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REVISTA

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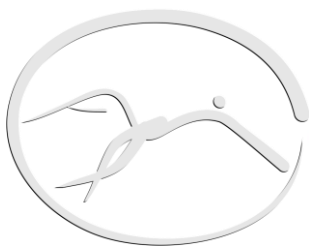
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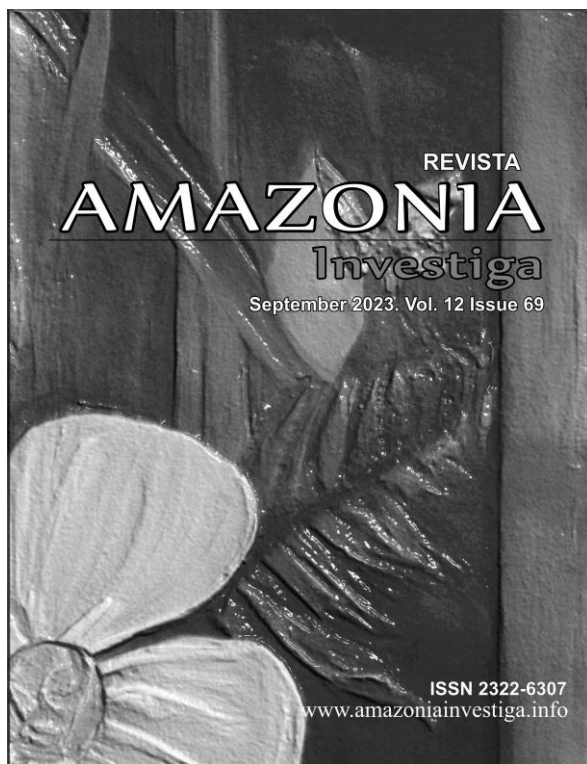


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## Sustainability in the modern architecture of Nicosia: A retrospective view

### Lefkoşa'nın Modern Mimarisinde Sürdürülebilirlik: Geriye Dönük Bir Bakış

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#### Abstract

Architectural approaches that developed and progressed in the modern period were founded on the criteria of modern architecture. It is possible to see the distinctive features of the modern period from the 1920s to the 1970s on the island of Cyprus, which has been under the influence of many cultures for many years. This study's main goal is to investigate the architectural criteria for residences constructed throughout the modern period in the Nicosia region in relation to sustainability parameters and modern architectural approaches. The methodology of the study consists of theoretical, analysis/practical approaches and observations. The analysis of a total of 3 houses was evaluated in the context of form, function, construction, and sustainability parameters. The houses examined during the findings phase were evaluated within the framework of sustainability parameters, and modern architectural approaches taking into account modern architectural criteria. In the houses discussed in the study, free plan, ornament-free facade designs, and large window openings on the facades, depending on the Functionalism, Purism, Cubism, and international style approaches, attract attention as architectural criteria. In this regard, it clearly reveals that the ideals, approaches, and principles of the modern period are related to the sustainability parameters that emerged at that time.

**Key Words:** Architectural Approach, Modern Architecture Criteria, Sustainability, Modern Period, Nicosia.

#### Özet

Modern dönemde gelişen ve ilerleyen mimari yaklaşımlar, modern mimarinin kriterleri üzerine kurulmuştur. Uzun yıllar pek çok kültürün etkisi altında kalan Kıbrıs adasında 1920'lerden 1970'lere kadar modern dönemin ayırt edici özelliklerini görmek mümkündür. Bu çalışmanın temel amacı Lefkoşa bölgesinde modern dönemde inşa edilen konutların mimari kriterlerini modern mimari yaklaşımlar ve sürdürülebilirlik parametreleri açısından incelemektir. Çalışmanın metodolojisi teorik, analiz/pratik yaklaşımlar ve gözlemlerden oluşmaktadır. Teorik aşamada modern mimari yaklaşımlar, sürdürülebilirlik parametreleri ve modern mimari incelenmektedir. Analiz/pratik yaklaşım aşamasında Lefkoşa bölgesindeki modern dönem konutları seçilerek konutların güncel analizi yapılmıştır. Toplam 3 konutun analizi form, fonksiyon, inşa ve sürdürülebilirlik parametreleri kapsamında değerlendirildi.

Bulgular aşamasında incelenen evler, sürdürülebilirlik parametreleri ve modern mimari kriterleri dikkate alan modern mimari yaklaşımlar çerçevesinde değerlendirildi. Çalışmada ele alınan evlerde İşlevselcilik, Pürizm, Kübizm ve Uluslararası üslup yaklaşımlarına bağlı olarak serbest plan, süslemesiz cephe tasarımları ve cephelerde geniş pencere açıklıkları mimari kriter olarak dikkat çekmektedir. Bu bağlamda modern dönemin ideallerinin, ilkelerinin ve yaklaşımlarının o dönemde ortaya çıkan sürdürülebilirlik parametreleriyle ilişkili olduğunu açıkça ortaya koymaktadır.

**Anahtar Kelimeler:** Mimari Yaklaşımlar, Modern Mimari Kriterler, Sürdürülebilirlik, Modern Dönem, Lefkoşa.

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## Introduction

The 20th century was the period when new concepts and theories emerged in the field of architecture, innovative examples were presented in discourse and practice, and architectural designs began. Modernism is defined as a global movement in the second half of the nineteenth century that influenced twentieth-century art and Western literature, as well as architecture, music, theater, and visual arts (Frisby, 2004). It is known that in the period called the modern period, new ideas and developments emerged and architectural designs began to become simpler. New approaches have developed under the heading of "modern architecture" in response to these issues. These approaches are often used in numerous applications in the area of architecture in various nations throughout the world. A new perspective was added to the architectural designs of the period with approaches such as Cubism, Functionalism, Bauhaus, Purism, De-Stijl, and International-style. The modern period stands out with designs where functional forms are prioritized, open floor plans, large wall openings, clean, simple lines, and modern and traditional building materials are brought together.

Cyprus was certainly no exception to the global expansion of modern architecture, which did not stop at specific geographical locations (Ali, 2018). This study examines the application of modern architectural criteria in houses in the Nicosia region of Northern Cyprus in the modern period.

Sustainability first emerged in the years when the spread of the modern age increased and modernism replaced it in the context of cultural, social, environmental, economic, technological, and urban growth. This review attempts to contextualize the sustainability criteria of modern architecture within the framework of criteria influenced by modern architectural approaches.

The houses built during the modern architecture period in North Nicosia on the island of Cyprus between 1963 and 1974 were built taking into account social and environmental issues as well as the lives of the users. These houses, which have a plan type that bears the characteristics of the modern period, were built using the two-storey reinforced concrete construction technique. The organization of the floor plans of the houses is created by combining basic geometric shapes. It is evident that the analyzed houses' facade and plan designs used modern

period approaches including functionalism, De-stijl and Cubism.

In this context, the houses constructed in Nicosia during the modern period were assessed in light of architectural approaches, modern architectural criteria, and parameters of sustainability.

## Research Questions/ Hypothesis

Within the objectives and goals of the study, the aim of the study is to determine the identity, architectural approaches, and sustainability situation of the modern period buildings in North Nicosia through observation and to offer suggestions. Keeping the identity of the modern period, modern architectural criteria and approaches alone are insufficient. It is suggested to implement architectural designs that adhere to cultural, social, environmental, and economic sustainability parameters for this reason. The following fundamental queries were addressed within the purview of this study:

1. What is the relationship between modern architectural criteria and approaches and sustainability parameters in Houses in North Nicosia?
2. How is the relationship between sustainability parameters and modern architectural approaches and criteria defined?
3. Which of the modern architectural criteria and approaches do Houses have?
4. How do Houses relate to the cultural, social, environmental, and economic parameters of sustainability?

## Limitations of the Study

The identity of the modern period in Cyprus is seen in the residential buildings designed by important architects such as Abdullah Onar, Ahmed Vural Behaeddin, and Ayer Kaşif between the 1960s and 1970s. The main reason for conducting this study is to reveal the identities of modern period residences and keep them alive. By examining modern architectural criteria and approaches and sustainability relations, it is seen that the general parameters of sustainability have modern period criteria. When the three modern period residences examined in the context of the study were considered with the parameters of sustainability, it was determined that their social, cultural, economic, and environmental relations overlapped with the architectural criteria of the modern period. In



light of these findings, it is important not to ignore the identity of the modern period in today's sustainable understanding.

## Literature Review

### Modern Architecture

The term "modern architecture" refers to the buildings constructed in the late 19th and early 20th centuries that exhibit some common attitudes and forms as well as an intellectual background that gave rise to the various acts, movements, and orientations that are used to categorize them (Tanyeli, 1997), (Özyalvaç, 2013). Modern architecture can be described as an approach that developed in opposition to an eclecticist style after the Industrial Revolution; it affected other forms of art as well as architecture and addressed the same fundamental concept despite the differences in their forms.

The use of steel and concrete together in structures at the end of the nineteenth century, in the words of art and architectural historian Pevsner, provided Modern Architecture with a new dimension. These materials allowed human beings the opportunity to cross unused openings, build very tall structures, and provide flexibility to the blueprints. By demonstrating qualities like the use of glass, open spaces, as well as utility, modern architecture which emerged as a reaction to nineteenth-century architecture has given architecture many distinct interpretations (Pevsner, 1977).

The search for technologically based forms in the late 19th century ushered certain new movements that would alter the agenda in the disciplines of art and architecture, based on the socio-economic developments. A mindset that sought to purge art and architecture of the classical style was developed as a result of the Arts and Crafts and Art Nouveau approaches that evolved during this time (Birol, 2006).

The philosophy and methods of the day were challenged by Sullivan's Modern Architecture, which asserted the requirement of creating structures in a quick, profitable, modern, and affordable manner. "Form follows function" is one of the key aspects of Sullivan's Modern Architecture. While taking into account the technical, economic, and political circumstances of the time, it was also suggested that the form should achieve a simplicity that would fit the demands of the day. In this trend, steel, a novel material, was employed in the construction of buildings. This architectural approach set the

groundwork for modern architecture understanding from the rationalist perspective (Budak, 1985, Dostoğlu, 1995, Tanyeli, 1997), (Benian, 2010).

### Architectural Approaches

In the 19th century, the show of building and facade designs was replaced by a simpler and simpler design. With the branches of philosophy, science, and art that started to develop towards the end of the 19th century, the movements that emerged in the early 20th century as a reaction to the design philosophies of the architects of this period are encountered. It is possible to say that it is the beginning of a new era with these currents.

#### • *Functionalism*

Function is the relationship between form and the purpose of the building (Z'ychowska, 2019). The dimensions, shape, and proportions of a design alone cannot be considered its aesthetic (beauty); rather, it also involves the practical importance of the purpose that the element or just component of the structure in question serves (Arenibafo, 2017; Winter, 2007). Functionalism's predominance in architecture had a big impact on modernism's development. On how function and form are related, there are many different perspectives. The adage "the form follows the function" by L. Sullivan, had a unique resonance with functionalism ideas in the early Modern period (Schumacher, 2002). Le Corbusier, a famous architect, claimed that the form of architecture is caused by the mind and reflects the best aspects of art, mathematical principles, and a proportionately balanced representation of the total (Behne, 1996). Therefore Form, Corbusier's concept of form, is more important than function (Trisno, 2019).

#### • *De Stijl*

De Stijl, a significant modernist movement that emerged at the beginning of the 20th century, distinguished itself from prior movements since it only lasted fourteen years, had a complete organizational framework, and lacked distinct patterns of organization (Qin, 2015). De Stijl opposed all decoration and favored a more logical, persuasive application of modern technology and materials (Doorman, 2003). The De Stijl method is a design technique that produces dynamic, unique, and complete abstraction. The new architecture offered examples of monumental, asymmetrical, cost-

effective, and stylistically unbound architectural forms. These suggestions influenced the general forms of modern architecture (Nia, & Rahbarianyazd, 2020; Birol, 2006). Mies van der Rohe was one of the movement's most significant proponents and De Stijl continued to have a important impact on architecture after 1931 (White, 2003).

- **Bauhaus**

German architect Walter Gropius (1883-1969) established the Bauhaus in the city of Weimar in 1919. Its main goal was to reinvent the tangible world in order to express the unification of all the arts, which was a novel concept (Griffith Winton., 2000). The Bauhaus Art Movement is more than just an educational movement or a design; it is the design of modernity, and it refers to the cultural, economic, and social modernization project that has been ongoing in Europe since 1850. It is well known for championing functionality. This principle placed a strong emphasis on the building's integrity, substance, and structure over ornamentation (Tietz, 2000), (Karaca, 2021). The Bauhaus movement, which promoted a simple, plain, rational architecture, based its principles on fundamental shapes (Benian, 2010). Starting in the 1920s, architects like Le Corbusier, Richard Neutra, Mies van der Rohe, and Walter Gropius developed the fundamentals of Modern Architecture, which gained traction as a result of the influence of Bauhaus on architecture (Dostoğlu, 1984), (Benian, 2010).

- **Cubism**

The most innovative and influential art approach of the 20th century is acknowledged as being cubism. (Besgen, 1998). Cubism represents the most significant fundamental shift in visual language since Giotto discovered linear perspective in the early fourteenth century (Haftmann, 1960), (Falcetta, 2007). The cubists were highly influenced by Einstein's theory of relativity and emphasized timelessness, that is, the relative and constant change of space, by drawing the appearances of the same object at different times on top of each other (Birol, 2006). Le Corbusier stated that modern architecture may utilize geometry to solve problems. Le Corbusier also followed the artistic tenets of cubist painter Cezanne by asserting that cubes, cones, cylinders, plus pyramids are sharp shapes created visible by light (Gardiner, 1985).

- **Purism**

Amédée Ozenfant and Le Corbusier, the movement's founders set up the Purism movement in painting, which incorporated machine aesthetics, clean and simple geometric shapes, and the spirit of old classicism (Simic, 2006). Since purism is a philosophy that supports clear, logical forms with laws, it has become more and more popular worldwide and given rise to the International Architecture approach. Architecture has reached an extreme degree with this purifying and understanding strategy, according to purism, which seeks to use ever-simpler forms (Kortan, 1986). Le Corbusier with Mies van der Rohe are two prominent supporters of purism (Birol, 2006).

- **International Style**

Johnson Philip Cortelyou, an American architect, created the international style, commonly referred to as International Modern or American Rationalist European Architecture. Style International C.F.A. It developed from the experimental work of architects like Vossey, Sullivan, with Adolf Loos, who sought to resolve the stylistic disarray of the 19th century (Hasol, 2014). The style was founded on Le Corbusier's ideals, which can be summed up as pilotis, roof gardens, open planning, horizontal windows, with sunshades (Benian, 2010). Volume rather than mass, clarity with the use of order rather than symmetry, readability, and rejection of gratuitous adornment is among the three categories Hitchcock used to categorize the original qualities of the style (Hitchcock, & Johnson, 1995). Along with these, other distinguishing characteristics of the design include terrace roofs, reinforced concrete skeletons, plain, white facades devoid of ornament, and forms created by the asymmetrical organization of fundamental geometrical elements (Hasol, 2014; Leuthäuser, 2001; Erenler, 1997).

### **Sustainability**

Sustainability is a way of living that maximizes economic, environmental, and social factors while taking indirect and long-term repercussions into consideration (Litman, 2011). The definition and focus of sustainable development up to the second half of the 20th century were environmentalism and the preservation of the natural world. Preventing these injuries caused by people to nature was the major objective of various organizations and societies, which began at the end of the



nineteenth century and continued to be founded from the start of the 20th.

The concept of sustainable development was initially presented in 1987 as part of the publication "Our Common Future" by the Brundtland Commission, formerly known as the (WCED) World Commission on Environment and Development (WCED, 1987; Soini & Birkeland, 2014). The principles of sustainable development, eradicating poverty, equitable resource use and distribution, population management, and the advancement of environmentally friendly technology are all intimately related in our common future report. The study demonstrates how social, economic, and environmental elements are interconnected (Yasemin & Bıçkı, 2006).

### **Social Sustainability**

Social sustainability focuses on the well-being of present and future generations (Chiu, 2003). Social sustainability is often a debated idea and open such as the general concept of sustainable development (Ghahramanpouri & Lamit & Sedaghatnia, 2013). The concept of social sustainability has just recently gained recognition, thus experts are continuously emphasizing the need to define it and are really curious about its precise meaning (Williams, 2014).

### **Cultural Sustainability**

According to cultural sustainability, culture is the most complicated of the two or three difficult terms. Due to the fact that culture has become a key concept in numerous, usually at odds systems of thinking and intellectual disciplines (Soini & Dessein, 2016; Pop et al., 2019). Culture was cited as the fourth component of sustainable development during the Johannesburg Earth Summit in 2002, and this was highlighted at the 2010 World Summit of Local and Regional Leaders. Nevertheless, cultural factors have historically received less attention in sustainable development goals (Appendino, 2017, Morelli, 2011). Cultural sustainability strongly affects conservation goals, which are to use for current needs and to pass on as much importance as possible to future generations (Pereira, 2007).

### **Environmental Sustainability**

A sustainable environment has become one that benefits future generations by leaving the earth in a better or more efficient state. Recycled

materials ought to be completely recyclable or renewable to ensure they have no impact on the environment or increase energy consumption. Likewise, used energy ought to be in the end renewable so that it does not donate to pollution (Boström, 2012). Environmental sustainability has become increasingly popular in popularity (Moldan & Janoušková, & Hák, 2012). For instance, the Environmental Sustainability Programming of the United States National Science Foundation promotes engineering research with the aim of establishing sustainable systems of design that enhance human well-being and that are also correspondingly compatible with maintaining natural systems in 2009 (Moldan & Janoušková, & Hák, 2012).

### **Economic Sustainability**

Economics is the process by which individuals create social and environmental repercussions, and economic sustainability is the process by which economic systems support long-term social and environmental improvements. One of the pillars of sustainability, the economy's sustainability, is crucial for maintaining the social, environmental, and human resources needed for income and living standards (Basiago, 1998). The equilibrium between environmental advantages and economic costs is economic sustainability. This condition of equilibrium includes things like conserving renewable resources, utilizing non-renewables sparingly, and switching to renewable resources while maintaining economic activity (Duran, 2018).

### **Methodology**

In the study, the conceptual framework of the research is presented by mentioning the methods and materials of the research. The data collection method is explained in order to reveal the architectural criteria, approaches, and sustainability context of the modern period. Then, three houses in the context of the modern period Nicosia city of Northern Cyprus were examined, and how they developed was explained. Existing residences were visited and an updated analysis was carried out using the on-site inspection method. Technical drawings of the plans and appearances were made, and photographs of the facade and interior were taken. Theoretical approaches were used in the context of modern architectural approaches and sustainability parameters in the selected houses, and analysis/practical approach evaluation methods and observations were used during the data collection phase. During the current analysis of the collected data, plan typologies of the

houses were created and their current functions were determined. Thus, the data collected emphasizes the necessity of evaluating and applying modern architectural criteria and approaches together with the parameters of sustainability in response to the research questions of the study.

## Research Area

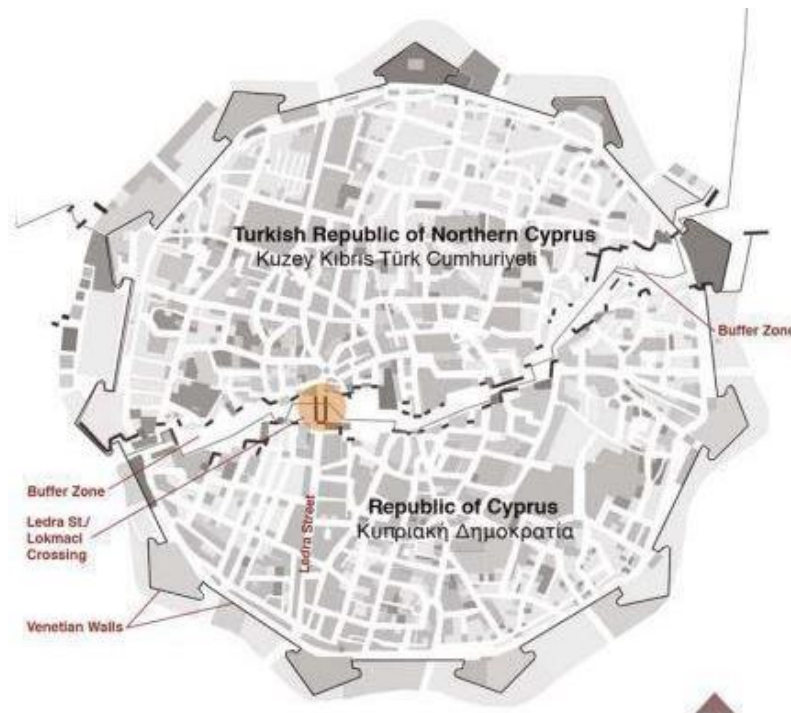
Throughout its history, various civilizations have had an impact on Cyprus. Its distinctive architectural design also reflects its extensive cultural history and turbulent past. Architectural styles from many different eras can be found today. Following the establishment of the British government, the Republic of Cyprus was founded in 1960. Bi-regional settlement has been the island's policy since 1974 (Oktay, 2007). See Figure 1.



**Figure 1.** Cyprus Map with the UN. Buffer Zone  
Source: (Burke, 2015).

The capital of Cyprus's island is Nicosia, as it has been for many years. The largest city on the island of Cyprus and the last divided city in Europe, Lefkosia is also known as Nicosia in Turkish and Lefkosia in Greek. See Figure 2. The partition of the medieval Nicosia walls, which enclose the city's historic core, reflects the island's geographic division. It has been the

subject of various research because it is a city that has traces of the histories and cultures of many different civilizations (Bakshi, 2014). In the later years of the British colonial administration (1878–1960), especially after World War II, Nicosia started to grow quickly. Over time, residential settlements were built outside the walled city (Günçe & Mısırlısoy, 2019).



**Figure 2.** Map of Nicosia  
Source: (Mesda, 2011).

## Results and Discussion

### Modern Architecture in North Nicosia, Cyprus

Although the exact founding date of Nicosia is unknown, it is thought that the city known as Ledra formed the basis of the modern city. B.C. Nicosia, a son of Ptolemy I Soter, was this city reconstructed after it was conquered by the Egyptians in 3000 BC, and he gave it his name. The old Nicosia is surrounded by high, strong walls that the Venetians built in 1567 as a line of defense against the Turks. The ancient Nicosia is surrounded by these eleven bastion walls (Akbulut, 1998). In the Venetian era, the settlements outside the walls were completely cleansed and all kinds of structures were destroyed. A deep ditch that is roughly 60 meters wide was then built around the fortress structure. This means that the wall alone served to delineate the urban area (Pasaogullari & Doratlı, 2009; Özdemir, 2018).

Architectural languages differed between the 1920s and the 1970s (Fereos & Phokaides, 2006; Menteş & Donà, 2019). Listable architectural styles include British Colonial, which is primarily a rationalization of regional vernacular architecture. Applying loggias, terraces, verandas, or courtyards to expand the interior space outdoors while using local materials and subtle adornment. After then, a mix of style

emerges that combines aspects of early modernism with British Colonial traits (Menteş & Donà, 2019).

The structures constructed in Cyprus during the 1960s have begun to show signs of modern architecture. It was largely abandoned to build homes the traditional way. They have been replaced by reinforced concrete structures. The majority of houses in rural have been transformed into villas. Most homes and office buildings were constructed in urban areas (Feridun & Feridun, 2013). The majority of homes constructed during 1960 and 1970 had just a few stories. Locally produced materials and conventional construction techniques started to fall out of favor as reinforced concrete's use expanded. Due to the extensive usage of modern building materials like bricks, iron beams, and aluminium, traditional materials were mostly utilized for decorative elements like plating for fireplaces and ceilings and plating for interior or exterior spaces (Cogaloglu & Turkan, 2019).

### Modern Architectural Approaches and Sustainability for Suna- Ümit Süleyman House (1960)

A good example of a modern city house is the Suna-Ümit Süleyman House, which was built in the Köşklüçiftlik neighbourhood of North Nicosia. On the main floor, living areas, kitchen, dining area, bathroom, wide terraces, garage,



laundry room, and office are all intended for a family of five. Upstairs, there are three bedrooms, a bathroom, and semi-open terraces looking at the street are located (Uluçay, Uraz, & Pulhan, 2006). See in Figure 3. In the House, where the free plan technique, which is one of the criteria of the modern period, is applied, the

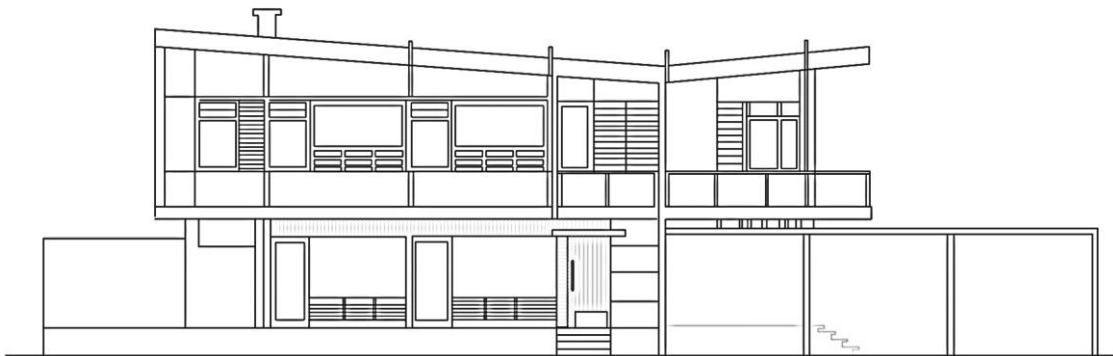
interior spaces are interconnected and flow into each other. Consisting of unadorned, simple geometric forms, the House carries the principles of functionalism, cubism, brutalism, rationalism, and international style from the approaches of the modern period.



**Figure 3.** Suna-Ümit Süleyman House's ground floor and first floor plans House  
Source: (Own authorship, 2023).

The Suna-Ümit Süleyman House's entrance facade's elevation moved up to the street with its tall eaves is another remarkable aspect. Red brick from the area is used to construct the entrance facade, while the remaining wall is constructed

of grey concrete slabs for the majority of its length. Using concrete for the garden walls allowed the design to be integrated (Mesda, 2011). See in Figure 4.



**Figure 4.** Suna-Ümit Süleyman House's Front Facade Design House  
Source: (Own authorship, 2023).

Wide and symmetrical windows have been designed and placed on the facade. The connection between the interior and the exterior is clearly highlighted. Additionally, the facades very skilfully represent the harmony of the pure concrete and white colour. The design of the building took advantage of the reinforced concrete construction method. Without using beams, the floors were applied, and the columns have been carried to the roof. (Mesda, 2011). The house, which is still used as a house today, is one of the most representative examples of the

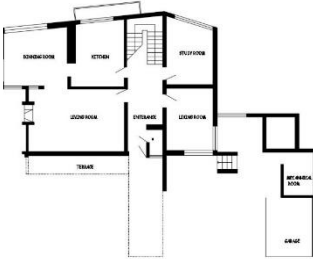



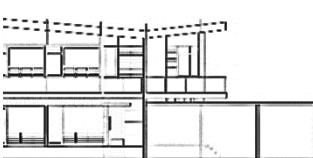
modern period in Northern Cyprus with its material selection, construction technique, and plan setup.

Nicosia Köşklüçiftlik, where the Suna-Ümit Süleyman House is located, is a densely populated area of the city. Access to the house, which is easily accessible, is also very easy on foot or by vehicle. The method of construction of the house not only shapes the architectural identity of the location but also incorporates historical and cultural features. For this reason, it

contributes to cultural sustainability. The relationship of the house with its environment is provided by the large windows and terraces used in its design. It also reflects the architectural criteria and approaches of the period with its modern, local materials and construction

techniques. In this context, it contributes to environmental sustainability by catching harmony with its environment. The house, whose function has not changed, maintains its economic sustainability today as it has social and cultural value. See Table 1.

**Table 1.**  
*Modern Architectural Approaches and Sustainability for Suna-Ümit Süleyman House (1960)*

Köşklüçiftlik, Nicosia - 1960 - Ahmet Vural Behaeddin House		
 <p>Ground Floor Plan (Own authorship , 2023)</p>	 <p>Entrance Facade (Uluçay &amp; Uraz &amp; Pulhan, 2006)</p>	 <p>Interior Spaces (Uluçay &amp; Uraz &amp; Pulhan, 2006)</p>
 <p>First Floor Plan (Own authorship , 2023)</p>	<p>Form analysis</p> <p>Function</p> <p>Construction</p>	<ul style="list-style-type: none"> <li>* Free plan technique.</li> <li>* Cube form that is free from ornaments.</li> <li>* The large windows on the facades and the exterior relationship</li> <li>* Functionalism, Purism, Cubism, and International-style approaches</li> </ul> <p>The building, which was designed as a house, still functions as a house today.</p> <ul style="list-style-type: none"> <li>* White and pure facade design</li> <li>* Entrance wall designed with red bricks</li> <li>* Concrete wall design in interior spaces and facade</li> <li>* Reinforced concrete construction technique.</li> </ul>
 <p>Front Elevation (Own authorship , 2023)</p>	<p>Social Sustainability</p> <p>Cultural Sustainability</p> <p>Environmental Sustainability</p> <p>Economical Sustainability</p>	<p><b>Sustainability Parameters</b></p> <ul style="list-style-type: none"> <li>* Accessibility</li> <li>* Walkability,</li> <li>* Transportation</li> </ul> <ul style="list-style-type: none"> <li>* Architectural style, construction technique and building form, determine elements of the architectural and cultural identity.</li> </ul> <ul style="list-style-type: none"> <li>* A relationship with the indoor and outdoor environment</li> <li>* Durable and environmentally friendly building materials.</li> <li>* Environmentally friendly and harmonious</li> </ul> <ul style="list-style-type: none"> <li>* The house is raising the value of the vicinity business, lands, and residential real estate. In this way, it makes contributes to economic sustainability.</li> </ul>

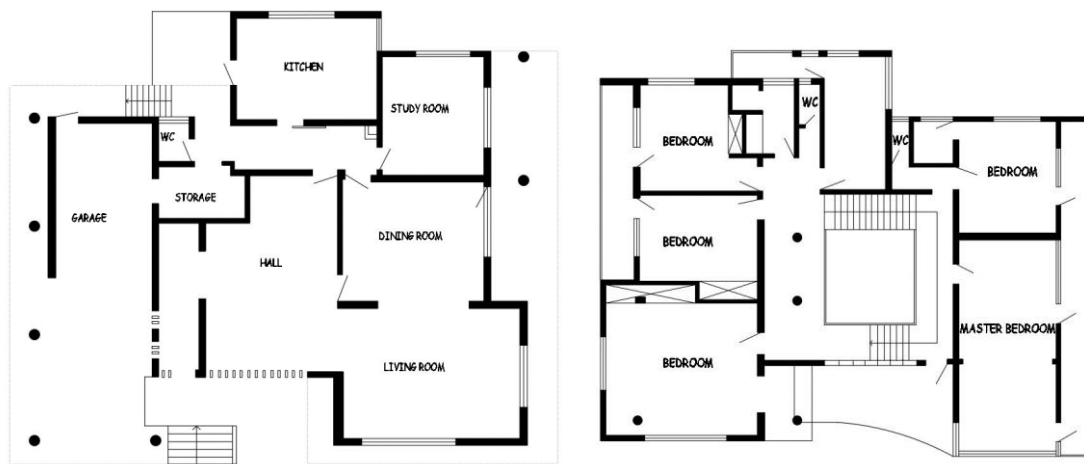
Source: (Own authorship, 2023).

### Modern Architectural Approaches and Sustainability for Mısırlızade House (1968-72)

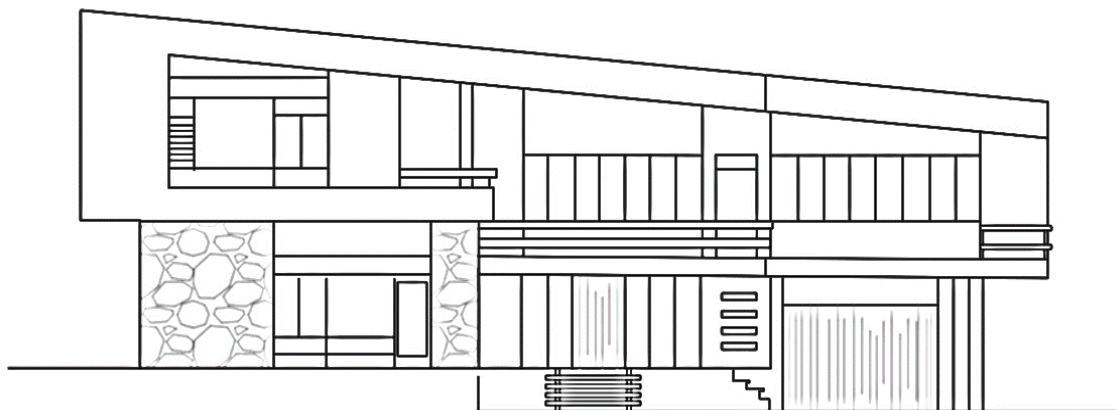
Abdullah Onar is one of the pioneers of modern architecture in Cyprus. It is remarkable that he uses plain, simple and pure geometric forms in his designs. All of his projects are highlighted by the use of a universal language and a logical construct.

On the front facade of the house, he created for Osman Nurettin Mısırlızade in Nicosia's Köşklüçüftlik neighbourhood, there is a semi-open area. The two-story house's lower floor holds a garage. With pilots on the ground, the

garage is created underneath the raised space. Even if the welcome area's hall part resembles the sofa in a Turkish home in logic, it initially simply serves as a means of entry to the stairs as well as common rooms. This space, which serves as the hub of the home, offers access to the kitchen, bathroom, and backyard through a unique and condensed corridor plan. While the living space and a separate eating area are usually arranged in a flexible connection, the space for dining is having a direct link with the kitchen. The upper floor is where the bedrooms and baths are located on the upper floor (Yavuz, 2021). See in Figure 5-6.



**Figure 5.** Mısırlızade House's ground floor and first floor plans House  
Source: (Own authorship, 2023).



**Figure 6.** Mısırlızade House's Front Facade Design House  
Source: (Own authorship, 2023).

The Mısırlızade House, which was designed as a house between 1968-72, still functions as a house today. The house was built using the reinforced concrete construction technique and was painted white. There are large windows on the facades. The house, which was designed as a terrace roof, was built within the framework of modern period materials and techniques. In addition, the

principles of rationalism, functionalism, purism, cubism, Bauhaus, and international style, which are among the approaches of modern architecture, draw attention in the building.

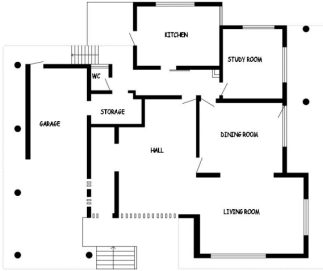

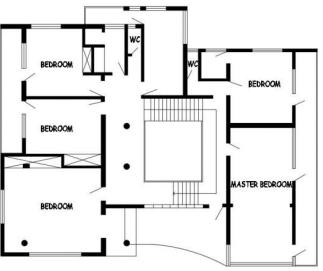
Due to its location, Mısırlızade House carries the sustainability criteria such as transportation by car, walkability, and public transportation. In

terms of its social sustainability, it is located at a point that can be easily accessed either by car or on foot. Because of these features, it carries the social sustainability parameters. With its construction style and technique, Mısırlızade House shapes the architectural identity of the Köşklüçiftlik region. Considering its historical process, it has historical and cultural characteristics. In this context, it carries the parameters of cultural sustainability. Living spaces are associated with its surroundings, as there are large windows on the facades of the

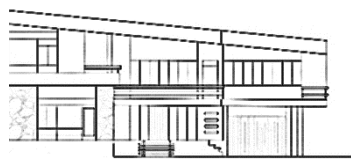
building. Thus, it is in contact with the natural environment. In the house where the interior-exterior relationship setup was designed, modern architectural materials and traditional materials were blended. In this context, the house maintains its environmental sustainability. Mısırlızade House increases the commercial, residential and land real estate values of the region where it is located. In this context, it contributes to economic sustainability. See Table 2.

**Table 2.**

*Modern Architectural Approaches and Sustainability for Mısırlızade House (1968-72)*

Köşklüçiftlik, Nicosia - 1968-72 - Abdullah Onar House		
 Ground Floor Plan (Own authorship , 2023)		 Entrance Facade
 First Floor Plan (Own authorship , 2023)	Form analysis	* The form of a mass, with a simple and free plan technique, in a symmetrical * The form of a plain white cube away from decorations intertwine interiors
	Function	* Wide band windows on the facades * Functionalism, Purism, Cubism, and The building, which was designed as a house, still functions as a house today.
	Construction	* Reinforced concrete construction technique * Design on the pilots * Large window openings on the facade design
	Social Sustainability	* Walkability * Transportation * Accessibility
	Cultural Sustainability	* Building form, construction technique and architectural style, and determine elements of the architectural and cultural identity.





Front Elevation  
(Own authorship, 2023)

Environmental  
Sustainability

Economical  
Sustainability

- \* Durable and environmentally friendly building materials.
- \* A relationship with the indoor and outdoor environment
- \* Environmentally friendly and harmonious

\* The house increases the value of commercial, land, and residential real estate in its vicinity. Thus, it contributes to economic sustainability.

Source: (Own authorship, 2023).

### Modern Architectural Approaches and Sustainability for Efruz House (1968-72)

The Efruz House are two-story structure with a combination of basic and square forms that lack ornamentation. The living space, dining area, kitchen, guest bathroom, study space, and terrace spaces are all located on the ground floor. The Efruz House (Müdüroğlu House) has an open

floor plan with connecting living and eating areas. To the left side of the entrance door on the main floor, there is a garage as well. The rooms on the main floor vary in size, and the layout is separated into distinct functional areas. There are three bedrooms, a bathroom, and a little balcony on the first level. See Figure 7. Attention is drawn to the direct connection as well as spatial flow between all spaces.



**Figure 7.** The original ground and first floor plan drawing of Efruz House  
Source: (Beyaz & Erçin, 2023).

Structure plans make explicit reference to the modern architectural approach that has been investigated, the dynamic between full and empty spaces a Cubist principle, and basic geometric shapes. Additionally, similar to De Stijl, there are straight lines, simple forms of geometry split into parts, an absence of concentricity, and a clearly organized plan. These structures are characterized by their straightforward, ornately free rectangular, triangular, and square forms. This is a hallmark of Bauhaus architecture.

Efruz house (Müdüroğlu House) was built in the modern period utilizing a combination of traditional and modern materials. The typical natural stone was used for both the outside and interior of these structures, which were constructed using a reinforced concrete construction method. This design emphasized both the characteristics of the modern period and the local materials. The ornament-free facade designs are painted white. Large rectangular window apertures on the facade allowed daylight to flow into the inner spaces and establish a connection between the row houses' interior and outdoor environments. Large window apertures

made in the design of the facade have been found to be in keeping with the facade surface, feature modern period approaches, and foster an indoor-

outdoor link in context with sustainability. See Figure 8.



**Figure 8.** The original facade drawing of Efruz House  
Source: (Beyaz & Erçin, 2023).

The focus area is situated within the densely populated North Nicosia region, characterized by a high population density and heavy traffic volume. This area ranks among the most popular districts in Nicosia owing to its proximity to social, economic, and public amenities. Furthermore, it is readily accessible both by car and on foot, and it excels in terms of neighborhood relations, social contributions to its surroundings due to its strategic location, and functionality. Consequently, the Kumsal region has evolved over time, increasing its significance within the context of sustainability as a result of these distinctive attributes.

The Efruz House (Müdüroğlu House), which was designed in Northern Nicosia, Cyprus, during the modern period and adhered to its architectural design criteria, was constructed using both modern period materials and local materials. Efruz House is building that most accurately reflect the architectural character and cultural identity of the modern period in terms of architectural approach, construction style, and

architectural criteria when considered in the context of cultural sustainability.

Designed in the Modern period Efruz House (Müdüroğlu House) was constructed in keeping with their environment. Its construction utilized modern and historical elements, which are strong and environmentally friendly, making them still relevant in terms of environmental sustainability in the present. The relationship between interior and exterior was not ignored in the design of that building.

Efruz House (Müdüroğlu House), which was constructed during the modern period, carries cultural value and kept its original function, continuing to be economically viable due to its social and cultural significance. Current, modern materials were used in the construction of the house. Due to their position, the house is situated on the line of a tourist center having high land and property values. Because of this, it continues economically sustainable as well as environmentally sustainable. See Table 3.

**Table 3.**  
*Modern Architectural Approaches and Sustainability for Efruz House (1963-74)*

Kumsal, Nicosia - 1963-74 - Ahmed Vural Behaeddin House			
 Ground Floor Plan ( Own authorship , 2023)	 Entrance Facade ( Own authorship , 2023)		 Interior Spaces (Own authorship , 2023)
	Form analysis <ul style="list-style-type: none"> <li>* Straight, simple, and sharp lines.</li> <li>* Symmetrical plans and geometric forms</li> <li>* Cubism, Bauhaus, De-Stijl, and Functionalism approaches.</li> <li>* Open-plan design concept.</li> <li>* Internal-external relationship</li> </ul>		
 First Floor Plan ( Own authorship , 2023)	Function		<ul style="list-style-type: none"> <li>* The building, which was designed as a house, still functions as a house today.</li> </ul>
	Construction		<ul style="list-style-type: none"> <li>* Traditional natural stone material on facade design</li> <li>* No ornamentation on the facade design</li> <li>* Rectangular, large window openings on the facade design</li> </ul>
 Front Elevation ( Own authorship , 2023)	Social Sustainability		<b>Sustainability Parameters</b> <ul style="list-style-type: none"> <li>* Density,</li> <li>* Functionality,</li> <li>* Walkability,</li> <li>* Neighborhood relationships,</li> <li>* Social benefits,</li> <li>* Accessibility by vehicle transportation</li> </ul>
	Cultural Sustainability		<ul style="list-style-type: none"> <li>* Construction technique, architectural style and building form determine elements of the architectural and cultural identity.</li> </ul>
	Environmental Sustainability		<ul style="list-style-type: none"> <li>* Environmentally friendly and harmonious</li> <li>* A relationship with the indoor and outdoor environment</li> <li>* Durable and environmentally friendly building materials.</li> </ul>
	Economical Sustainability		<ul style="list-style-type: none"> <li>* It maintains its economic sustainability due to the use of building materials with cultural value.</li> <li>* It increases land value and residential property values.</li> </ul>

Source: (Own authorship, 2023).

## Discussion

The study aims to analyse the current situation of the modern period in Northern Nicosia. In this direction, the relationship between the criteria of modern architecture the approaches of the modern period, and the parameters of sustainability was determined. In order to reveal this relationship, the findings of the research are

discussed in terms of criteria and style in the context of modern architecture, and the classification of social, cultural, environmental, and economic values in the context of sustainability.

Accordingly, the buildings built in the modern period in Northern Cyprus should be considered as an integral part of the cultural and historical

heritage and much more work should be done to protect them. Thus, it has emerged that the modern period identity will be preserved and kept alive when the modern period buildings are measured in terms of their sustainability social aspect, cultural value, economic situation, and their relationship with the environment without ignoring the architectural criteria and approaches. The houses selected in the study are considered in this context, it is clearly seen that they carried the criteria and approaches of modern architecture as well as the criteria of sustainability.

It was observed that the examined houses had the architectural criteria of the modern period: simplicity, open plan, sharp lines, and geometric forms. It has been made very evident that they also incorporate modern approaches like Cubism, Bauhaus, De-Stijl, and Functionalism.

In this context, it is supported by the findings of the study that the houses analyzed within the scope of the study have preserved their identity with a sustainable approach until today, without losing the architectural approaches and criteria of the modern period.

### Conclusion

In many nations around the world today, in the century we now live in, the social, cultural, and environmental repercussions of architectural approaches and architectural criteria that originated with the modern period are still evident. Cyprus, an island that has been influenced by numerous civilizations, features many different kinds of construction styles. This study investigates the link between the impacts of altering living conditions such as swift urbanization, and socioeconomic dynamics in the modern period, and knowledge of sustainable design. All around the island of Cyprus, examples of structures that have been designed with the form-function relationships that are the modern period's defining characteristics and the architectural approaches that arose along with the modern period have existed. In spite of unfavorable circumstances like war, migration, and economy, between the two populations on the island in 1960 and 1974, architectural structures depicting the traces of the modern period were designed in the 1960s and 1970s.

According to the results obtained as a result of the findings, all the houses designed and built in the modern period should be protected. While modern period buildings are changing their function or being renovated, the interventions

made to these structures cause the buildings to lose their original identities. In modern-period buildings, it has been determined that if the modern-period criteria and approaches can be preserved, the building will be sustainable. Houses with cultural value should be taken under protection so that their architectural criteria and approaches are not lost. The social, economic, cultural, and environmental values of the regions where these houses are designed can survive as long as the building identity of that region is preserved. In short, the architectural criteria and approaches of the modern period should not be ignored, along with the parameters of sustainability and sustainability. It is very important to preserve the function of the structure. If the building is going to change its function, its architectural identity should not be damaged so that it can preserve the criteria and style of the period.

As a result, in the current century, socio-cultural, economic, and architectural built environments are created using the concept of sustainability instead of modernism. In this sense, it is possible to say that the ideas, concepts, and approaches of the modern period form the basis of sustainable designs. The significance of modern criteria and approaches has therefore been displayed in this study. It is expected that the sustainability context of the current period architectural criteria and approaches of the study area will add to the scientific literature as a consequence of both literature and analysis evaluations.

### Recommendations

According to the results of this study, it is an inevitable conclusion that the houses built in the modern architectural period should be protected. State intervention is required to preserve and maintain the architectural criteria and approaches of modern period residences.

In addition to modern architectural criteria and approaches, it must be addressed together with sustainability parameters in order to preserve the identity of the modern period.

As a result, the recommendations of this study are listed below:

- It is recommended that the criteria and architectural approaches of modern architectural period residences be considered together with sustainability parameters.
- It is strongly recommended that relevant stakeholders work together to ensure that the



identity of the modern period buildings examined in this study is not lost and preserved.

- It is recommended that more data and document-based studies be conducted on modern architects and buildings in Northern Cyprus.
- According to the analysis results of the modern period residences with historical and cultural value examined in North Nicosia, it is recommended to identify all residences/structures built throughout the island in the modern period in order to preserve their identity.

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## Fostering volunteerism among students with learning disabilities: The role of primary schools and challenges

تعزيز العمل التطوعي لدى الطلاب ذوي صعوبات التعلم: دور المدارس الابتدائية والتحديات

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### Abstract

The significance of the study lies in its focus on promoting volunteerism among Students with Learning Disabilities (SLD). The study aimed to provide recommendations that help overcome the challenges faced by primary school role in promoting volunteering among SLD. The study used a mixed-method approach. Personal interviews were conducted with 20 parents of SLD, and a questionnaire was administered to 98 teachers of Learning Disabilities in primary schools in Al-Ahsa Governorate, Saudi Arabia. The study results are that the teacher's role held the highest importance in fostering volunteering among SLD in primary school, followed by the school administration role, and subsequently, the school curriculum, according to parents' Perceptions. There are significant challenges facing the role of elementary schools in promoting volunteer work among SLD, with the most important of these being personal, organizational, and then academic challenges, according to teachers' perspectives. The study does not identify significant differences in these challenges based on the teachers' perspectives, considering gender and years of experience.

**Keywords:** Fostering, learning disabilities, primary school, students, volunteering.

### Introduction

Many studies have shown a positive impact of volunteer work on both individual and community levels. It contributes to the development of leadership skills among students participating in volunteer work (Al-Kalbani, 2020), reduces hyperactivity among SLD

اهتمت الدراسة بتعزيز مشاركة الطلاب ذوي صعوبات التعلم في العمل التطوعي بالمجتمع، هدفت الدراسة لتقديم بعض التوصيات التي تساعد في التغلب على التحديات التي تواجه دور المدارس الابتدائية في تعزيز العمل التطوعي للطلاب ذوي صعوبات التعلم. استخدمت الدراسة المنهج المختلط. تم إجراء مقابلات شخصية مع 20 من أولياء أمور الطلاب ذوي صعوبات التعلم، كما تم تطبيق استبانة على 98 معلماً من معلمي الطلاب ذوي صعوبات التعلم بالمدارس الابتدائية في محافظة الأحساء، المملكة العربية السعودية. كشفت أهم نتائج الدراسة أن دور المعلم كان له الأهمية الكبرى في تعزيز العمل التطوعي بين الطلاب ذوي صعوبات التعلم في المدارس الابتدائية، يليه دور الإدارة المدرسية، ثم المناهج الدراسية من وجهة نظر أولياء الأمور، وأن هناك تحديات كبيرة تواجه دور المدارس الابتدائية في تعزيز العمل التطوعي بين الطلاب ذوي صعوبات التعلم، وأهمها التحديات الشخصية، فالتنظيمية، ثم الأكاديمية من وجهة نظر المعلمين. كما أظهرت النتائج عدم وجود فروق ذات دلالة إحصائية في التحديات التي تواجه دور المدرسة الابتدائية من وجهة نظر المعلمين باختلاف النوع، وسنوات الخبرة.

**الكلمات المفتاحية:** التطوع، تعزيز، الطلاب، صعوبات التعلم، المدرسة الابتدائية.

(Abo Al-Rab, 2018), enhances their academic achievement (Kasnawi, 2019), boosts students' personal and cognitive skills, and increases their self-esteem (Bates, 2016).

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Some studies conducted in Saudi have indicated shortcomings in the role of general education schools in promoting volunteer work among their students (Al-Jaloud, 2013), and the contribution of school administration in encouraging students to participate in volunteer work is low (Al-Shahri et al., 2017). A study by Abualrob (2019) found that the teaching performance of teachers and the training of their students in the necessary skills for volunteer work had not reached the required level. Additionally, SLD face significant challenges in educational institutions (Al-Muqbil, 2021). In light of Saudi's efforts to promote volunteer work among its citizens and in alignment with Vision 2030, which emphasizes the importance of volunteerism as part of future readiness and sustainable development, with the goal of reaching one million volunteers by the end of 2030, the researcher engaged in discussions with some parents of SLD and their teachers regarding their perceptions of the role of elementary school in promoting volunteer work for students and the challenges they face, within the context of societal culture. So, the research problem concentrated in the main question: What are the perceptions of parents and teachers of SLD regarding the role of elementary school in promoting volunteer work for students, and what challenges do school encounter?

### Question

1. What are the perceptions of parents regarding the role of elementary school (teachers, curriculum, and school administration) in promoting volunteer work among SLD?
2. What are the personal, academic, and organizational challenges that teachers perceive as hindrances to the role of elementary school in promoting volunteer work among SLD?
3. What are the statistically significant differences in the responses of the study sample concerning the challenges faced by elementary school in promoting volunteer work among SLD, relate to gender and years of teaching experience?
4. What recommendations to enhance the role of elementary school for engagement of SLD in volunteer activities?

**Objective and important:** The study aims to identify parents' perceptions regarding the role of elementary school in promoting volunteer work among SLD, explore the challenges perceived by teachers, and provide recommendations to mitigate these challenges. The theoretical significance of the study lies in its focus on

enhancing volunteerism among SLD. The practical significance lies in meeting the personal and societal needs of SLD, utilizing their potentials in community service, for achieving sustainable development. The study's scope includes the perceptions of parents about the role of teachers, curriculum, and school administration in promoting volunteerism among SLD. The research is confined to the personal, academic, and organizational challenges that faces elementary school, Al-Ahsa region of Saudi Arabia during the second semester of the 2022 academic year.

### Research Terminologies

**Volunteering:** Refers to involves an individual's effort for their community without expecting material or moral compensation, with the intention of contributing to social services (Al-Naeem, 2005).

**Volunteer Work:** It is dedicating time and effort without expecting financial or moral rewards to assist a specific group within society (Kasnawi, 2019). Al-Qahtani (2019) defines it as effort exerted willingly and voluntarily without any form of coercion.

**Learning Disabilities:** "disorders in one or more of the basic psychological processes involved in understanding or using spoken or written language, which may manifest in disorders of listening, thinking, speaking, reading, writing, or mathematics, not attributed to intellectual, sensory, or learning conditions, or family care" (Ministry of Education, 2020, p.12).

**Student with Learning Disabilities:** "A student who exhibits clear academic and non-academic skill deficiencies, struggles with employing learning strategies, and is unable to keep up with peers academically" (Ministry of Education, 2020, p.14).

### Literature Review

Countries, societal institutions, and individuals strive to establish activities that focus on voluntary work and attract the wealthy and capable to support the poor, the sick, the needy, and the disabled within and beyond their borders. Voluntary work is a hallmark of social responsibility aim at elevating societies and nurturing their various aspects through the initiatives of individuals and groups, without burdening government institutions further (Al-Harthy, 2019). Global organizations have emerged to provide their services worldwide,

such as "Doctors without Borders," which offers medical assistance to patients, and "Habitat for Humanity," which aims to provide suitable housing for all. No country in the world is exempt from the need for voluntary work, as it holds immense importance for nations, institutions, and individuals. In recent years, the number of volunteers and volunteer organizations around the world has increased many times (Madryha et al., 2023). Volunteering contributes to achieving sustainable development (Al-Saadi & Al-Wabar, 2020).

Voluntary work emerged as a humanitarian endeavor since the beginning of creation, as a response to natural hazards that threaten human life, aiming to achieve a secure life suitable for mutual coexistence among individuals (Al-Fadala, 2021). Engravings on the walls of ancient Egyptian temples and tombs depict evidence of voluntary work aimed at assisting the poor and the needy. In Greek civilization, the wealthy cared for the poor and needy, and the state treasury organized social care for its citizens. In Roman civilization, voluntary work was offered from the aristocracy aiding the public, distributing wheat to the poor people (Al-Naeem, 2005). Religions also emphasized voluntary work and social cooperation. In Judaism, many texts from the Old Testament encourage voluntary work, with one of the Ten Commandments revealed to Moses stating, "Blessed is he who considers the poor; the Lord will deliver him in the day of trouble and open your hand to your poor and needy brother in your land." Similarly, in Christianity, texts encourage the care of the needy, "Through charity, give to him who asks of you, and do not turn away from him who wants to borrow from you." Islam introduced a comprehensive system of social care based on collaboration among people. Allah says, "And cooperate in righteousness and piety" (Quran, Al-Ma'idah: 2), and in the sayings of Prophet Muhammad, "He does not believe in me who sleeps with a full stomach while his neighbor goes hungry beside him, knowing (Al-Tirmidhi, 5038)." In modern times, Britain was the first to establish volunteer brigades to combat the "Great Fire of London" in September 1666. The United States was the first to organize voluntary work in the modern world, enacting a law in December 1737 to regulate voluntary firefighting in New York City (Al-Naeem, 2005).

In Saudi, voluntary work initially began as individualistic manner, guided by family and tribal dynamics. However, it took on a formal structure following the unification of the Saudi by King Abdulaziz, with the establishment of the

Charitable Ambulance Society in Mecca in 1354 A.H. Subsequently (Hamza, 2015). The Saudi has issued regulations and laws to govern voluntary work and the establishment of associations under the supervision of the Ministry of Labor and Social Development and endeavored to instill a culture of voluntary work through education, contributing to secure coexistence and stability within society. The domains of voluntary work have diversified to include education, healthcare, services for individuals with disabilities, social service, the elderly, widows, children, and some others. Additionally, the locations and sources of support for voluntary work are varied, encompassing governmental and public support both within and outside the Saudi. The importance of voluntary work and its development have been highlighted through Saudi's Vision 2030, aiming to increase the number of volunteers from 11,000 to one million by the end of 2030, with substantial females' participation (Al-Baqami & Al-Bardisi, 2021).

SLD constitute one of the most prevalent categories among students with special needs. Despite their need for assistance in overcoming academic challenges, they can offer community services and compensating for educational gaps, thus gaining the ability to manage themselves and assert their identities. Saudi has shown special concern for students with special needs, including those with learning Disabilities, aiming to enhance their level of independence so that they can be beneficial members of society (Ministry of Education, 2020). SLD includes three main categories: those with low academic skills, academically gifted, and with attention deficits (Ministry of Education, 2020, p.19). SLD exhibit strengths in spatial-visual and sensory-creative aspects, such as visual and spatial perception, tactile sensory experience, heightened awareness of the present moment, and singular thinking (Shaabani & Drissi, 2021). They excel in standardized tests measuring geometric shapes and image comprehension (Boucheix et al., 2014) and display spatial intelligence while having comparatively lower language abilities than peers (Andreou et al., 2013).

Voluntary work fosters a sense of duty, self-confidence, cooperation, communication skills, leadership skills, and social experiences (Mash'al, 2021), and reduces class and social disparities and cultivates a sense of belonging (Al-Saifi, 2019), and also participating in the community's betterment to achieve sustainable development (Al-Ghaith et al., 2020). For SLD,

voluntary work brings about positive changes in their personal aspects, leading to happiness, peace of mind, vitality, activity, positive human relationships, self-appreciation, societal adaptation, increased experience, boosted self-confidence, compensation for academic weaknesses, reduction of selfishness, and alleviation of negative feelings (Al-Thunayan, 2021), and meeting their natural needs, compensating for academic shortcomings (Al-Dosari, 2018).

Schools have a crucial role in fostering voluntary work by individuals through education, instilling a sense of duty, responsibility, and giving to others (Askar et al., 2017). The role of primary school is particularly significant in promoting voluntary work among students (Abo Skina et al., 2018). The primary stage is where concepts are formed; values and positive habits are developed, especially for SLD. Teachers encourage them to engage in voluntary work, participate alongside them, nurture positive attitudes towards it, and the curriculum promotes positive attitudes towards voluntary work through its subjects. School administration fosters voluntary work by organizing non-curricular activities.

Previous studies dealt with volunteer work from different aspects. The relationship between school administration and volunteer work (Al-Aklabi, 2019), the school administration contributes to enhancing volunteerism among female students (Al-Ghaith et al., 2020), the availability of leadership skills among students engaged in volunteer work (Al-Kalbani, 2020), the impact of school leadership on enhancing volunteerism (Al-Ghaith et al., 2020) and the school's role in developing a culture of volunteerism (Al-Saadi and Al-Wabar, 2020); (Belarbi and Zougai, 2021). Enhancing volunteerism culture among secondary school students (Al-Harabsheh, 2021) and understanding the influence of family, school, and friends on school students' volunteerism between the ages of 11-15 (Law et al., 2015). Some studies have investigated the relationship between the curriculum, educational activities, and the development of a culture of volunteerism in secondary school (Askar et al., 2017), the culture of volunteerism among intermediate-grade female students (Abo Skina et al., 2018), programs based on volunteering and extracurricular activities to reduce excessive activity among SLD (Abo Al-Rab, 2018), and the effectiveness of a program based on voluntary activity in academic achievement and students' attitudes toward volunteerism (Kasnawi, 2019). Al-Sobbahi (2016) studied the importance of

values related to volunteerism in social studies curricula, while Al-Bani, (2019) studied the requirements for developing volunteer work among secondary school female students. Additionally, methods of instilling volunteerism values among elementary school students have been investigated (Al-Dosari, 2018), and strategies to attract students to participate in volunteer activities (Al-Dawi, 2021).

**Literatures studies:** Some studies have addressed digital volunteer work (Park and Johnston, 2017), the relationship between digital volunteering and professional development in education (Al-Samiri, 2021), the importance and benefits of volunteer work, and volunteers' competition in achieving integration in entrepreneurship (Rolf et al., 2021), the reality of volunteer work for high school students (Barshid, 2019), students' understanding of the concept of volunteer work (Mash'al, 2021), the students' inclination towards volunteer work (Khaldi, 2022). Some studies discussed the attitudes of teachers towards volunteer work and its relationship with the social communication methods of SLD (Al-Thunayan, 2021), the role of teachers in promoting volunteer work among students (Al-Draei, 2021). Some studies also examined the obstacles to volunteer work (Al-Shuwaihat et al., 2019), the obstacles to achieving the educational dimensions of volunteer work (Al-Harbi, 2020), the obstacles to Saudi women's volunteerism (Suleiman, 2021), (Mousa, 2023) and (Al-Baqami & Al-Bardisi, 2021), and obstacles to participation in volunteer work among high school female students (Al-Kalib, 2023).

The current study aligns with some previous studies in terms of objectives, methodology, tools, and samples, but it is differed in the research topic, which none of the previous studies explored the perceptions of parents regarding the role of elementary school in promoting volunteer work for SLD and the challenges they face from the perspective of teachers. This distinction adds significance to the current study and fills a gap in the research field.

## Methodology

**Research Method:** The study employed a mixed-methods approach, utilizing qualitative methods through personal interviews with parents of SLD. Additionally, the study employed a descriptive-analytical method using a questionnaire to teachers of SLD. The study's population includes two groups: the first comprises all parents of elementary school SLD,

and the second includes all teachers of SLD in government primary schools in Al-Ahsa, Saudi. The total number of teachers is 165 (70 males and

95 females), based on statistics from the Education Directorate in Al-Ahsa for the year 2022. The study's sample as in Table (1).

**Table 1.**  
*The study sample*

	Variables	Categories	N.	%	Total
Parents' Sample	Gender	M.	10	50.0	20
		F.	10	50.0	
	Qualification	Below a university degree	7	35.0	20
		Having a university degree	11	55.0	
		Beyond a university degree	2	10.0	
Teachers' Sample	Gender	M.	38	38.8	98
		F.	60	61.2	
		<5	8	8.2	
	Years of experience	5< 10	29	29.6	98
		10<	61	62.2	

Table (1) shows that (55%) of the parents have a university degree and (10%) have a higher qualification than a university degree. The teacher sample were randomly, selected by an electronic link sent via email and WhatsApp groups for them. The response of females (61.2%) is higher than that for males. The response rate is highest among respondents with more than 10 years of experience (62.2%).

**Study Tool:** The researcher used two study instruments. The first was personal interviews, involved three open-ended questions for parents, inquiring about their perceptions of the roles of teachers, curriculum, and school administration

in promoting voluntary work for SLD. The second was a questionnaire, comprised closed-ended statements (Likert five-point scale), from "strongly agree" to "strongly disagree." The questionnaire focused on the challenges hindering the primary school's role in enhancing voluntary work for SLD, from the perspective of teachers.

**Tool Validity:** The expert validation, and the tool's validity has been calculated using internal consistency coefficients by assessing the relationships between the scores of each statement and the total score of the dimension it measures Table (2).

**Table 2.**  
*Correlation Coefficients Between the Score of Each Statement in the Questionnaire and the Total Score of the Respective Dimension*

Personal Challenges		Academic Challenges		Organizational Challenges	
N.	Correlation Coefficient	N.	Correlation Coefficient	N.	Correlation Coefficient
1	0.680**	8	0.774**	14	0.567**
2	0.815**	9	0.719**	15	0.629**
3	0.787**	10	0.722**	16	0.838**
4	0.639**	11	0.814**	17	0.797**
5	0.554**	12	0.676**	18	0.634**
6	0.683**	13	0.624**	19	0.726**
7	0.840**	--	-	20	0.785**
Total	0.889**	Total	0.918**	Total	0.916**

(\*\*) Significant at 0.01.

Table (2) demonstrates that the correlation coefficients between the statements and the corresponding dimensions are statistically significant at 0.01. This achieves the construct validity of the questionnaire.

**Tool Reliability:** The reliability of the questionnaire was calculated by using Cronbach's Alpha coefficient and Spearman-Brown reliability. The values for the three dimensions and the entire questionnaire are shown in Table (3).



**Table 3.**  
*The Reliability Coefficients for the Questionnaire Dimensions.*

Questionnaire Dimensions	Alpha coefficient	Spearman-Brown
Personal Challenges	0.837	0.702
Academic Challenges	0.813	0.701
Organizational Challenges	0.827	0.622
Total Questionnaire	0.925	0.897

Table (3) illustrates that the reliability coefficients for the total score of the questionnaire using Cronbach's Alpha method is (0.925), ranging from (0.813 – 0.837) for the dimensions of the questionnaire. The split-half reliability coefficient is (0.897), ranging from (0.622 – 0.702) for the dimensions of the questionnaire. These values indicate that the

questionnaire exhibits a high level of stability, making it dependable for obtaining reliable results.

The five-point Likert scale was used. Values and limits of the responses were determined based on Table (4).

**Table 4.**  
*Five-Point Likert Scale Values*

Response	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Grade	5	4	3	2	1
Response Category	Very high	High	Moderate	Low	Very low
Limit	4.2≥5	3.4≥4.2	2.6≥3.4	1.8≥2.6	1≥1.8

## Results and Discussion

**First question:** The researcher used a personal interview, consisting of three open-ended questions. Voluntary interviews were conducted after obtaining the participants' consent, through phone calls. Each interview took approximately 12 minutes, involving three stages. The first stage 2 minutes, included introducing the participants, explaining the interview's objectives, encouraging them to express their opinions freely, and emphasizing that the responses would

only be used for research purposes. The second stage 9 minutes presented the interview questions. The third stage 1 minute, concluded by thanking the participants.

The interviews have been documented during the interviews to prevent the loss of important information. The responses were transcribed, and the most frequently recurring ones were categorized into closely related groups, as shown in Table (5).

**Table 5.**  
*Parents' Perceptions (N=20) About the Role of Elementary School (teachers, curriculum, and administration) in Promoting Volunteer Work Among SLD.*

R	Questions	Responses	N.	%
1	What do you envision about the role of the teacher in promoting volunteer work for SLD?	Calculating grades for student volunteer participation.	20	100
		Training students on volunteer work models.	19	95
		Setting a good example for students in volunteer work and involving them.	17	85
		Encouraging students to take initiative in volunteering.	16	80
		Discussing volunteer-related issues that students may face.	15	75
		Building confidence in SLD for volunteering.	13	65
		Seeking students' opinions on suitable volunteer areas.	11	55
		Introducing students to volunteer organizations in the community.	7	35
2	What do you envision about the role of the curriculum in promoting	Cultivating positive attitudes among students.	19	95
		Raising awareness among students about the concept and importance of volunteering.	18	90
		Reviewing inspiring volunteer work models.	16	80
		Identifying suitable volunteer fields for students.	14	70

3	volunteer work for SLD?	Guiding students in utilizing their free time for volunteering.	14	70
		Promoting teamwork and community involvement.	14	70
		Nurturing students' creativity in volunteer activities.	12	60
		Providing students with practical training for volunteer activities.	6	30
		Establishing partnership agreements with community volunteer institutions.	20	100
		Hosting school counselors to address volunteer-related issues for students.	18	90
	What do you envision about the role of school administration in promoting volunteer work for SLD?	Conducting educational seminars on suitable volunteer activities for students.	17	85
		Organizing an exhibition of students' volunteer work within the school.	17	85
		Adopting a volunteer record for students.	16	80
		Supporting individual initiatives of volunteer students.	14	70
		Assisting students in participating in volunteer day events.	13	65
		Creating an appealing environment for students to engage in volunteering.	10	50

Table (5) illustrates the perceptions of parents that the most important role of teachers in promoting students' volunteer work is to assign grades for their voluntary participation. All parents agreed on this 100%. Introducing students to community volunteer institutions ranked last in importance. The most significant role of the curriculum is to shape positive attitudes among students, with 95% of parents agreeing on this. Providing students with practical training for volunteer activities ranked

last. The primary role of school administration is to establish partnership agreements with community volunteer institutions, with all parents agreeing on this 100%. Creating an appealing environment for students that enhances volunteer work ranked last.

Regarding the degree of importance of the role of teacher, curriculum, and administration in promoting volunteer work for SLD, Table (6) illustrates the participants' responses.

**Table 6.**  
*The Importance Role of Teacher, Curriculum & Administration*

R	Domain	Responses						Mean	A
		High		Moderate		Low			
		N	%	N	%	N	%		
1	Teacher	17	0.85	2	0.10	1	0.05	2.8	1
2	Curriculum	9	0.45	8	0.40	3	0.15	2.3	3
3	Administration	12	0.60	7	0.35	1	0.05	2.55	2

Table (6) shows that the role of the teacher came in the first place, followed by the role of school administration, and then the role of the curriculum.

**Second question:** To answer the second question, The researcher used frequencies, means, standard deviations, and ranks (Table 7).

**Table 7.**  
*Means, Standard Deviations, and Ranks of Teachers' Responses Regarding the Challenges to the Role of Primary School in Promoting Volunteer Work for SLD.*

First dimension: Personal Challenges					
Seq.	Item	Mean	St.D.	Level	Ranking
1	Lack of basic skills among students to engage in volunteering.	3.828	0.827	High	3
2	SLD have a limited awareness of volunteering.	3.688	0.924	High	6
3	Insufficient motivational incentives to encourage SLD to participate in volunteering.	3.922	0.860	High	1

4	Resistance of SLD families to involve their children in volunteering.	3.422	1.124	High	7
5	Parents of SLD prioritize academic achievements for their children.	3.875	0.787	High	2
6	Difficulty in time management for SLD.	3.703	0.903	High	5
7	Limited knowledge among SLD about volunteering.	3.750	0.960	High	4
All first dimensión		<b>3.741</b>	<b>0.653</b>	High	1
Second dimension: Academic Challenges					
8	Weak communication channels between the school and community institutions.	3.766	0.904	High	3
9	Conflict between volunteer hours and SLD learning time.	3.734	1.102	High	4
10	The negative impact of participation in volunteering on the academic performance of SLD.	3.016	1.076	High	6
11	A lack of activities that motivate volunteering for SLD.	3.641	.949	High	5
12	Emphasis on academic achievement in assessments at the expense of volunteering.	3.844	0.912	High	1
13	Narrowing the curriculum subjects' focus on academic achievement for SLD.	3.828	0.952	High	2
All second dimensión		<b>3.638</b>	<b>0.709</b>	High	3
Third dimension: Organizational Challenges					
14	The school's do not consider volunteer participation in the .assessment criteria for SLD	3.547	1.083	High	5
15	Insufficient training courses to foster a culture of volunteering among SLD.	3.984	0.882	High	1
16	Lack of appealing volunteer programs within the school for SLD.	3.922	0.931	High	2
17	Shortcomings in regulations governing the involvement of SLD in volunteering.	3.813	0.889	High	3
18	Difficulty in organizing volunteer exhibitions within schools.	3.537	1.140	High	6
19	The school administration lack of conviction in involving SLD in volunteering.	3.531	1.069	High	7
20	Absence of coordination between the school and families to organize volunteering for SLD.	3.797	0.839	High	4
All third dimensión		<b>3.734</b>	<b>0.688</b>	High	2
Total Questionnaire		<b>3.705</b>	<b>0.620</b>	High	

Table (7) illustrates that the average score of the importance of challenges to the role of the elementary school in promoting volunteer work for SLD is 3.705, indicating a significant level of challenges. The most prominent challenges are personal challenges with an average of 3.741,

following the organizational challenges 3.734, and academic challenges rank lowest 3.638.

The average score of the importance of personal challenges facing the role of the elementary school in promoting volunteer work for SLD, is 3.741, indicating a significant level of

challenges. The highest-ranked personal obstacle was statement (3) and (4) with an average of 3.922 and 3.875. On the other hand, statement (4) ranked last among the personal obstacle statements, 3.422, and statement (2) ranked second to last.

The average score of the importance of academic challenges facing the role of the elementary school in promoting volunteer work for SLD, is 3.638, indicating a significant level of challenges. The highest-ranked academic obstacle was statement (12) and (13) with an average of 3.844 and 3.828. Statement (10) ranked last among the academic obstacle statements, 3.016, making it the least significant academic obstacle. Statement (11) ranked second to last.

The average score of the importance of organizational challenges facing the role of the

elementary school in promoting volunteer work for SLD, is 3.734, indicating a significant level of challenges. The highest-ranked organizational obstacle was statement (15) and (16) with an average of 3.984 and 3.922. Statement (19) ranked last among the organizational obstacle statements, 3.531, making it the least significant organizational obstacle. Statement (18) ranked second to last.

**Third question:** To answer the third question concerning study variables (gender and years of experiences), the response is as follows:

1. Gender: Means and standard deviations have been computed for the scores of challenges faced by the role of the elementary school in promoting volunteer work for SLD, based on the gender variable. Table (8) presents the results of the Mann-Whitney test, indicating the differences between the two groups.

**Table 8.**

*Mann-Whitney Test (U) for Challenges to the Primary School Role in Promoting Volunteer Work for SLD According to the Gender*

R	Questionnaire Dimensions	Gender	N.	Mean	Sum of Ranks	U	Sig. (2-tailed)
1	Personal Challenges	M	38	24.65	320.50	229.50	0.087
		F	60	34.50	1759.50		
2	Academic Challenges	M	38	29.12	378.50	287.50	0.461
		F	60	33.36	1701.50		
3	Organizational Challenges	M	38	26.92	350.00	259.00	0.223
		F	60	33.92	1730.00		
Total Questionnaire		M	38	25.88	336.50	245.50	0.151
		F	60	34.19	1743.50		

Table (8) shows that there is no significant differences at ( $\alpha \leq 0.05$ ) for the entire survey and for each of the three dimensions individually according to gender.

2. Years of Experience: Kruskal-Wallis test has been used. Table (9) presents the results of differences between the three groups in terms of years of experience.

**Table 9.**

*Kruskal-Wallis Test Average Ranks of Teachers Estimates of the Challenges to the Primary School's Role in Promoting Volunteer Work for SLD, According to Years of Experiences*

R	Questionnaire Dimensions	Years of Experience	N	Mean	Chi-Square	Sig. (2-tailed)
1	Personal Challenges	5<	8	41.33	0.841	0.657
		5<10	29	33.53		
		<10	61	31.59		
2	Academic Challenges	5<	8	37.83	2.275	0.321
		5<10	29	38.13		
		<10	61	30.32		
3	Organizational Challenges	5<	8	41.67	7.055	0.137
		5<10	29	42.43		
		<10	61	28.66		
Total Questionnaire		5<	8	40.33	3.287	0.193
		5<10	29	39.00		
		<10	61	29.87		



Table (9) displays the results of the Kruskal-Wallis. There is no significant differences at ( $\alpha \leq 0.05$ ) for the entire questionnaire and its three sub-dimensions according to years of experience, and the challenges faced by the role of the elementary school in promoting volunteer work for SLD are present to a significant degree.

## Discussion of Results

**Question one:** Table (5) have revealed parents' perceptions regarding the role of the elementary school in promoting volunteer work for SLD. The most important role attributed to teachers has been the allocation of grades for students' volunteer participation. One participant mentioned, "My son needs to improve his academic grades, which would encourage him to engage in volunteer work." This implies that parents seek alternative ways to evaluate their children with learning Disabilities through engaging in activities. The assigning grades to students for their volunteer activities can enhance their engagement in volunteer work, which aligns with Abo Skina et al., (2018). Furthermore, the identification of students with volunteering institutions in the community has been ranked lowest. This could be attributed to the fact that volunteering institutions are well-known within the Saudi community and operate in a formal manner. One participant noted, "There are no charitable organizations operating outside the law or in secrecy". Parents attributed the most significant role of the curriculum to shaping positive attitudes among students. This aligns with the notion that volunteer work requires the cultivation of positive attitudes towards it. One participant emphasized, "The elementary stage is the most suitable for instilling attitudes in students", which is consistent with Al-Dosari (2018), Askar et al., (2017), and Al-Sobbahi (2016). The provision of practical training for volunteer activities has been ranked lowest. This might be due to the need for elementary school students to understand volunteer work through hands-on practice and teacher guidance, rather than relying solely on the curriculum as Al-Draei (2021). The most crucial role attributed to school administration has been the establishment of partnership agreements with community volunteering institutions. One participant stated, "Partnerships between volunteering institutions and schools provide an appropriate environment for volunteer work." This highlights the necessity of collaboration and synergy between community institutions and educational institutions to organize efforts and achieve goals, which aligns with Al-Ghaith et al. (2020). Creating an attractive environment for students

to enhance volunteer work was ranked lowest. This might indicate that students prefer to engage in volunteer work outside the school environment to develop their experiences and interactions with community institutions, which aligns with Al-Kalib (2023). Additionally, some roles mentioned by parents were individual in nature and could be included alongside the primary roles of the school.

Table (6) regarding the importance of the roles of school elements have revealed that teachers' role ranked first in terms of promoting volunteer work for SLD, as perceived by parents. This finding can be interpreted by the fact that the role of the teacher is one of the most crucial factors in promoting volunteer work among students. The other school elements depend on the teacher's performance, as the teacher has the most significant impact on students, which aligns with Al-Draei (2021), and Al-Thunayan (2021).

**Question Two:** Table (7) have revealed that the average challenges faced by primary school in enhancing volunteer work for SLD, from the perspective of teachers, was (3.705), indicating a significant degree of challenges. This finding aligns with Al-Halalat (2018), which highlighted the considerable challenges faced by schools and educational institutions in promoting volunteer work among students. Despite the contributions of school administration in fostering volunteer activities (Al-Shuwaihat et al., 2019), the results suggest that there exists a deficiency in planning and coordination among educational institutions concerning the promotion of volunteer work. Moreover, SLD often require specialized communication skills to effectively engage with them according to (Al-Thunayan, 2021). Additionally, it was found that volunteer activities might not be appealing to SLD (Al-Samiri, 2021). Furthermore, a major obstacle identified was the lack of clarity in objectives of volunteer work within educational institutions (Al-Harbi, 2020). Time management and opposition from families were also the challenges, especially for female students' participation in volunteer work in Saudi, where certain volunteer activities clash with the prevailing family culture in Saudi society (Al-Kalib, 2023), but Al-Ghaith et al., (2020) reported a high degree of school contribution to enhancing volunteering.

The results have further revealed that, according to teachers' perspectives, the greatest challenges facing the role of schools in promoting volunteer work among SLD were personal, organizational, and then academic challenges, with high level for

each. The prominence of these challenges can be attributed to the fact that volunteer work heavily relies on the efforts of individuals. Their willingness to engage in volunteer work depends on their understanding of its importance, their awareness, and the prevailing culture around volunteer work, which aligns with Mash'al (2021). The effectiveness of volunteer work relies on the support of teachers and school leadership, and the efforts must be made to address the challenges faced in volunteer work and encourage student engagement (Al-Draei, 2021), which emphasized the impact of educational methods on supporting student volunteering.

The results also have indicated that the most significant personal obstacle has been the lack of intrinsic motivation, which could be attributed to the unclear objectives and importance of volunteer work among participants (Rolf et al., 2021). Similarly, the limited role of teachers in promoting volunteer work for students has been highlighted (Al-Thunayan, 2021), although this differs from the findings of Al-Bani (2019), who reported the availability of requirements for developing a culture of volunteer work among secondary school female students.

Regarding academic challenges, the prioritization of tests and academic achievement over volunteer activities has been identified as a significant challenge. Elementary school tend to emphasize academic performance, and volunteer work might conflict with students' study schedules. Furthermore, parents' preference for academic achievement over volunteer work might discourage their children's participation (Al-Kalib, 2023) and (Al-Harbi, 2020). In terms of organizational challenges, the scarcity of training courses aimed at cultivating a volunteering culture was highlighted (Al-Ghaith et al., 2020). This reflects the school's focus on academic achievements rather than volunteer work, which align with Al-Harbi (2020), which highlighted the lack of clear objectives and philosophy of volunteer work in primary school. Similarly, the limited role of schools in promoting volunteer work was noted (Al-Harabsheh, 2021).

**Question Three:** Table (8) shows that there are no significant differences at ( $\alpha \leq 0.05$ ) for the entire questionnaire and its three dimensions concerning gender. This suggests the similarity of challenges faced by both male and female schools in Saudi regarding personal challenges, environmental and curricular challenges, and organizational and physical facilities challenges.

The absence of differentiation between male and female schools can be attributed to the fact that they both serve the same educational role according to the educational policy goals in the Saudi. The treatment of male and female students is equitable, and teachers from both genders hold the same bachelor's degrees from education colleges that offer identical programs. Additionally, this result could be interpreted as cultural elements having a similar impact on learning in both male and female schools in Saudi (Al-Ghaith et al., 2020). However, this finding differs from the results of Al-Kalib (2023), who find differences in the requirements of volunteer work between female and male students. It was suggested that proper care must be provided for females, possibly due to the conservative nature of Saudi society, which can lead to restrictions on female participation in activities that do not align with traditional roles.

Table (9) shows that there are no significant differences at ( $\alpha \leq 0.05$ ) for the entire questionnaire and its three sub-dimensions according to years of experience. This reaffirms the consensus among teachers that challenges facing primary school in promoting volunteer work for SLD are significantly present, regardless of the number of years of experience. This finding suggests that identifying the challenges does not necessarily require years of teaching experience, and all teachers contribute to enhancing volunteer work for students despite their varying levels of experience. This result aligns with Al-Draei (2021), but it contrasts with the findings of Al-Dosari (2018), who stated that methods of instilling volunteer work values in elementary students depend on teachers' experience and communication skills.

**Question Four:** The study proposes the following recommendations to enhance the role of elementary school for engagement of SLD in volunteer activities and development of a culture of volunteerism within the education system:

- Allocate grades for volunteer work within the assessment of SLD.
- Establish a file recording volunteer activities for SLD within their academic file.
- Design an incentives and attractive elements, to encourage SLD to participate in volunteer activities.
- Training teachers on strategies to overcome challenges faced volunteer work for SLD.
- Develop curricula to enhance volunteer work among SLD.
- Promote a culture of volunteerism within primary school.

- Allocate school activity hours for community-based volunteer work.
- Establish a department within educational administrations to provide consultations regarding volunteer work.
- Utilize the expertise of community institutions to address challenges to student participation in volunteer activities.
- Coordinate between school administration and the parents of SLD to encourage their participation in volunteer work.
- Organize an annual conference on volunteer work for students.
- Issuance of an annual guide covering all aspects related to volunteer work for students.

### Conclusions

As a results of the study of Parents' Perceptions of the Primary School Role in Promoting Volunteering Among Students with Learning Disabilities and Teachers' Perspectives on Challenges:

- The perceptions of parents highlighted the roles of teachers, curriculum, and school administration in promoting volunteer work for SLD, with the most significant role attributed to teachers.
- Significant challenges were identified by teachers, facing the primary school's role in promoting volunteer work for SLD.
- Personal challenges were the most significant challenges from the perspective of teachers regarding the primary school's role in promoting volunteer work for SLD, followed by organizational and academic challenges.
- There is no significant differences in the challenges faced primary school in promoting volunteer work for students according to gender and years of experience.

Regarding to further research, the researcher considers it necessary to make more studies about "digital volunteerism for students and its role in enhancing global citizenship", "factors influencing the engagement of SLD in volunteer work" and "the role of volunteer work for SLD in achieving sustainable development".

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## Military slang: Origin, structure and semantics

### Армійський Сленг: Походження, Структура та Семантика

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#### Abstract


The humankind has been facing different wars and military conflicts during its existence and development. In the current globalized world, the role of the military is very essential and obvious. Furthermore, military slang in English is of utmost significance due to the leading role of the military from various English-speaking countries. The aim of the following research is to identify and analyze military slangy words and phrases in English; to create the military slang phrases and words corpus; to make their semantic and structural characteristics analyses; and to explain their practical usage context. The methods applied in this research include linguistic analysis, which was utilized in the selection of military slang words and phrases applied in modern English; the word-building analysis, which helped in determining semantics and structural features of military words and phrases utilized in the English language; and linguo-cultural and socio-cultural analyses that allowed giving explanations of the UK and US military traditions, cultures, and vocabulary specific features. The specific characteristics of military slang are dynamism, exaggerated


#### Анотація


Протягом усього свого існування та розвитку людство стикалося з різними війнами та військовими конфліктами. У сучасному глобалізованому світі роль військових є дуже важливою та очевидною. Крім того, військовий сленг в англійській мові є надзвичайно важливим через провідну роль військових з різних англійських країн. Метою даного дослідження є виявлення та аналіз військових сленгових слів та словосполучень в англійській мові; створення корпусу військових сленгових словосполучень та слів; аналіз їх семантичних та структурних характеристик; а також, пояснення контексту їх практичного використання. У дослідженні використано такі методи, як лінгвістичний аналіз, за допомогою якого було відібрано слова та словосполучення військового сленгу, що вживаються у сучасній англійській мові; словотвірний аналіз, який допоміг визначити семантику та структурні особливості військових слів та словосполучень, що вживаються в англійській мові; лінгвокультурологічний та соціокультурний аналізи, які дозволили пояснити особливості військових традицій, культури та

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expression, broad usage by the military, and general familiarity. The military slang vocabulary units have the same formation ways typical of general English vocabulary, including meanings transfer (metaphor), abbreviation and acronyms, blending, affixation, conversion, shortening, and compounding.

**Keywords:** slang, military slang, word-building, metaphor, compounding, origin.

## Introduction

Due to numerous wars, armed conflicts and interventions that have been taking place in different parts of the world, the role of the military has become more and more evident and significant. Among the recent wars and conflicts are the Russian-Ukrainian war, Iranian-Israeli proxy conflicts, Armenia-Azerbaijani conflicts and others (Ero & Atwood, 2023). It is worth emphasizing that the United States of America in cooperation with the United Kingdom and other English-speaking countries has actively been participating in solving the above-mentioned issues. Thus, various security hyper-threats and the ways aimed at finding effective solutions to avoid world instability have attracted plenty of attention to the military field (Boulton, 2022, 92-93). Furthermore, for the researchers working in the linguistics and translation field, the English language, military terms, and military slang in particular are of intense interest. Numerous military acronyms, abbreviations, as well as slangy words and phrases are widely used by the military in different settings, military-related reports, speeches, and mass media news. Therefore, military slang in the English language should thoroughly be studied considering the current state of affairs occurring in the world.

The **aim of the research** is to create the corpus of military slang words and phrases; identify and classify them in the English language; to analyze their structural and semantic features; and to explain the context of their application.

We collected **the corpus of the research** from the following sources: *Military Slang Dictionary* (n.d.); *Military.com* (n.d.); *War Slang: American Fighting Word and Phrases since the Civil War* (2004) by Dickson, *DOD. Dictionary of Military and Associated Terms* (2021); *Tommy French: How British First World War Soldiers Turned French into Slang* (2021) by Waker; *Soldiers'*

лексики Великої Британії та США. Специфічними рисами військового сленгу є динамічність, перебільшена експресія, широке використання військовими та загальновідомість. Лексичні одиниці військового сленгу мають ті ж самі способи творення, що й загальноживана англійська лексика, зокрема перенесення значення (метафора), аббревіація та акроніми, блендінг, афіксація, конверсія, скорочення та словоскладання.

**Ключові слова:** сленг, військовий сленг, словотворення, метафора, словоскладання, походження.

*Songs and Slang of the Great War* (2014) by Pegler.

## Theoretical Framework and Literature Review

Slang is defined as a non-linguistic and non-standard additional lexical system that presents expressive and valuational, usually stylistically marked names of the generally accepted and known concepts (Jones, 2018, 233; Sun, Zemel, & Xu, 2021, 462; Pedlar, Thomson, & Castro, 2019). It belongs to a specific social subculture within the national language (Uwen & Mehnsa, 2022, 91-92). In the majority of cases, scholars use different adjectives with the term *slang*, which narrows down its meaning and clearly shows its field of application, e.g. *military slang* (including *radar slang*, *Air Forces slang*, *English Army slang*, *American Army slang*, *war slang*), *teenage slang*, *business slang*, *SMS slang*, *computer slang*, *prison slang*, *sex slang*, etc. (Shevchuk & Klymenko, 2011; Jones, 2018; Fajardo, 2019). Slang is not considered to be the form of language existence as it does not have its specific phonetic and grammatical levels and is based on each national language peculiarities (Hanaqtah, 2019). Many researchers indicate that various mass media means, as well as mobile platforms and applications assist in wide-spreading and using slang, in our case, military one (Yusuf, Fata, & Aini, 2022, 167).

In this research we regard military slang as an essential part of slang used in the English language, which is applied by the US and UK military to denote various military concepts. However, it is of great significance to take into account that there are many obvious differences in the military terms' usage by representatives of the US, UK and other English-speaking states (Dickson, 2004; Waker, 2021).



Military slang comprises almost all military life areas. All the weapon types, equipment, property types, military ranks and professions, military events and actions, armed forces types, food and drinks, uniforms, interpersonal and professional relationships, and many other aspects do have their specific names in informal and formal languages. The following tendency occurs due to the necessity to have simple, original and specific names for various concepts and objects in the professional and private life of the military professionals.

### Methodology

The methods used in this research are as indicated below:

- Linguistic analysis was applied to select military slang words and phrases used in the modern English language;
- Socio-cultural and linguo-cultural analyses assisted in explaining the US and UK military cultures, traditions, vocabulary peculiar features, and others;
- Word-building analysis was utilized to determine structural and semantic features of military slang words and phrases used in the modern English language;
- Etymological analysis was used to explain the origin and reconstruct the inherent images that are the basis of the nominal units.

### Discussion and Results

#### *Semantic Word-building Processes Applied to Form Military Slang Words and Phrases*

**Metaphor.** Metaphors based on the associations with realities and processes or with the objects of everyday domestic sphere reflect both positive and negative evaluative modality, as they are mainly means of expressing emotive shades of meaning. The most numerous are the metaphors of clothes and shoes. The lexeme *boot* entered the military slang with the meaning of *a Navy or Marine recruit*. The term is thought to come from the leggings that newly recruited sailors used to wear during training, which were called *boots*. (Since colonial days, Americans have been using the word *boot* to mean footwear reaching to the knee). The nomination has expanded its semantics to general naming someone lacking in experience. The derived word combinations also belong to the bottom of the connotative semantic differential *scale*: *boot shark* (a female who preys on new recruits); *boot Lt.* (A brand-new officer who is terrible at just about everything,

especially land nav, and is oblivious to how boot they are); *salty boot* (a boot who has a non-combat deployment). The lexeme acquires a neutral meaning to give a certain characteristic to the footwear: *Mickey Mouse boots* (cold weather boots) (Military Slang Dictionary, n.d.).

Other very commonly used slang words are a *sock* and a *shoe*. For example, the expression *fresh socks* has two meanings, the second of which arises from the first and metaphorizes the change of socks as a complete change of events on the battlefield:

*“Putting new socks on after a long day in the field. A complete game changer”* (Military Slang Dictionary, n.d.).

The expression *gum shoe* is used to refer to a military naval rank – Cryptologic, technician rated sailor (Military Slang Dictionary, n.d.).

The dominant lexeme, by adding a certain meaningful word, forms a compound that gives a certain characteristic of the footwear: *shower shoes* (flip flops or sandals worn in the shower to avoid any number of nasty things you might pick up in the communal showers), *crooked shoes* (footwear cut for right and left feet. Such shoes were provided to Union soldiers, many of whom, prior to enlisting, had only worn two shoes cut identically (Military Slang Dictionary, n.d.).

The word *crusher* (hats worn by pilots during World War II) is formed by association with the way hats were worn. The hat's wide top brim would need to be crushed down to allow for headsets to be worn. A parachute is metaphorically referred to as an *overcoat* (Urban Dictionary, n.d.). On the basis of sound similarity, a nominal unit *cammys* is formed that is used to name camouflage utility uniform and what are referred to as *The Battle Dress Uniform* (BDU) or a *camouflaged combat uniform* in the Army and Air Force (Dickson, 2004, 303).

The word combination *slick sleeve* is used to designate an airman basic. According to the Urban Dictionary (n.d.), it is used in the Army since the introduction of the ACU uniform, when a soldier has not yet been deployed overseas and lacks the combat patch on their right shoulder sleeve.

Concluding the analysis of the clothing metaphor, it is evident that the vast majority of the slang words used are emotive in nature. The detailed structure of the correlative domain, its closeness and comprehensibility to a person

create favorable conditions for high productivity and pragmatic potential of this type of artifactual metaphors.

**Anthropomorphic metaphor.** In linguistics, anthropomorphic metaphor plays a key role in the process of the surrounding reality mental structuring. A person has fixed his or her physical image, internal states, emotions and intelligence, attitude to a certain object. Almost every word mirrors a person. Human thinking and consciousness are inherently anthropocentric and capable of cognizing the outside world in close association with personal experience. Thus, anthropomorphic metaphor turns out to be one of the most productive types of metaphor in the military slang. As a result, the anthropomorphic metaphor is based on the comparisons of phenomena and processes of the military world and realities with anatomical, physiological and psychological qualities of a person, which is reflected in the basis of the metaphorical model MILITARY REALITY IS A HUMAN ORGANIZATION. For example: *bone* (a B-1 bomber); *fangs* (a Marine Corps term for one's teeth); *strawfoot* (a rural or backwoods soldier (as if he still had straw on his shoes)); *doughfoot* (an infantryman) (Military Slang Dictionary, n.d.; Dickson, 2004; Pegler, 2014; Waker, 2021). According to *The New York Times* of December 10, 1944, the term *doughfoot* alludes to the disagreeable, even miserable, conditions endured by the infantryman because of mud (Dickson, 2004). *Slicksleeve* refers to a private, the lowest Army rank, which is normally held only by new recruits while at Basic Combat Training (BCT). However, the rank occasionally is assigned to soldiers after a disciplinary action has been taken (Dickson, 2004, 330).

**Allusive phenomenon metaphor.** A special group of anthroponymic slang words or phrases are allusive phenomenon metaphors. Scholars interpret the term *allusive phenomenon* as the broadest in meaning, since allusive phenomena as a notion cannot be designated by any single linguistic category – a word or phrase, sentence, phraseology, cliché, metaphor, etc (Torczynska, Shymanska, Gontsa, & Dudenko, 2021). However, there is no unanimity in its interpretation. Military slang often uses expressions based on the latter. Without knowledge of certain historical figures, folk heroes or legend characters, it is hardly possible to understand the meaning of a certain word or expression. An allusive name is an individual name associated with either a well-known text or an allusive situation. It is a kind of a complex sign, when used in communication, it appeals not

to the actual denotation (in other terminology – referent), but to a set of the given allusive name differential attributes. In the military slang it may consist of one or more elements, thus denoting a single concept. For instance, *Jawa* is a term for an Army Soldier who is stationed in a desert area, named after the desert-dwelling aliens of *Star Wars* (Military, n.d.).

*Joe* is an army term for a soldier shortened from G.I. Joe (Military, n.d.). *G.I. Joe* is one of the numerous American media franchises and a line of the best-known action figures owned and produced by the toy company Hasbro. The initial product offering represented four of the branches of the U.S. armed forces with the Action Soldier (U.S. Army), Action Sailor (U.S. Navy), Action Pilot (U.S. Air Force), Action Marine (U.S. Marine Corps) and later on, the Action Nurse. The name is derived from the usage of *G.I. Joe* for the generic U.S. soldier, itself derived from the more general term *G.I.* The development of G.I. Joe led to the coining of the term *action figure*. G.I. Joe's appeal to children has made it an American icon among toys (Logos-World, n.d.).

The nominal unit *Sad Sack* derived from the comic book series hero name the "The Sad Sack" by American artist George Baker about the adventures of an unlucky soldier; *Andrew Jackson* "military police", where *Andrew Jackson* is a hero of US folk legends, a skilled marksman who always hits the target, and the emblem of the military police is crossed pistols; *Billy Brown* "a soldier", *William* is the most popular name among the British, so is the surname *Brown*. According to the same model, the following slang units are formed: *Jerry* (a German); *Jock* (a Scotsman); *Davie Jones* (a sailor or pilot who is in the water without a life jacket (Military Slang Dictionary, n.d.; Military, n.d.; Dickson, 2004; Pegler, 2014; DOD, 2021; Waker, 2021). According to Dickson (2004), *Davie Jones* is the spirit of the sea or the sailor's devil. There is the possibility that the name originated, as a corruption of *Devil Jonah*, or possibly *Duffy Jonah*, where *duffy* being a British West Indian word for the devil), *Fanny Adams* (zero visibility, a lie), *Naked Fanny* (Nakon Phanom air base), in Thailand (Military Slang Dictionary, n.d.; Dickson, 2004; Pegler, 2014; DOD, 2021; Waker, 2021).

Military personnel often use the real people and fictional heroes' names, for instance, *Jack Johnson* (a heavy artillery, large-caliber projectile). The notion derived from the famous boxer's name of the first African-American

world champion Jack Johnson (Dickson, 2004, 72). The two following names entered the military slang from cartoons: *Donald Duck* (a floating tank; a floating car); a special duplex drive (DD), which is installed on such vehicles, hence the name *Donald Duck* appeared, and *Mickey Mouse* (an educational film shown to soldiers) (Dickson, 2004). In this case, the name emerged due to the similarity to Mickey Mouse cartoons shown to children (Dickson, 2004, 188).

*Gun Bunny* is an ironic name for an artilleryman (similar to *Bugs Bunny*, a cartoon character known for his stupidity and ridiculous actions) (Dickson, 2004, 274).

*Ali Baba* is referred to an enemy soldier (Military Slang Dictionary, n.d.). The following combination became popular after the Gulf War against Iraq.

Nominal unit *Jesus Slippers* (military-issued shower footwear) is associated with Christian beliefs (Military, n.d.).

Some allusive names in military slang are often formed by means of alliteration, including *Bouncing Betty* (a mine that bounces after being stepped on to cause greater damage to the enemy); *Tommy* or *Tommy Atkins* (a name for the British common soldiers); *Joe Jump* (a parachutist); *Peeping Tom* (surveillance equipment), and others (Military Slang Dictionary, n.d.; Dickson, 2004; Pegler, 2014; DOD, 2021; Waker, 2021). Furthermore, the expression *Peeping Tom* is also based on the meaning “a curious prying fellow” (Etymonline, n.d.).

*Sobbing Sister* is used to name “a mine fired from a mortar”. It is worth noting that the term *sob sister* dates to 1907, when the women reporters who were covering the trial of Harry K. Thaw for murder were condemned (Proquest, n.d.).

**Metaphor of nature.** Wildlife occupies a significant place in the worldview of military personnel, and ideas related to it are reflected in numerous slang nominal units. Zoomorphic metaphor correlates birds and animals with the military realities: *a bird* – slang word for a helicopter (Dickson, 2004, 236, 338) and *a hawk* – a term for cold weather (Dickson, 2004, 311). The metaphor is connected with African beliefs where *Hawk* or *Hawkins* is an African-American vernacular term for a cold, biting wind.

*Mustang* is the term referring to any officer who was promoted from the enlisted ranks (can be

used respectfully or pejoratively,) *a snake eater* (a Special Forces soldier; also known as a tree eater); *a whale* (a tanker in the gulf), *zebra* (an N.C.O. in the higher grades (E-6 to E-9) and others (Dickson, 2004). The term *zebra* alludes to the number of insignia stripes on the sleeves.

*Trench monkey* is a term given to underpaid, and over qualified archaeological field technicians who work in Cultural Resource Management (Urban Dictionary, n.d.);

Slang word *to fang* is a verb used to describe a person being rebuked, called out, or otherwise disparaged. The word has a negative connotation and originates from the Old English *fang* (prey, spoils) (Etymonline, n.d.).

*Grape* is a plant metaphor with two meanings: one for the Air Force, where it refers to an easy assignment, and can be used as a compliment when a service member makes something look easy and the other is for the Navy, where it is utilized to characterize an individual who refuels aircraft (Military, n.d.).

Another common metaphorical group are action metaphors that are mainly nouns used in military slang to specify the way of action, for example, *cannibalize* (to take workable parts of one item and use them in another); *dust-off* (to organize a medical evacuation by helicopter); *expectant* (a casualty that is expected to pass away); *crank* (a navy term for a sailor pulling temporary duty in the galley) etc. (Military Slang Dictionary, n.d.; Dickson, 2004; Pegler, 2014; DOD, 2021; Waker, 2021). Jamieson's Scottish dictionary (1825) underlines a secondary sense of the word “hard, difficult” as in *crank word* (a word hard to be understood); *crank job* (a work attended with difficulty, or requiring ingenuity in the execution) (Etymonline, n.d.). *Gofasters* is a term for sneakers used in the Army, Navy, and Marine Corps (Military, n.d.); *kinetic* is a slang adjective meaning violent; *klicks* – kilometers, where a *kick* means a blow or thrust with the foot; *swoop* – marine term for a weekend trip off base (Military, n.d.). The etymology of the word *swoop* dates to the 1560s “to move or walk in a stately manner”, meaning “pounce upon with a sweeping movement” first recorded in the 1630s (Etymonline, n.d.). *Zoomie* is a term used by non-flying servicemembers for anyone who operates a flying vehicle. *Zoomie* is the act of an animal running around, sometimes in circles, in a very energetic way (Cambridge Dictionary, n.d.).

The word *creepers* has several meanings: (1) lice, (2) the feet, (3) soft-soled shoes, symbols

usually included (Cambridge Dictionary, n.d.; Etymonline, n. d.; Dickson, 2004, 145).

The term *comics* is used to describe maps presented by military intelligence. The term is fairly derogatory in nature as a slight against the accuracy of the maps. It also refers to the brightly colored layouts (Military, n.d.).

The semantics of the main as opposed to the secondary is embodied in the gastronomic nomination *gedunk* that is referred to snack foods, such as candy and chips, as well as the place they are sold. The following term is usually associated with the Navy, and may be utilized in the phrase *gedunk sailor* as a pejorative remark for inexperienced sailors (Military, n.d.).

A metaphor for natural phenomena is the nomen *smoke* that is used with the meaning “to punish a service member with excessive physical work due to a minor infraction” (Military, n.d.).

#### **Structural Word-building Processes Used to Form Military Slang Words**

**Compounding** is one of the word-building processes when one or more affixed or structurally simple words are combined to form new ones, for example, *bulkhead* (the interior divider of a ship); *sea daddy* (a senior sailor who mentors junior ones); *wingnut* (a member of the US Air Force); *glamour hat* (a helmet); *waterwalker* or *waterdog* (marines whose duty is to purify water); *Tony Hawk* (a nickname for soldiers who are excellent at avoiding any kind of work); *soup sandwich* (a situation when a person gets into a mess); *tag chaser* (a girl chasing soldiers to marry them); *slave suit* (a military uniform); *pickle suit* (a green flight suit that looks like a pickle); *pizza box* (the lowest marksman badge for a Marine shooting rifle or pistol); *hurricane party* (a party held in the barracks during the hurricane when the military base is locked down); *jungle juice* (a mix of different types of alcoholic drinks that makes people fully intoxicated at the party); *tail-end Charlie* (the last aircraft in the formation); *picture show* (a big battle); *alphabet job* (an easy task); *rest camp* (a cemetery) and many others (Military Slang Dictionary, n.d.; Military, n.d.; DOD, 2021; Pegler, 2014; Waker, 2021).

The word *firewatch ribbon* is used to name the medal of the National Defense Service. It is awarded to all military members during the wartime events (Military Slang Dictionary, n.d.). In this word *firewatch* is referred to the guard

duty that all military members do while they are at bootcamps (Etymonline, n.d.).

A *small ticket* is used in reference to a dishonorable discharge from the US Navy, whereas a *big ticket* is used when an honorable discharge is awarded (Dickson, 2004, 42).

A *bird* or *chicken colonel* is a military rank designated by a silver eagle on each colonel's shoulder. When a colonel has such a rank, he or she is regarded as a full colonel (Dickson, 2004, 140).

*Fruit salad*, *salad bar*, or *chest candy* refers to colorful and bright chest decorations. Usually, soldiers have a great number of battle stars and service ribbons worn on the uniform jacket left side (Dickson, 2004, 160; Military Slang Dictionary, n.d.).

**Affixation**, including suffixation, prefixation, or both, is frequently utilized to form military slang words in the English language. For instance, the suffix *-ie*, which has a derogatory meaning, is widely used to create military slang words: *digie* (digital camouflage worn by marines and soldiers); *swabbie* or *squidie* (*squidee*) (affectionate terms utilized by other service branches members in order to describe members of the US Navy); *brownie* (a Navy term applied to name paper towels or any paper of the brown color); *woobie* (known as a poncho liner, which is one of the military equipment pieces, such as pillow, sleeping bag, blanket, etc.; *uniform groupie* (a person following people wearing a specific uniform); *man jammies* (the robes worn by the men from the Middle East, which are similar to pajamas); *doolie* (a freshman at the USAF Academy); *dixie* (a cooking pot used in the field kitchen); *hickie* (anything whose name people cannot remember); *bunkie* (a person who shares a shelter or a bunk) (Military Slang Dictionary, n.d.; Military, n.d.; Dickson, 2004; Pegler, 2014; DOD, 2021; Waker, 2021).

The slang word *wook* or *wookie* is applied to name a female marine in the US Army Forces. There are two reasons why females are referred to in such a way. The slang word *wook* stands for the acronym *Women Outside of Kitchen*. The second reason is that according to grooming standards, women are allowed to have long hair, which is very similar to a specific hero from *The Star Wars Series*, *wookies* (Military Slang Dictionary, n.d.).

The word *crunchie* is used to name the infantry when they are on the ground. The following



nickname originates from the crunch noises the infantry produces when vehicles run over them (Dickson, 2004, 268).

The suffix **-er (-or)** is considered the most productive suffix in English (Etymonline, n.d.). This suffix has several meanings in the English language – 1) *the doer of the action* – *eagle keeper* (F-15 maintainer crew chief); *goopher* (a highly competent and experienced airman); *gravel or mud cruncher* (an infantryman); *pill roller* (a hospital corp); *side-kicker* (a sleeping companion); *top cutter* or *top kicker* (a first or top sergeant); *woobler* (an infantryman); *youngster* (a first or second lieutenant); *apron chaser* or *jumper* (a seducer); *arm-dropper* (an artillery man who gives a signal to start firing the gun by dropping his or her raised hand); *chuck spoiler* (a cook); *evader* (a person who is isolated in unfriendly or hostile territory who manages to elude capture); *snake eater* (members of US Army Special Forces); *base operating support-integrator*, also known as *BOS-I*, (the joint task force commander assigned to synchronize all functions and actions for a contingency base) (Military Slang Dictionary, n.d.; Military, n.d.; Dickson, 2004; Pegler, 2014; DOD, 2021; Waker, 2021).

2) *the object* utilized to perform some actions – *cum-dumpster* (a mouth); *digger* (knife, fork and spoon); *donut launcher* (a device fitting on the end of the M16 rifle that fires donut-shaped rubber bullets used to control riots); *sicker* (a sick report from the doctor); *go-fasters* (tennis shoes); *goat locker* (a room for Chief Petty Officers); *goldbricker* (a shrinker); *pinger* (an anti-submarine helicopter); *scabliker* (medical branch rating) etc. ((Military Slang Dictionary, n.d.; Military, n.d.; Dickson, 2004; Pegler, 2014; DOD, 2021; Waker, 2021).

**Abbreviations** and **acronyms**, which are considered ones of the types of shortening, are widely used in the military field. The vivid abbreviations and acronyms examples used by the US and UK military are as follows: *CW* (chemical warfare); *F3EAD* (find, fix, finish, exploit, analyze, and disseminate); *KFS* (Knife, fork, and spoon); *RAM* (random antiterrorist measure); *GOBI* (General Officer Bright Idea); *NEST* (nuclear emergency support team); *PRISM* (planning tool for resource, integration, synchronization and management); *BOHICA* (Bend Over Here It Comes Again); *QRF* (Quick Reaction Force); *FOUO* (for official use only); *CHU* (Combined Housing Unit); *COP* (Common Operation Picture); *RHIP* (Rank Has Its Privileges); *BOLO* (Be on the Lookout); *NLT*

(No Later Than); *SMIT* (Senior Marine in Training); *WTI* (Worse than Iraq); *LALO* (Low Altitude Low Opening); *LRA* (Lowest Ranking Airman); *ND* (Negligent Discharge); *PNN* (Privates News Network); *TNT* (Tactical Nap Time) etc. (Military Slang Dictionary, n.d.; Military, n.d.; Dickson, 2004; Pegler, 2014; DOD, 2021; Waker, 2021).

The abbreviation *BGB* (Big Grey Boat) refers to large battleships or carriers that are usually grey in color (Military Slang Dictionary, n.d.).

The acronym *CAR* (Combat Action Ribbon) is earned by soldiers during the combat (Military Slang Dictionary, n.d.).

The acronym *M.A.R.I.N.E.* stands for Muscles Are Required, Intelligence Non-Essential. It is used to name a member of the US Marine Corps (Military Slang Dictionary, n.d.).

The other acronym *GUPPY* (Greater Underwater Propulsive Power) refers to the class of the streamlined submarines of the US Army (Military Slang Dictionary, n.d.). Thus, it is obvious that acronyms and abbreviations are frequently used to form military slang words and phrases in the English language.

**Blending** is a type of word-building where the terminal or initial segments of the words are joined to form a new word, for example, *comint* (communications + intelligence); *rescap* (rescue combat air patrol); *polmil* (political + military); *comnet* (communications + network); *pvnmed* (preventive + medicine); *conus* (continental United States); *polad* (policy advisor); *orbat* (order of battle); *coop* (continuity of operation); *optar* (operation target); *resprod* (responsible + production); *netwarcom* (naval network warfare command); *navspecwarcom* (naval special warfare command); *infltrep* (inflight + report); *geoint* (geo-spatial + intelligence); *exord* (executive + order) and others ((Military Slang Dictionary, n.d.; Military, n.d.; Dickson, 2004; Pegler, 2014; DOD, 2021; Waker, 2021).

*Femarmes*, also known as *leather nectarines* or *jungle Juliets*, comprises words female and marines. It is worth noting that the Marines insist that any gender or sex discrimination should be avoided. Thus, the term *Marines* is to be applied in reference to females (Dickson, 2004, 155).

The word *alloreq* (allocation + request) names a daily message that is aimed at providing the total air effort estimate, as well as identifying any joint and excess force general support sorties and

unfilled air requirements for any pre-planned missions (DOD, 2021).

A *phibron* (amphibious + squadron) refers to an administrative and tactical organization comprising amphibious warfare ships applied to transport military equipment and soldiers for amphibious operations. In its turn *phibop* (amphibious + operation) is an operation that is launched from the sea by military forces to conduct force operations within the littorals (DOD, 2021).

A *casevac* (casualty + evacuation) is used to name different unregulated casualty movements that may comprise movements between or to medical treatment facilities (DOD, 2021).

*Colpro* (collective + protection) is the protection given to the individuals that allows relaxation of biological, chemical, nuclear and radiological protection (DOD, 2021).

**Shortening** belongs to one of the word-building processes when initial, final or sometimes both elements of the word are omitted or deleted on purpose, for instance, *cad-idiot* (an idiot cadet); *Civ Div* (civilian division or being a 100% civilian); *K-pot/helmet* (Kevlar pot/helmet); *Septar* (Seabourne-powered target utilized for training); *civi*, *civy* or *civvy* (civillian); *helo* (a helicopter); *unsat* (unsatisfactory used to describe facilities or people that are not up to par); *sigint* (signal intelligence); *night op* (a night operation); *ammo* (ammunition); *chute* (parachute) and others (Military Slang Dictionary, n.d.; Military, n.d.; Dickson, 2004; Pegler, 2014; DOD, 2021; Waker, 2021).

The word *bro-vet* (a veteran who always lets other people know that he or she is a veteran and expects that he or she must be honored for his or her military service) derives from *brother-veteran* (Military Slang Dictionary, n.d.).

*Commo* (communication) is referred to different types of communication equipment or the communication officers on the US battleships. In the above-mentioned cases, the final elements of the words are omitted (Military Slang Dictionary, n.d.).

*G-suit* or *anti-g-suit* originates from nouns gravity or anti-gravity and suit. The Air Corps have been using such suits so that pilots do not lose their consciousness while on duty (Dickson, 2004, 170).

Thus, it is evident that such types of word-building as affixation, abbreviations / acronyms, blending, and compounding are turned out to be productive in creating slang words and phrases in the English language.

**Conversion** is a type of word-building (also known as zero derivation) when the word belonging to one part of speech can become the other part of speech, for instance, *to ditty-bopper* (used to describe soldiers who march out of synch with a cadence); *to spearhead* (to lead other people); *to goldbrick* (to evade duties); *to pancake* (to land flat); *to pink* (to strike with a bullet); *to police* (to clean up); *to soldier* or *to officer* (to serve); *to solo* (to fight alone); *to strip* (to reduce in rank); *to taxi* (to drive a plane along the ground without rising in the air or to acquire the need speed to take off); *to washout* (to fail); *to bomb* (to study quickly and persistently); *to brief* (to instruct in regard to the up-coming operations); *to depot* (to supply); *to dust off* (to evacuate); *to hat up* (to change one's location); *to ruck up* (to get through a very challenging or difficult situation) and others (Military Slang Dictionary, n.d.; Military, n.d.; Dickson, 2004; Pegler, 2014; DOD, 2021; Waker, 2021). As evident from the corpus of the research, the majority of words have become the verbs and are used to name different actions and processes performed by the military. In some case, we observe the change in the meaning of the military slang words.

## Conclusions

Slang is one of the most interesting and, at the same time, complex language phenomena. Among linguists there is still no unified point of view on both etymology and understanding of the term's essence and its place in the lexicon system.

The distinctive features of slang in general and military slang, in particular, are exaggerated expression, dynamism, general familiarity and broad usage within the military society. Interpreting military slang will always be challenging. Due to the fact that it is dynamically developing and being updated, any dictionary and reference books devoted to the problems of military slang will inevitably "lag behind" reality. Therefore, in order to provide an adequate interpretation of specific military words and phrases, the linguists will definitely need a rather profound knowledge of military routine, army regulations and traditions, the structure of military units, their tactics, weapons and military equipment used and so on.

The knowledge of the slang expressions applied by army personnel is also of great importance, as the use of such language units can significantly improve the military reality image presented to general auditory.

The military slang vocabulary units have the same formation ways that are characteristic of general vocabulary (transfer of meanings (metaphor), blending, shortening, conversion, affixation, abbreviation and acronyms, compounding, etc.).

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## Functions and principles of creating quality information support for the educational space of higher education institution

### Функції та принципи створення якісного інформаційного забезпечення освітнього простору закладу вищої освіти

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#### Abstract


The article reveals the main provisions and shows the necessity of informatization of the educational space of the higher school at the current stage. The purpose of the article is to show the necessity and to define the main provisions of the informatization of the educational space of the higher school at the current stage to ensure the quality education of those seeking education. The methodology of the article characterizes the totality and connection of the following methodological techniques: competence, acmeological, systemic, interdisciplinary, personal-activity, comparative, prognostic; methodological principles of research; patterns of educational and professional activity; global trends in the development of informatization of the educational space of a higher school to ensure quality education of education seekers; trends of globalization. The article reveals the


#### Анотація


У статті виявлено основні положення та показано необхідність інформатизації освітнього простору вищої школи на сучасному етапі. Метою статті є показати необхідність та визначити основні положення інформатизації освітнього простору вищої школи на сучасному етапі для забезпечення якісної освіти здобувачів освіти. Методологія статті характеризує сукупність і зв'язок таких методичних прийомів: компетентнісного, акмеологічного, системного, міжпредметного, особистісно-діяльнісного, порівняльного, прогностичного; методологічні принципи дослідження; закономірності навчально-професійної діяльності; світові тенденції розвитку інформатизації освітнього простору вищої школи для забезпечення якісної освіти здобувачів освіти; тенденції глобалізації. У статті розкрито вимоги інформатизації освітнього простору вищої школи,

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requirements for informatization of the educational space of a higher school, lists the advantages, shows the main positions of the teacher's role in creating an informational educational space using computer technologies. The most important educational areas of high-quality education of education seekers with the help of informatization of the educational space of the higher school during pedagogical interaction, which create decent conditions in educational activities, are singled out.

**Keywords:** institutions of higher education, informatization of the educational space, students of higher education, information technologies, functions and principles.

### Introduction

The modern world, in the conditions of competition in all spheres, and globalization of social life, attaches primary importance to higher education, and modern educational technologies that contribute to the successful innovative development of the state. With such innovations in development, the main condition of the new paradigm of higher education should be the modern formation of the knowledge economy. At the same time, this increases the importance of higher education and complicates the task of innovative qualified training of future competitive specialists who support and shape the image of the institution of higher education in which they learning and contribute to its development in the educational space of the modern world. Therefore, it is necessary to create:

- an innovative environment, a special information system, which includes information resources and contributes to their actualization;
- an educational system that allows technological stages of learning, provides an opportunity to integrate with other systems, use other banks of information, to give new content to the educational process, which embodies the modern realities of the information society. Such goals in a higher education institution can improve the information and educational environment, which makes it possible to make the transition to an educational open system and improves its technological base (Yashchuk, 2021).

The higher school initiates the improvement of the competitiveness of its graduates in the labor market and constantly contributes to the

перераховано переваги, показано головні позиції ролі викладача при створенні інформаційного освітнього простору засобами комп'ютерних технологій. Виокремлено найважливіші освітні напрями якісного навчання здобувачів освіти за допомогою інформатизації освітнього простору вищої школи під час педагогічної взаємодії, що створюють достойні умови в освітній діяльності.

**Ключові слова:** заклади вищої освіти, інформатизація освітнього простору, здобувачі вищої освіти, інформаційні технології, функції та принципи.

improvement of the quality of education while reaching more of its students. Taking into account the capabilities of each student of education, his needs, and requirements for processing information and obtaining new knowledge, in higher education it is necessary to create a system of informatization of the educational space, properly ensure a high level of access to informing students of education, obtaining information that will satisfy student needs and increase the image of higher education institutions education. The constant informatization of the educational space of the higher school, in particular the development of information and communication technologies, set the goal of organizing effective innovative training, and not only provided the opportunity for higher education institutions to intensify the educational process. This speaks of the great possibilities of information technologies (Kalusenko & Kartashova, 2020).

Informatization in higher education is becoming a necessary phenomenon in the development of modern innovative education, while the educational system must be flexible, sufficiently inertial to change its methodology in time and respond to the times, as well as to promote solid educational knowledge of education seekers, for further orientation in modern world space. An increase in the importance of fundamental knowledge is possible in higher education with the informatization of the educational space, which will constantly develop and make education 100% innovative and modern.

Computer skills are of primary position for informatization in higher education and in general in the modern scientific world, with the



mandatory and constant change of methods and methods of scientific research.

In modern society, the most important problem is the high-quality and innovative training of a competitive specialist, which includes the mandatory use of smart technologies, modeling of the educational environment, and computer technologies of an innovative nature and global scale. Solving such a problem is possible with the help of specific functions and principles when creating high-quality information support for the educational space of a higher education institution.

**The purpose of the article:** to show the necessity and to define the main provisions of the informatization of the educational space of the higher school at the current stage to ensure the quality education of those seeking education.

### Literature Review

I. Yashchuk (2021) offers ways to modernize the educational space of the higher school in the conditions of global changes. Proved the need for the transition of the higher school to a distance form of education, and showed the need for informatization and computerization of education with this approach. The impossibility of quality professional training of a future competitive specialist without the development of information literacy has been proven, which indicates the need for constant information and technological updating in every institution of higher education. Ways of creating an informational and educational environment in which the personal and professional qualities of specialists are formed, and educational work is organized directly, with the aim of high-quality training of future competitive specialists have been revealed. The example of the Pedagogical Faculty of the Khmelnytskyi Humanitarian and Pedagogical Academy shows the innovative work of the educational environment using the Moodle educational platform. The advantages of the informatization functions of the educational space of the higher school are proven and their pedagogical necessity is shown.

I. Chaika (2012) showed the advantages of the informational setting of a higher school. The main principles of informatization of the educational space of a higher school are named: independence, accessibility, activity, reflexivity, interactivity, integration, redundancy, individualization, sensitivity, renewability, versatility, pedagogical expediency of using information technologies in the educational

space of a higher school. The principles are important and necessary when solving the main tasks of information processing and its collection.

V. Kalusenko, & L. Kartashova (2020) considered the issue of training students in the development of the higher school, economy, informatization of society, and science. They proposed a scheme for the introduction of electronic educational environments into the educational process, which is currently the main task for institutions of higher education. The informatization of the educational space of the higher school is considered a process of innovative transformations of the content, organizational forms of training students of education, and changes in methods during the transition of the student of education to life in the conditions of the information society.

### Methodology

Research methods were used at various stages of the study of the informatization of the educational space of the higher school:

- *theoretical:*
  - a generalization of the analysis of educational and methodological philosophical, psychological, and pedagogical modern literature, articles in scientific publications was carried out to explain the national progress of the problem of informatization of the educational space at the present period of the change of the educational field, the selection of conceptual ideas and the disclosure of their essence. This approach made it possible to distinguish the academic and operational basis of the informatization of the didactic space;
  - modeling and synthesis allowed generalizing information about the essence of the research, to form the main provisions of informatization of the educational space;
- *empirical:* psychological-pedagogical observation in the process of educational activity of education seekers in the informational educational space to clarify the level of formation of their educational competence within the limits of the informatization of the educational space.

The research conducted with the help of the used research methods is based on the practical application of the information educational space,

which provides an opportunity for students to increase the effectiveness of skills, abilities, knowledge and through compliance with the process and system of balance, purposefulness, openness, and interdependence of the components of the information educational space. The training of the imaginary and organizational basics of the training of future specialists requires the implementation of a scientific search for the informatization of the educational space of a higher school at the current stage to ensure the high-quality education of education seekers by the selected concepts.

The methodological concept characterizes the totality and connection of the following methodical methods: competence, acmeological, systemic, interdisciplinary, personal-activity, comparative, prognostic; methodological principles of research (substantial analysis, objectivity, unity of logic and history, comprehensiveness, holistic study of systemic processes and pedagogical phenomena); patterns of educational and professional activity; global trends in the development of informatization of the educational space of a higher school to ensure high-quality education for those seeking education; globalization trends.

The theoretical concept reveals the conceptual provisions of the optimization of the informatization of the educational space of the higher school at the current stage to ensure the high-quality education of education seekers, which is the basis for improving the professional competence of specialists, taking into account the specifics and the positive implementation of best practices. The professional training of future specialists at the modern stage through informatization of the educational space of the higher school at the modern stage contributes to ensuring the quality education of future specialists and is based on psychological-pedagogical, philosophical, sociocultural principles, covering scientific approaches of empiricism, a holistic approach to the education of a specialist, pedagogy, sociocultural paradigm, humanism, social constructivism, neopragmatism.

The prognostic-practical level of the research allows a qualitative study of approaches to the development of professional competence and professional training of specialists by informatization of the educational space of the higher school at the modern stage to ensure quality education of those seeking education, analysis of systems of professional training of

specialists and substantiation of the ways of modernization of higher education.

## Results and Discussion

The 21st century was named the century of quality education in connection with the informatization of the educational space of the higher school, associated with the information revolution, during which intelligence, information, and knowledge occupy the role of the main driving force and actualize their status in the system of social life. Education reflects the peculiarities and specifics of the expansion of the current data society, which needs modernization and transformation. In connection with the growth of information flows, the acceleration of the pace of people's lives, and the improvement of technologies, in the educational space of a higher school, informatization is due to the relevance and necessity of the needs of social development. As a guarantor of the intellectual future potential of the nation, the main priority is the informatization of education, health care, science, and culture.

G. Yordan, & H. Yordan (2020) consider the informatization of education "as a process of changing the content, methods and organizational forms of student training at the stage of its transition to lifecycle in the circumstances of the information society, the creation and use of information technologies to increase the efficiency of activities carried out in the education system".

Computer technologies, informatization of the educational space, and the global Internet network are necessarily present in all areas of human life: in everyday life, and the professional sphere. In connection with the constant practice of information skills by students, a high level of skills and knowledge in the special innovative computer field is necessary. Therefore, the need to provide higher education institutions with various types of special programs for studying the material and practical innovative technologies for the formation of knowledge in the field with the help of information technologies has been proven. Information technology is constantly improving, which leads our society to constant development (Biletska et al., 2021). The development and formation of the information-educational environment in higher education institutions were updated by:

- the relentless development of information knowledges;
- the openness of educational systems;

- the need for electronic educational resources in all spheres of life;
- the rapid growth of the level of computer skills of the students in the educational process;
- virtualization of the educational process;
- transition to an active, new form of implementation of the education process;
- the need for social partnership contacts and informational interaction of education seekers;
- monitoring of educational activities (Gavrilyuk, 2016).

The purpose of creating an automatic information and educational situation of a higher school is to fully satisfy the educational needs of students of all levels of education, all specialties, and information and educational resources, regardless of where the students are, what educational resources are currently needed by students, what services they need when using modern information technologies (Bykov, 2010).

The advantages of informatization of the higher school are the possibility of:

- organization of the educational process, and educational events in electronic form;
- planning and implementation of educational space at different levels, programs, and forms of education;
- replacement of the reproductive activity of the educational space acquirers with a creative and consultative one;
- submission of reference information for training, and mandatory educational material;
- promotion of communication interaction between the management apparatus of the institution, students, and teachers;
- providing participants in the educational process with access to information related to the organization of the educational process, planning of training, and monitoring of educational activities;
- the use of the educational process of information materials, effective teaching-methodical support of constantly updated complexes (Gunko, 2014).

When creating an informational educational space in a higher school, the following requirements should be taken into account:

- *technical*: Wi-Fi technologies, network availability, computer equipment;

- *software*: integration, interaction, security issues;
- *human resources*: psychological readiness, availability of specialists, ICT literacy;
- *academic*: compliance with educational programs, methodical content;
- *social*: cultural, normative-legal, and ethical aspects (Kuchai et al., 2021).

Studying the organization of the educational process, the information-search activity of education seekers in the information-educational space, the educational environment is considered a system and consists of the following components:

- 1) multilevel information resources, which are program-methodical, cultural, problem-oriented, and intellectual, consist of knowledge and work technology with the application of search, information storage, its processing and practical application;
- 2) information infrastructure to ensure the development and functioning of the environment during the educational process (Chumak & Bondarenko, 2023).

The use of innovative technologies in the information and educational environment and the acquisition of information in the computer network optimizes the verbal communication of students and makes the contact among the teacher and the student innovative. Implementation of the innovative nature of education with the use of modern technologies takes place with the mandatory support of education seekers and in the form of an innovative program, a schedule of updated modules of educational classes according to the innovative program. Innovative support from teachers is carried out individually for each student to strengthen the integration of the educational process, and increase interdisciplinary training to include academic disciplines in a disciplinary complex that is unified. In the process of such an educational process, the students of education maximally acquire the skills of using information technologies in modern research, educational, and scientific activities (Kuzminskyi et al., 2018).

The information and educational environment provides the simultaneous solution to the following tasks:

- organization of educational activities for education seekers using elements of e-learning;

- formation of skills and abilities of students with the help of an informational educational space with the help of computer technologies for a high-quality educational process and the provision of developmental, educational, reflective, and informational functions, which are necessary for further professional activity.

The educational function, which ensures the operation of all components in the structure of the informational educational space using computer technologies and organizes the monitoring of the quality of education, control of the learning process, and the application of educational functions, is fundamental for work in the information educational space using computer technologies. Such a function ensures the competitiveness of a trained specialist to work in a professional environment. The importance of the implementation of the educational function depends on the strength, completeness, and awareness of scientific and theoretical knowledge that is being formed, skills and practical abilities, and experience of practical, intellectual, and creative activity within the field of training chosen by the student of education. The educational function is related to the educational function and is realized in our time necessarily with the help of informational educational space using computer technologies. The following components are involved in its work: technological-procedural, resource-content, and subject-social, which work successfully with the help of information and educational space using computer technologies and, as a result, allow to form the motives of activity, the future professional activity of specialists, positive qualities personalities, value orientations, professional values, their views on life, worldview, interests, aesthetic and moral ideas (Oseredchuk et al., 2022).

The developmental function ensures the change of the following spheres of the student's personality: emotional-volitional, intellectual, need-motivational and prepares the future competitive specialist for conscious professional activity. The main position for the implementation of this function is the selection of such resources as informational, scientific-didactic, and technological and their mandatory inclusion in interactive activities with the help of informational educational space using computer technologies (Dotsenko, 2016).

The information function is related to the selection, processing, distribution, transmission, storage, and use of scientific, educational, moral-

aesthetic, and worldview information to meet all the needs of education seekers. It is this function that forms in the students of education the ability to implement information technologies to solve educational and educational tasks, to implement information interaction (Plakhotnik et al., 2022).

The reflective function of the informational educational space using computer technologies is aimed at the development and optimization of self-improvement and self-development of the subjects of the informational and educational environment and provides for:

- critical analysis of attitude towards oneself as a future competitive specialist, personality, analysis of interests, motives, emotional-sensual state, value orientations of activity, assessment of activity, own behavior, state of development of all one's professional activity;
- identification of cause-and-effect relationships, successful interaction, reasons for the state of development of the informational educational space, significance of the educational process, etc. The result of the implementation of the reflexive function with the help of the information educational space using computer technologies is manifested in the improvement of actions that purposefully affect the productive implementation, improvement, and group of the educational procedure during the interaction of the subjects of the information educational space (Shchyrbul et al., 2022).

The function of socialization of an individual to work in an informational educational environment using computer technologies ensures the development of relations between members of society and social institutions. The activity of the subject in the informational and educational space, which is determined by socio-cultural, ethnic realities, and mentality aimed at the application of innovative approaches of mastering the self-development of the individual, is determined by the universal human need for a goal-oriented and competitive specialist by values, norms, rules, traditions, methods of activity. The result of the influence of the function of socialization for the realization of a high-quality informational educational space using computer technologies is the ability of education seekers to find non-standard solutions to problems in situations, the ability to exercise their civic and moral choices, the formation of the worldview of education participants, social activity, the harmonization of their relations, the



development of universal values, the ability to carry out creative activities, self-education and self-development in the team (Yashchuk, 2021).

The educational information space when using computer technologies provides an opportunity for students to obtain educational information in a detailed, open form not during the organization of the educational process, but before the beginning of education. The information and educational environment provides equal access to information for students and teachers for possible exchange and dialogue in ways of cognitive activity, ensuring their cooperation, subject-subject relations, and values. With the help of informational educational space using computer technologies, it is possible to create conditions for the educational activities of students and the personalization of their educational communications. This will be possible only under the condition of compliance with the set of principles of implementation of the information and educational environment, and its possible potential: accessibility, activity and independence, reflexivity, interactivity, integration, redundancy, individualization, versatility, sensitivity, renewability. The justification of such principles is influenced by the logical foundations of the process of knowledge acquisition, the theory of knowledge; regularities of the functioning of the psyche of the individual, psychological, pedagogical, social, and epistemological regularities.

The principle of activity and independence provides for the internal motivation of obtaining an education and requires an active attitude of education seekers to the use of various innovative methods of organizing the educational process, and information objects.

The principle of reflexivity promotes the awareness of all parameters of the education process, own changes, and methods of activity. Reflection is formed at each stage of personality development under the influence of the way of life, it is based on the inner freedom of the future specialist, which requires self-control of one's actions and deeds.

The principle of interactivity makes it possible to create information support in the mode of exchange of operations and actions and the mode of interactive dialogue.

The principle of integration provides for the interconnection of communications with the help of an informational educational space with the goals and content of education in a higher

education institution using computer technologies, as well as based on interdisciplinary connections, promotes the unification of educational information into problem-thematic cycles that combine related disciplines and courses into single educational areas.

The principle of redundancy accommodates a certain amount of information to ensure an informational educational space, the mastery of which makes it possible to collect the necessary data, a broad orientation for the independent determination of important educational conditions that ensure the solution of the task set by education. At the same time, information that is redundant for the relevant needs of the student of education is regulated by the requirements of its optimality, this information expands the spectrum of ways to solve a scientific problem or educational, indicative possibilities of a student (Kuchai, 2017).

The principle of individualization ensures the correspondence of individual characteristics of students to information provision, level of training of students, their age-related cognitive abilities, scientific interests, and professional specialization. The creation of information support in the informational educational space should take into account the quality and volume of educational tasks and their complexity.

The principle of versatility involves the practice of necessary educational information and communication skills, such as hypertext blocks, electronic manuals and textbooks, virtual simulators and environments, educational websites, electronic libraries, encyclopedias, handbooks, portals, interactive video, electronic magazines, multimedia educational systems, etc. A modern institution of higher education should today be a complex of variable, different educational communications that use information technologies to create information support of quality education in an informational educational space in which it is possible to acquire information and logically build one's educational trajectory (Kuchai & Kuchai, 2019).

The principle of sensitivity is necessary to provide feedback to the students of teaching for high-quality and quick assimilation of courses and disciplines of study in the information space of education.

The principle of updateability requires correction, the constant addition of information, updating of educational information, and ways of



presenting it to students. In the conditions of creating information support in the informational educational space, there is a need for a constant increase in the volume of new knowledge, the application of innovative techniques of technology, the necessary solution of the tasks, constant monitoring of the quality of knowledge, accounting for positive changes in the education process. With this approach, preference is given to information technologies that make it possible to make permanent additions and even changes to the information support of the educational process in a short period, to transfer new information to students of education in a few seconds via the Internet (Kuzminsky et al., 2021).

The analyzed principles realize the didactic potential of the informational and educational setting, they are interconnected and contribute to the professional and cultural self-projection of the individual.

Therefore, we see that the creation of information provision in the informational educational space within the framework of the analyzed principles is a necessary basis for ensuring a competitive level of preparation of education seekers for professional activities. These principles are also important and necessary for solving tasks of collecting and processing information (Chaika, 2012).

We agree with V. Bykov (2008, 2019), that when studying the influence of the worldwide implementation of information skills on the functioning of the educational situation of higher education organizations, it is required to single out important educational directions of the subjects of education during pedagogical interaction, which should create worthy conditions for educational activity that will be qualitatively implemented with the help of isolated functions and principles in the creation of a high-quality information provision of educational space of a higher education establishment. Let's list the following conditions:

- electronic educational profiles that provide promising directions for the educational activities of teachers and students, and contribute to updating the characteristic features of innovative education;
- electronic educational resources for educational activities;
- educational social networks that support an open informational and educational environment in cooperation;

- innovative pedagogical technologies that create a new organization of education and are based on work in an informational and educational environment using the means of computer-oriented educational systems of methodological purpose;
- computer-oriented systems for monitoring the quality of educational activities that supplement traditional ones.

Therefore, the integration of information technologies into education will allow the creation of a high-quality environment of information and pedagogical activity in higher education, in particular:

- improvement of the organizational conditions for the making of information funding in the information and educational space;
- increasing the efficiency of the informational educational space by introducing innovative mechanisms of interactivity of the educational process, visibility of the use of sources of information support in the educational space;
- compression of information in time and space due to the possibility of expanding and collapsing it;
- optimization of students' work pace (choice of individual educational trajectory, individualization of education, differentiation);
- effective implementation of interdisciplinary connections in the informational educational space;
- based on the informatization of individual functions, optimization of the teacher's informational and pedagogical work;
- improving the conditions of educational activity by creating positive motivation in the student, interest through an interest in the computer, ensuring a positive emotional state of the individual, humane attitude towards the individual, development of the information culture of the student, creative and research, qualities through self-discovery, self-realization, reflection (Jordan & Jordan, 2020).

In a higher school, the educational environment contains methodical tasks, test tasks for independent work and monitoring the quality of education, educational-methodical complexes, etc., which implement, by the needs of the formation of professional competencies of students, the content of educational disciplines. The information environment of the higher school provides equal access to information

resources for everyone and creates an opportunity to implement all types of interaction: presentations, e-mail, and chats, which contributes to the high-quality interaction of all subjects of the educational environment. At the same time, the role of all focuses in the information environment is changing.

Let us distinguish the role of the teacher, which is essential for the implementation of functions and principles for the creation of high-quality information support in the educational space of a higher education institution and is manifested in the following positions:

- acts as a disseminator of knowledge,
- performs the part of a consultant and coordinator in the educational process, and students of such an educational process are its subjects, where their training is aimed at acquiring and developing professional competencies (Kalusenko & Kartashova, 2020).

### Conclusions

The necessity and main provisions of the informatization of the higher school at the modern stage are shown and revealed to ensure high-quality training for those seeking education and the creation of information by profession with the help of information technologies. The purpose of creating of a higher school is to fully satisfy the educational requests of students of all levels of education, all specialties, and information and educational resources, regardless of where the students are, what educational resources are currently needed by students, what services they need when using modern information technologies.

The advantages and requirements of informatization of the educational space are listed. The educational environment is considered as a system consisting of such components, which are considered in the article. The main positions of the teacher's role in creating an informational educational space using computer technologies are shown. The important educational directions of education seekers with pedagogical interaction, which should create decent conditions for educational activity, are listed:

The main functions of the information and educational space have been identified and analyzed.

With the help of the informational educational space, it is possible to create conditions for the educational activities of students using computer technologies. This is possible only under the condition of compliance with the set of principles of information and educational environment implementation (accessibility, activity and independence, reflexivity, interactivity, integration, redundancy, individualization, versatility, sensitivity, and updateability), which is substantiated in the article.

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## Theoretical foundations of implementation blended learning in the process of training future specialists

### Теоретичні основи імплементації змішаного навчання у процес підготовки майбутніх фахівців

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#### Abstract


The article analyzes the technology of blended learning and its impact on the quality training of specialists. The purpose of the article is to characterize the technology of blended learning, to substantiate its importance for the quality training of specialists, and to find out the main ways of its application in the educational process of higher education institutions. The methodological concept of the article reflects the interaction and interrelationship of categories that are basic in professional thinking and methodological levels in the educational process of higher education institutions. Blended learning has been proven to be more effective than traditional classroom learning in improving student achievement. It has been argued that blended learning is more flexible and accessible to students than traditional classroom learning. The main conditions for the effective application


#### Анотація


У статті аналізується технологія змішаного навчання та її вплив на якість підготовки спеціалістів. Метою статті є охарактеризувати технологію змішаного навчання, обґрунтувати її важливість для якісної підготовки фахівців та з'ясувати основні шляхи її застосування в навчальному процесі вищих закладів освіти. Методологічна концепція статті відображає в навчальному процесі вищих закладів освітнє взаємодію та взаємозв'язок категорій, які є базовими у професійному мисленні та методологічному рівнях. Доведено, що змішане навчання є більш ефективним, ніж традиційне навчання в класі, у покращенні успішності учнів. Обґрунтовано, що змішане навчання є більш гнучким і доступним для студентів, ніж традиційне навчання в класі. Висвітлено основні умови ефективного застосування змішаного навчання,

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of blended learning, technological solutions of blended learning, methodical approaches of blended learning are highlighted, the forms that can be used to implement blended learning are considered. In summary, blended learning is an effective and promising technology for high-quality training of specialists.

**Keywords:** mixed learning technology, specialist training, higher education institutions, flipped classroom, Learning Management System.

## Introduction

The article analyzes the application of blended learning in the educational process of higher educational institutions.

In the conditions of informatization of education, blended learning as one of the varieties of e-learning best meets the task of forming general cultural and professional competencies of the future specialist. The technology of mixed learning has significant didactic capabilities and is characterized by a variety of provided forms, methods and means of learning, their interactivity, various ways of interaction of the subjects of the educational process and most fully corresponds to the specifics of higher educational institutions. The introduction of electronic educational resources into the educational process contributes to the assimilation of the content and practice of the educational material, the performance of control actions, the organization of independent, searching, research, educational activities of students, and the increase of their cognitive and professional interest. The implementation of mixed learning technology effectively affects the components of student learning: cognitive, functional, that is, on the forms and methods of learning organization, on the activation, intensification and effectiveness of learning, and personal and valuable - on the formation of learning motivation, professionally significant aspects.

The knowledge transfer system has radically changed over the past decades, and the amount of knowledge has increased many times. Nowadays, preparing a person for professional activity once, for the rest of his life is no longer possible. The solution to the problem lies in the application of the educational process of institutions of higher education of innovative learning technologies with modern professional training of specialists, the transition to education throughout life, and at the same time, basic

технологічні рішення змішаного навчання, методичні підходи змішаного навчання, розглянуто форми, за допомогою яких можна реалізувати змішане навчання. Підсумовуючи, змішане навчання є ефективною та перспективною технологією якісної підготовки спеціалістів.

**Ключові слова:** технологія змішаного навчання, підготовка фахівців, заклади вищої освіти, перевернута класна кімната, система управління навчанням.

education should be the foundation for further education and periodically supplemented with programs of additional education. Blended learning and distance learning have a significant potential to meet the needs of modern times in the educational field, in the acquisition of digital literacy by the student, and in the spread of more flexible, innovative forms of education (Mala, 2022).

With a mixed system of education, there is a real opportunity to use those techniques, forms, principles, and technologies that have already proven their feasibility and effectiveness. For example, the modular rating system for evaluating the quality of educational activities of educational space applicants is used in the practice of face-to-face and distance learning. The analysis of the forms of psychological and pedagogical training shows that the educational trajectory is combined learning. In the modern conditions of the development of the educational trajectory, the future specialist must collectively and optimally use educational professional knowledge and opportunities provided by both classical disciplines and new educational technologies. In mixed learning, the basis of the educational process is the intensive, purposeful, controlled independent work of the student who can study according to an agreed individual schedule, in a place convenient for him, using complex special educational tools and an agreed contact opportunity to work with the teacher (Shevchuk & Yashanov, 2022).

Possibilities of blended learning allow to expand the psychological component of learning motivation, to ensure mastery of the methods of performing informational and analytical activities within the framework of training, to acquire knowledge in the chosen profession.



## Literature Review

One of the priority tasks of education is the mastering of modern technologies by specialists, the development of their skills in searching for information on electronic media and networks, increasing the quality of specialist education.

The advantages of mixed learning in educational institutions are intensive updating of knowledge obtained from global information resources; expand the teacher's field of activity (regardless of the location of all subjects of the educational process); provide for the special needs of the disabled and other categories of the population; develop cognitive interests, contribute to the formation of their professional orientation, mastery of scientific research methods.

L. Shevchuk, & S. Yashanov (2022) conducted research on the role of modern approaches to blended learning in higher education institutions; singled out the main components, and revealed the meaning of the concept of blended learning; we will present the main approaches to combining learning and its integration, show the advantages of various technologies, give examples of their use in the educational process. We created the concept of combined education, which allows in modern conditions students to education in various combinations and to optimally use the opportunities provided by classical education and the use of distance technologies; showed the role of blended learning in education and characterized the main directions of its development. The principles of unity of organizational foundations and pedagogical foundations, support of dynamic balance, and system of IT training of professional education specialists in mixed education were revealed. The main organizational and pedagogical requirements for blended learning are defined and their role in education based on electronic educational and methodological complexes is analyzed. The structure of the educational methodical electronic complex, which ensures the implementation of the methodical system of education in the educational environment, includes local, autonomous, distance educational courses and methodical support for the use of such courses in the educational activities of specialists. Pedagogical conditions for the implementation of blended learning in the educational space have been developed.

The analysis of scientific sources in the aspect of the selected problem shows that activation of researchers' interest in blended learning. It is

defined in the works of scientists various classifications of teaching methods.

V. Yurchenko (2021) examined the possibilities of obtaining education for psychological and pedagogical training and revealed the forms of training of future specialists through institutional (distance, face-to-face, dual, mixed, network, and workplace) forms of education. The principles on which the new model of professional education should be based are highlighted. The main educational methods are analyzed and the main forms of obtaining higher education are shown, the disadvantages and advantages of distance, mixed, face-to-face, dual, network, and workplace forms of the educational process are revealed. The professional models of the organization of mixed training for the psychological and pedagogical training of specialists were analyzed. One of the most effective forms of education, the introduction of mixed education in institutions of higher education, the scientist determined the necessity and expediency of using the "inverted class" model, such a model of education for the psychological and pedagogical training of specialists, which nullifies the main shortcomings of the educational space and which takes into account all advantages of forms of education.

In the pedagogical literature, blended learning is considered as a qualitatively new form of education based on the principles of independent learning, modern pedagogical methods, technical means of information transmission as a special type of educational activity, which makes the process flexible, variable, multi-vector, makes it possible to train students according to an individual educational trajectory in accordance with personal needs, interests and abilities.

I. Oros, A. Chychuk, & E. Hutterer (2023) as a type of teaching methodology, the technology of mixed learning, which can successfully implement new principled forms and methods of the educational space, using information and communication means of implementation, is revealed. The educational free, open (Open Source) and online platform Moodle (a modular object-oriented dynamic learning environment) is considered. The key features of blended learning are highlighted, its content is considered, and the components of blended learning are highlighted: independent work in the electronic environment of education seekers; classroom traditional classes; and electronic group training (online conferences, etc.). The concept of "flipped classroom" is recognized as a

key concept of blended learning. Instrumental means that implement blended learning in institutions of higher education are described. The main educational-methodical and organizational-pedagogical aspects of various forms of training for the psychological-pedagogical training of specialists are highlighted.

Methods of in-depth study with the use of information and communication technologies is devoted to work S. Shevchuk (2023). S. Shevchuk created an initiation project based on the system of mixed learning, which combines directly (on-site) and indirectly (through the possibilities of online learning) the forms of interaction of future specialists and pedagogical workers, which is presented as a process of optimizing the educational space of the universe, increasing efficiency opportunities for those seeking higher education. The possibilities of transformation of the educational process are shown, which is a necessary condition for the transition of higher education institutions to mixed learning to best ensure the educational interests and needs of those seeking education with the use of modern innovative technologies, pedagogical approaches, which is facilitated by the expedient modern application of the possibilities of digital technologies. The method of implementing blended learning in the professional training of specialists is highlighted, the validity is proved based on the competence approach, the essence is revealed, and the principles and models of blended learning are described.

At the same time, the introduction of modern information technologies in the educational process gives rise to a number of problems related to content, methods, organizational forms and means of training, humanization and humanization education. Distance courses developed for secondary school students of the educational institution, their information content, sequence presentation, use of information tools and terminology only partially meet modern requirements. Therefore, the problem of mixed learning in the psychological and pedagogical training of specialists in institutions of higher education requires greater analysis.

**The purpose of the study:** to characterize the technology of mixed learning, to prove its importance for the quality training of specialists, and to find out the main ways of its application in the educational process of higher education institutions.

## Methodology

To realize the goal of the research, theoretical research methods were used: analysis of psychological and pedagogical, philosophical literature, critical, retrospective and comparative, logical analysis of methodical literature, regulatory and legal official documents, dissertation research in order to determine the theoretical research foundations and the state of the research problem; during the determination of the structural components and content of the blended learning technology in the modern professional training of specialists, the method of didactic modeling was used in the educational process of higher education institutions; the theoretical understanding of practice and the study of ways of applying mixed learning technology as an effective means of psychological and pedagogical professional training of future specialists were implemented; synthesis, comparison, generalization, comparative study of ways of applying mixed learning technology in modern professional training of specialists; forecasting, abstraction, modeling, design, classification – with the aim of clarifying and concretizing the meaningful essence of the problem; formation of a categorical and definitive basic apparatus, construction and substantiation of a functional system for the introduction of mixed learning technology in the modern professional training of specialists;

The research is based on the understanding of the ways of applying the technology of mixed learning in the modern professional training of specialists in the educational process of higher education institutions as a designed educational process that forms basic, integral, professional, personal knowledge in future specialists, which are universal, cover professional generalization and contribute to theoretical, cognitive action of education seekers to consciously compare with their skills and knowledge thanks to the formed educational socio-cultural environment, and to compare them with professional professionally standardized actions in the future.

The study implements the special principle of applying the technology of mixed learning in the modern professional training of specialists in a meaningfully updated content of worldview, methodological, theoretical, and practical components of educational disciplines in the educational process of higher education institutions and the acquisition of professional skills and abilities and fundamental knowledge.

The methodological concept reflects in the educational process of higher education institutions the interaction and interrelationship of categories that are basic in professional thinking and methodological levels: procedural and praxeological (the level of technologies, techniques, methods, and scientific research), conceptual and descriptive (specifically scientific and general level of methodology), philosophical-perspective (philosophical level of methodology), analysis of the fundamentalization of ways of applying mixed learning technology in modern professional training of specialists. The methodological concept contributes to the justification of the ways of applying the technology of mixed learning, the fundamentalization of the professional psychological and pedagogical training of future specialists reflects in the direction of a significant increase in the level and quality of the readiness of future specialists for professional activity; development trends of fundamentalization of education and is based on general pedagogical, methodological, philosophical principles.

The methodical concept involves the determination of educational and methodological support for the implementation of the didactic system of mixed education of students in higher education, the selection of the most effective models, forms and methods of organizing this process.

The methodological concept consists of fundamental scientific ideas about the relationship and interdependence of pedagogical phenomena and processes, personality as a subject of active activity and attitudes, personality development in educational activities. Conducted research and obtained results can become the basis for the development of electronic textbooks; technologies, forms and methods of organizing educational activities, adapted to a mixed form of education; new approaches to the formation of intellectual, informational, communicative and social competences; creation of a didactic algorithm for the individualization of learning; solving psychological problems in the conditions of new challenges of society; willingness of teachers and students to cooperate.

The fundamentalization of the application of mixed learning technology in the modern professional training of specialists in the educational process of higher education institutions included the use of training forms, methods, informative and material means,

implementation of conditions; the development of practical personally oriented methodical, educational support for the application of mixed learning technology in the modern professional training of specialists.

## Results and Discussion

Blended learning is found in the literature as:

- training in the mixed mode of Mixed-Model Instruction;
- Hybrid Learning;
- symbiosis of online and traditional (offline) education;
- learning through Technology-Mediated Instruction technologies;
- a type of teaching methodology that implements new forms and methods of teaching, using information and communication means of their implementation (Tkachenko & Romanenko, 2021).

Having analyzed the scientific works, we support O. Bazeliuk's (2018) opinion that "mixed learning in vocational education should be understood as a harmonious combination of distance learning (for mastering theoretical knowledge) and real practical activities of students", which will give "the ability to use the advantages of distance and traditional learning, and also avoid the disadvantages that are inherent in each of the specified forms".

Let's name the main features of blended learning:

- 1) active use of the latest modern information and communication technologies to obtain quality education, innovative search for educational material by education seekers, and obtaining new professional knowledge, i.e. information and communication technologies are a full-fledged integral component of the educational process;
- 2) integration of various methods, methodological approaches, means, methods of presenting educational information, new material, and types of innovative activities of education seekers (part of the information is distributed to independent study, and part to group work, regardless of where the training takes place: online or in the classroom (Tkachenko & Romanenko, 2021).

The following applications are used to transmit, save, create educational and methodological materials, support and organize the process of

mixed learning using telecommunications: Student Information Systems (SIS), Learning Management System (LMS), Virtual Classrooms (VC), Learning Content Management Systems (LCMS), Virtual Learning Environments (VLE), Training Management Systems (TMS), Assessment Management Systems (AMS), Social Learning Systems, eBooks Management Systems, Massive Open Online Courses (MOOCs), Learning Analytics, etc.

LMS – Learning Management System – a software computer complex used for the management, development, and distribution of online educational materials with the provision of joint access to them is important for high-quality training and the organization of the blended learning process. If even teachers do not have deep knowledge of programming, then these complexes are available and easy to use. Such materials are created with an indication of the sequence of their study in a visual educational environment. The materials include projects for starting in small groups, individual tasks, and other educational elements for all students of education, based on the communicative and content component (Oros et al., 2023).

Important conditions for the effective application of blended learning are the psychological, motivational, methodical, and technological readiness of the teaching staff of the higher education institution. Important conditions in the context of actions and experience are also: choosing a model of the educational process, designing an educational scenario, organizing the independent work of future specialists, and detailed training (Shuliak et al., 2022).

The technological solutions of blended learning are as follows: the possibility of convenient communication between education seekers and the teacher; for educational materials, it is important to ensure unimpeded accessibility; automation of constant monitoring of the quality of knowledge of education seekers; monitoring the success of the educational process of a higher education institution (Mamatova et al., 2022).

Methodical approaches of blended learning are effective immersion in the educational process of subjects of learning; interaction between students; mastering educational material; construction with personalization of access and work of an individual educational trajectory.

Let's consider the forms by which blended learning can be carried out:

- synchronous remote forms (virtual classes, webinars, coaching, instant messaging, etc.);
- synchronous intramural forms (practical classes, seminars, lectures, etc.);
- asynchronous forms (assessment of knowledge (testing, surveys), education in the use of an electronic system for supporting the educational process, working with web pages, web documents, video and audio files, communication on discussion forums, in educational Internet communities, using e-mail, etc.) (Yurkiv, 2021).

The use of an e-learning platform is a mandatory element of the organization of blended learning (Frolov, 2021). It contains in its structure the learning management system LMS (Learning Management System). Nowadays, many LMS platforms specialize in corporate training. Some are characterized by advanced functions to implement content repurposing. There are private and open-source platforms (BrainCert, Moodle, Open edX, DotLRN, Claroline, Litmos, Sakai, etc.).

In the process of professional psychological and pedagogical training of future specialists, we will highlight the conditions for the effective organization of blended learning:

- 1) permanent filling and creation of an informational and educational environment in the institution of higher education with personalization for the education seeker and the teacher to implement the method and pace of learning, own goals, and opportunities with a clear understanding of the goal of learning to understand educational activities;
- 2) to create conditions for an effective combination of classroom training with online training for knowledge control, to correct educational progress, efficiency, and activity of education seekers, establishing effective interaction between education seekers and teachers and among themselves using digital tools;
- 3) for the effective mastering of the material by those seeking education, methodical design of educational disciplines, educational process, as a sequence of actions, constant updating of educational and methodical material with the use of digital technologies, updating of various forms and methods of organizing the educational process, with the interaction of all participants in the educational process, active support, etc.;



- 4) space for constant exchange of views and ideas of all participants in the educational process, involvement of each student in the educational process, comfortable interaction to achieve group and individual educational goals;
- 5) informational and methodical improvement and organization of educational material for independent work of education seekers, implementation of pedagogical reflection;
- 6) establishment of feedback between students and the teacher;
- 7) to increase the training of future specialists, eliminate educational problems, and introduce systematic monitoring of blended learning (Hazdyk, 2021).

We will reveal the content of the key concept of mixed learning "flipped classroom", in which special attention is paid to aspects of the organization of the educational process and aspects of designing electronic courses.

The essence of the "inverted technology" based on the active use of the electronic educational environment is to rearrange the key components of the educational process. When implementing such an "inverted technology", the educational process begins with the setting of a problematic task, where the learner is forced to familiarize himself with the posted material in the electronic course environment to complete it. In the electronic environment, at the same stage, self-monitoring of the understanding of the material is carried out. Thus, the process of assimilation of new material begins with the independent work of education seekers.

An electronic course, properly designed for mixed learning, allows taking into account the individual learning style of students: the type of cognitive abilities, level, and speed of mastering the material contributes to the individualization of the educational process, ensures more active involvement of students in educational activities, increases the success of students in general. Under the condition of a reasonable ratio of independent work and classroom classes with the correct organization of mixed learning, the quality of education in modern conditions will increase.

It is necessary to take into account the high requirements that the form of mixed education puts forward to the level of professionalism of teachers. At the same time, the main emphasis is shifting from administrative tasks and the traditional organization of the educational process to the provision of individualized help

and support to those seeking education and working with databases, by adding to traditional education such online components as discussion of problematic issues, surveys, blogs, online discussions, completing tasks in electronic form, etc., to comprehensive and systematic improvement of educational programs, to solving problems of supporting the learning process, stimulation, motivation. Therefore, educational adaptive programs allow each student to study in a convenient mode and pace and receive differentiated instructions (Vyshkivska et al., 2022).

Let's name the varieties of the inverted class:

- typical – students study new educational material on their own, and perform tasks of a practical nature in class;
- group – students are united in groups for the practical application of new educational information, while they work as a team, teach each other and learn from each other;
- debatable – used in the study of disciplines in which research and visual demonstration of materials are expected;
- "inverted teacher" – students directly participate in the process of creating practical tasks and educational video materials.

When using the "inverted learning" technology, classroom classes should not occupy a central place but should support the process of acquiring the skills and knowledge of students. With this approach, the content of education becomes a starting point and not an end in itself. Emphasis in educational activity is placed on the process of cognitive activity, during which the learner discovers new knowledge based on the content (Shevchuk, 2023).

Blended learning can take place synchronously or asynchronously.

The organization of synchronous training is in harmony with regular face-to-face training. And not much differs from him. Students and the teacher must be in the same place at the same time – virtual or physical.

Asynchronous learning requires flexible coordination of meetings between learners and teachers. Flexible coordination requires mutual respect for time, adherence to agreements, drawing up an individual schedule of interaction, planning one's schedule, and preparing for meetings (Plakhotnik et al., 2023). Teachers should use an effective learning strategy just in



time, precisely on time, because mixed learning involves the performance of practical tasks, independent processing of educational materials, timely submission of control, and homework assignments. That is, to plan, determine, and announce in advance the entire planned volume of tasks that the student of education must perform and indicate how much time it may take to perform a particular task. The teacher needs to offer clear and clear criteria for checking and monitoring the educational achievements of the students. This approach contributes to the optimization of time and resources and allows students of education to form different types of motivation, while teachers must make sure that the materials for processing and studying are available to students of education.

Blended learning of students can take place asynchronously with a large part of independent work (Kuchai et al., 2021). However, the presence of a community that collaborates creatively and learns well contributes significantly to all the achievements of education seekers. The support of interaction between students of higher education and the creation of a community depends to a large extent on the efforts of teachers. Understandably, instructors want to jump straight into teaching their course, but it's recommended that blended learning spend time building community. Such efforts in further professional training play a positive role in joint education, i.e. there is training according to the "peer-to-peer" scheme, project-based training (Hrechanyk et al., 2023).

Students of higher education can collaborate both in virtual space and face-to-face. For virtual interaction, the standard functionality of any of the education management systems is sufficient: there can be cooperation of education seekers on the creation of scientific texts in Google Documents or Wikipedia; joint generation of ideas with the help of virtual boards; joint calculations in Google Sheets, etc (Pasichnyk et al., 2021).

Since blended learning is a combination of learning in a higher educational institution (onsite or offline) with a distance form (including online), at the same time, in the modern world, distance learning has become a springboard to quality education with the aim of accelerated implementation of blended learning by institutions of higher education. This made it possible to significantly increase the digital skills of all subjects of the educational process and rethink the traditional models of education used by higher education institutions. Blended

learning requires clear planning of the use of the digital environment and the real one so that they provide the most effective all the needs of the learners.

The implementation and organization of blended learning requires clear preparation, careful planning, a change in attitude towards education, and established patterns of behavior of participants in the educational process (Zavalevskyi et al., 2023). Blended learning removes the mere physical presence of learners in a shared educational space and replaces it with intellectual engagement and creative presence in a shared educational virtual space. Both students and teachers can process and prepare educational materials, having access to the technical means necessary for high-quality education, not necessarily in an educational institution, but anywhere.

Blended learning is based on the following values:

- responsibility – all participants in the educational process are responsible for achieving the educational result;
- integrity – academic integrity for the participants of the educational process becomes very important in the absence of strict control: students of education practice academic integrity at the level of values; teachers trust students that the tasks submitted for verification have not been written off;
- respect for each other's time – requires compliance with educational programs and plans and careful planning;
- mutual respect and trust – respect and trust presupposes the absence of strict control in the activities of the participants of the educational process;
- understanding the full picture of the course
- awareness of the expected educational results and the educational goal will contribute to the formation of a responsible attitude toward the educational results of the participants of the educational process (Shevchuk, 2023).

Blended learning provides significant advantages for a higher education institution:

- increasing the accessibility of a higher education institution to a larger number of education seekers; the possibility of studying with minimal separation from work; more accessible education for persons with disabilities; the availability of

education for those seeking education from geographically distant regions;

- providing students with additional development of soft skills that are highly valued by employers: purposefulness, self-confidence, and ability to learn independently;
- the possibility of solving problems with a lack of study facilities, and limited classroom stock, in a higher education institution;
- reduction of costs for psychological and pedagogical training of students: although preparation for mixed education at the first stages, on the contrary, will require greater not only financial resources, which will significantly decrease in the future;
- the ability to evaluate what is evaluated: with the help of simulators, videos, etc., teachers can check the student's mastery of the planned skills.

Blended learning also has several advantages for students of higher education:

- access to educational materials from any convenient device or place or at any convenient time;
- autonomy of the learner: the possibility of ensuring an individual educational trajectory, choosing an individual learning pace;
- greater interest in learning through the use of innovative methods and approaches, digital technologies, gamification, etc.;
- memorization of a larger amount of material by students;
- development of soft skills: self-confidence, ability to learn, acquisition of communication skills. Therefore, blended learning in the field of higher education is gaining momentum in the world and has a future (Pasichnyk et al., 2021).

The practical implementation in the professional training of specialists in blended learning technology showed that precisely under the conditions of new variations of blended learning models, the use of all components of the functions of complex methodical support of the modern model of education, the expansion of the spectrum of the implementation of interactive technologies in education, it becomes possible to conduct qualitatively, interestingly and effectively in the mode online and offline classroom classes, scientific and practical conferences and seminars, organize independent work of education seekers in chat and forums,

promote research and experimental activities of education seekers (Shevchuk, 2023).

Traditionally, the application of blended learning technology in the modern professional training of specialists in the educational process of higher education institutions takes place in three stages: independent study of the material, classroom interactive classes, and continuation of interactive training and support at the workplace. During the application of mixed learning technology, students have the opportunity to set their own learning pace and choose methods and forms of working with educational material. The use of mixed learning technology in the modern professional training of specialists provides opportunities for an intensive exchange of views, ideas, and beliefs of students in the educational process of higher education institutions, promotes active interaction of students, provides constant feedback between the teacher and students, directs student learning to achieve group goals and individual educational goals (Stoliarenko, 2015).

The application of mixed learning technology in the modern professional training of specialists in the educational process of higher education institutions can be carried out in the following forms: synchronous face-to-face forms (seminars, lectures, practical classes, etc.); synchronous remote forms (webinars, virtual classes, instant messaging, coaching, etc.); asynchronous forms (assessment of knowledge (testing, surveys), training in the use of an electronic learning support system, video and audio recordings, working with documents and web pages, communication via e-mail, Skype, in discussion forums, educational online communities, etc.) remotely (Kasyan et al., 2018).

The organization of the application of mixed learning technology requires the solution of difficult methodological, organizational, and educational tasks in the educational process of higher education institutions: the organization of technical support; choosing a model of mixed learning, which should solve specific tasks set by the institution of higher education; training of teachers to work in the format of mixed education (training of personnel); development of regulatory requirements and methodological recommendations for the organization of the educational process based on the model of mixed learning (providing regulatory and methodological support). This makes it possible to qualitatively divide the material into "face-to-face" and "online", create instructional materials

for students and teachers, develop recommendations for the clear use of information and communication technologies in the teaching of professional disciplines, and use interactive methods of active learning in the classroom (Yurchenko, 2021).

The paradigm of developmental education most fully corresponds to the idea of distance and traditional education. Therefore, the organizational-pedagogical model of blended learning synthesizes the advantages of three approaches to the organization of the professional training process:

- andragogically oriented to the peculiarities and needs of education seekers, the adult population: learning based on experience and with the help of action;
- personally oriented, aimed at the development of the meaningful motivational and value component of the personality and mental, communicative, reflective, creative, and other abilities of students;
- context-oriented, on the involvement of the specifics of professional subject and social activity of specialists in the educational process, taking into account their real problems and experience; transparency of boundaries between educational and professional activities.

The combination of these approaches and their ideas makes it possible to create such an integrated educational environment that will satisfy the needs of employers, take into account the peculiarities of students, and ensure their orientation towards the development of professional competence by solving both professional and educational problems (Shevchuk & Yashanov, 2022).

## Conclusions

The technology of blended learning is characterized and its importance for quality training of specialists is proved, the main ways of its application in the educational process of higher education institutions are clarified, and the main features of blended learning are named.

The applications described in the article are used to transmit, save, create educational and methodical materials, and support, and organize the process of mixed learning using telecommunications.

The importance of the Learning Management System computer software complex, which is

used for the management, development, and distribution of online educational materials with the provision of shared access to them, is shown for quality education, and organization of the mixed learning process.

The main conditions for the effective application of blended learning, technological solutions of blended learning, and methodical approaches of blended learning are highlighted, and the forms by which blended learning can be implemented are considered.

The use of an e-learning platform is shown to be a mandatory element of the organization of blended learning.

The content of the key concept of blended learning "flipped classroom" is revealed, within which special attention is paid to aspects of the organization of the educational process and aspects of designing electronic courses. Varieties of the inverted class are characterized. The operation of mixed learning synchronously and asynchronously is shown.

The stages of the traditional application of blended learning technology in the modern professional psychological and pedagogical training of specialists in the educational process of higher education institutions are considered.

The organizational-pedagogical model of blended learning synthesizes the advantages of three approaches to the organization of the professional training process. The organization of the application of mixed learning technology requires the solution of difficult methodical, organizational, and educational tasks in the educational process of higher education institutions, which is disclosed in the article.

We recommend that higher education institutions provide training for specialists in the use of information and communication technologies, and that higher education institutions develop assessment strategies suitable for blended learning.

Conducted research and obtained results can become the basis for the development of electronic textbooks; technologies, forms and methods of organizing educational activities, adapted to a mixed form of education; new approaches to the formation of intellectual, informational, communicative and social competences; creation of a didactic algorithm for the individualization of learning; solving psychological problems in the conditions of new

challenges of society; willingness of teachers and students to cooperate.

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## Optimal CBDC design for Ukraine through the lens of privacy and security

### Оптимальний дизайн CBDC для України через призму конфіденційності та безпеки

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#### Abstract


The growing popularity of cryptocurrencies has put on the agenda the need to develop an alternative and more regulated digital currency design, including a central bank digital currency (CBDC). The objective of the study is to formulate proposals for the development of the optimal design of the CBDC of Ukraine. The study is based on a review of the literature on digital currencies, cryptocurrencies and legislation on personal data protection, payment security and financial supervision. The implementation of the CBDC in Ukraine is associated with numerous technical and legal risks, including: privacy and data security risks; complications of financial monitoring; contradictions with national and international legislation; banks disintermediation risks.

To prevent these risks, a CBDC design is proposed that is compatible with national and international legislation, ensures data privacy and security, facilitates financial tracking, and reduces the risks of disintermediation.


The development of the CBDC in Ukraine could have a significant impact on the country's financial system. However, it is essential that the


#### Анотація

Зростання популярності криптовалют поставило на порядок денний необхідність розробки альтернативного та більш регульованого дизайну цифрової валюти, зокрема цифрової валюти центрального банку (CBDC). Метою дослідження є формування пропозицій щодо розробки оптимального дизайну CBDC України. Дослідження базується на огляді літератури про цифрові валюти, криптовалюти та законодавства про захист персональних даних, безпеку платежів і фінансовий моніторинг. Впровадження CBDC в Україні пов'язане з численними технічними та юридичними ризиками, серед яких: ризики конфіденційності та безпеки даних; ускладнення фінансового моніторингу; протиріччя національного та міжнародного законодавства; ризики дезінтермедіації банків. Щоб запобігти цим ризикам, пропонується дизайн CBDC, який є сумісним з національним і міжнародним законодавством, а також здатний забезпечити конфіденційність і безпеку даних; полегшити фінансове відстеження; зменшити ризики дезінтермедіації.


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design of the CBDC is carefully considered to mitigate potential risks.

**Keywords:** central bank, central bank digital currency, distributed ledger technology, General Data Protection Regulation, payment system.

## Introduction

Against the backdrop of the growing popularity of cryptocurrencies and the increasing interest of central banks in developing Central Bank Digital Currencies (CBDCs), the imperative for faster, cheaper, more transparent, inclusive, and secure payment services becomes paramount. As highlighted by the Financial Stability Board's reports in 2020, these priorities are crucial for fostering economic growth, supporting international trade, facilitating global development, and ensuring financial inclusion (FSB, 2020a; FSB, 2020b). The rapid replacement of electronic money by cryptocurrencies in international settlements has prompted central banks worldwide to explore and implement CBDCs as an alternative instrument. The Atlantic Council's CBDC Tracker reveals that as of July 2023, 130 countries, representing over 95 percent of global GDP, are actively considering the introduction of CBDCs, with 11 already launched and 21 engaged in pilot projects, including Ukraine (Atlantic Council, 2023).

The analysis of CBDC pilot projects in countries such as Sweden, China, Norway, and others underscores a critical challenge - balancing the imperative of data privacy and security in payments, as mandated by international documents like the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (GDPR), with the concurrent need for robust financial monitoring. This issue is particularly pronounced as regulators, including those in Ukraine, consider the adoption of distributed ledger technology (DLT) as the foundational infrastructure for CBDCs, presenting an alternative to cryptocurrencies. However, aligning such approaches with existing legal and regulatory frameworks, both at the national and international levels, poses complexities, especially within the European Union (EU).

Розвиток CBDC в Україні може мати значний вплив на фінансову систему країни. Однак дуже важливо, щоб дизайн CBDC був розроблений таким чином, щоб зменшити потенційні ризики.

**Ключові слова:** центральний банк, цифрова валюта центрального банку, технологія розподіленого реєстру, Загальний регламент захисту даних, платіжна система.

This dilemma necessitates further research and the formulation of proposals for the development of the Ukrainian CBDC design. This is particularly important in view of the Association Agreement between the EU and its Member States, of the one part, and Ukraine, of the other part (the "Association Agreement") as well as Ukraine's recently acquired status as an EU candidate country.

The article aims to contribute to this discourse by formulating recommendations for the optimal design of Ukraine's CBDC, considering the intricacies of international and national legislation on personal data protection, ensuring payment confidentiality and security, and complying with financial monitoring regulations. As the digital financial landscape continues to evolve, addressing these concerns is not only pivotal for safeguarding the rights and privacy of citizens but also for upholding the stability and integrity of the financial systems intertwined with global and regional economic frameworks.

## Theoretical Framework or Literature Review

In general, the relevance of the issue of introducing a CBDC into the payment system is only growing. According to some experts, this will help strengthen financial stability and monetary policy, improve payment systems, and promote financial inclusion (Boar & Wehrli, 2021). Economic and legal research and the experience of other countries in this area can ensure the formation of scientific and practical reasonable extraordinary solutions, the implementation of which will contribute to positive transformations in the process of further digitalization of the payment market in Ukraine at the legislative level and in practice.

A growing number of publications focus on two fundamental questions. The first is how should retail digital money be issued by central banks and whether physical cash could be replaced by CBDCs (Brunnermeier, James, & Landau, 2019;

Chernyshova, Voznyakovs'ka, & Bashlay, 2021; Keister & Sanches, 2021; Shapoval, 2020). On the other hand, it is about the systemic implications of such a currency and how to deal with the associated risks and instability they may cause (Allen, Gu, & Jagtiani, 2022; Brunnermeier et al., 2019; Belke & Beretta, 2020; Fernández-Villaverde et al., 2020; Hrytsay, 2022; Khodakevich, Ponomarenko, & Urvantseva, 2022; Niepelt, 2018; Veneris et al., 2021).

Scientists note that CBDCs can have different designs (Allen et al., 2020; Auer & Boehme, 2021; Kiff et al., 2020). The role of the central bank and other payment market participants in the such currency ecosystem depends on the choice of a particular design. CBDCs can be issued and distributed directly by the central bank (direct design) or by authorized financial institutions (intermediary design). As for the technological basis of digital currency, it can be based on a centralized or distributed ledger technologies (DLT). In the case of a centralized ledger, the central bank controls and manages the CBDC system. In the opposite case (distributed ledger), data processing, storage and management functions are delegated to authorized financial institutions in the private or public sector (Gross et al., 2021).

Most central banks have launched CBDC pilots to find arguments in favor of choosing DLT for its launch (Sethaput & Innet, 2023; Sethaput & Innet, 2021).

However, in order to develop an optimal design for CBDCs, central banks must strike a balance between data protection and the individual's right to privacy, on the one hand, and the public interest in combating terrorist financing and money laundering, on the other. There are risks that a fully anonymous digital currency will make it impossible for anti-money laundering regulations (AML) regulators to exercise control, while a partially or fully transparent one could be used by governments as a surveillance tool. In addition, such a design choice is inconsistent with the fundamental rights to data protection and information privacy mentioned above (Ballaschk & Paulick, 2021; Islam & In, 2022; Fanti & Pocher, 2022; Auer et al., 2023); Tsang, Yang, & Chen, 2022; Tronnier, 2021).

For example, Charles Hoskinson (2022), the founder of Cardano, sees CBDC as a tool for controlling the population and considers it the most dangerous innovation in monetary policy. The same opinion is shared by researchers at the

American Institute for Economic Research. "Meeting the threat of an authoritarian rival by using dangerous social control technologies is completely contrary to society. According to experts, it would be more appropriate to invest in improving the payment system rather than replacing it with CBDC, which will give the government unprecedented control over financial transactions" (Salter, 2022). At the same time, more and more scholars point out the risks of the banking system's disintermediation (Eren, Jackson, & Lombardo, 2022; Banet & Lebeau, 2022; Changi et al., 2022).

Pollock (2018, p. 11), in his speech to the Subcommittee on Monetary Policy and Trade of the Committee on Financial Services of the United States House of Representatives, noted that disintermediation, in turn, would lead to even greater risks: unfair competition, abuse of regulatory powers to enhance one's own advantages, etc. The same concerns were expressed by Carstens A. (2019), Mancini-Griffoli et al., (2019), Bindseil U. (2020). According to Carrat (2018, p. 7) "the risk of excessive disintermediation would be mitigated by making any new form of central bank money more like cash and less like deposits".

In any case, "central banks should not put a brake on innovations just for the sake of it". But this does not mean that it is necessary "to rush ahead disregarding all traffic conditions. First, they should make sure that innovations set the right course for the economy, for businesses, for citizens, for society as a whole" (Carstens, 2019, p. 10).

As rightly noted Santaolalla Montoya (2023) "centralized digital currencies should be very well regulated, precisely so that they are not abused by the executive authorities or central banks. The European Data Protection Regulation must be strictly enforced".

Quite interesting in this vein is the work "Central bank digital currency: Principles for technical implementation", in which the authors presented an overview of some of the principles of a CBDC. This paper particularly emphasizes the key requirements of privacy protection and interoperability (Duffie, Mathieson, & Pilav, 2021).

Pocher and Veneris (2021) in their paper "Privacy and Transparency in CBDCs: A Regulation-by-Design AML/CFTS Scheme" offer a technical and legal taxonomy of

approaches to balancing privacy and transparency in CBDCs without violating accountability and anti-money laundering and counter-terrorist financing requirements in the United States of America (USA). Some proposals of the researcher may be applicable in resolving the question regarding the choice of the optimal CBDC design for Ukraine.

In general, while acknowledging the importance of existing scientific developments in this area, it should be noted that some scientific aspects of the general issue of choosing a CBDC design in Ukraine that would meet the requirements of international and national legislation on personal data protection, data privacy and security of payments, as well as legislation on financial monitoring have not yet been detailed. Accordingly, the above has led to the need for the proposed research.

### Methodology

To attain the article's aim and uphold the scientific rigor of the research outcomes, a methodological framework encompassing hermeneutic, comparative, and generalizing methods was applied.

The choice of China, Sweden, and Norway as the focus of the study was deliberate and based on several criteria. China, represented by the People's Bank of China (PBoC), was selected due to its leadership in developing central bank digital currencies (CBDCs), as evidenced by its extensive pilot project reaching 260 million people and encompassing various scenarios, such as public transit, stimulus payments, and e-commerce (Atlantic Council, 2023). Transactions using China's digital yuan hit 1.8 trillion yuan (\$249.33 billion) at end-June 2023, marking a jump from over 100 billion yuan as of August last year (Wee, 2023). The inclusion of China provides a comprehensive understanding of a leading CBDC initiative on a large scale.

Sweden and Norway were chosen because they are progressive EU countries actively piloting CBDCs, not only at the national level but also in collaboration through projects like Icebreaker, involving Israel and the Bank for International Settlements (Atlantic Council, 2023). The participation of these Nordic countries in the Icebreaker project is unique and allows for an exploration of cross-border retail payments using CBDC. Furthermore, the intermediary design based on DLT in the CBDCs of Sweden and Norway contrasts with China's approach,

offering valuable insights into diverse design strategies.

Hermeneutic and comparative methods facilitated the analysis and comparison of international experiences, including data from CBDC pilot projects in Sweden, China, and Norway. This involved an in-depth examination of reports on the implementation of these projects, along with an exploration of international and national acts/documents governing legal regulations, data protection, financial monitoring, and related aspects.

Data collection involved accessing reports, legal documents, and official publications from the People's Bank of China, the Riksbank, the Central Bank of Norway, and relevant international organizations. Comparative analysis was conducted to identify commonalities and differences in CBDC designs and implementations. Conclusions, recommendations, and suggestions were formulated through a process of generalization based on the insights gained from the analysis of these diverse experiences.

### Results and discussion

The general principles of the issuance and use of digital money of the National Bank of Ukraine (NBU) in Ukraine and its distinction from electronic money were officially established by the Law of Ukraine "On Payment Services" dated June 30, 2021 (this law is the result of the implementation of European legislation - author's note). According to paragraph 96 of Article 1 of this law, "digital money of the NBU is an electronic form of the currency of Ukraine, the issuer of which is the NBU".

At the same time, it should be noted that the Law of Ukraine "On Payment Services" is rather declarative in its approach to regulating the specifics of issuing and using digital currency. In particular, the legal act notes that the procedure for issuing and storing digital money, as well as the specifics of payment transactions using digital money, should be determined by the NBU's regulations (Article 62 of the Law of Ukraine "On Payment Services").

Despite the two-year period for the adoption and existence of the Law of Ukraine "On Payment Services" further steps to implement the above article by the regulator are rather slow. Thus, the NBU presented the draft concept of the e-hryvnia - the digital money of the National Bank of Ukraine - to representatives of banks, non-bank



financial institutions and the virtual asset market for discussion and feedback only on November 28, 2022 (NBU, 2022).

The regulator is currently considering and working on the following possible uses of the e-hryvnia, which will determine its design and main characteristics: e-hryvnia for retail cashless payments; cross-border payments and operation with virtual assets (NBU, 2022).

At the same time, as noted above, the innovation of introducing the e-hryvnia (CBDC) may lead to a number of positive and negative consequences. On the one hand, it will help to optimize financial monitoring, accessibility of payments, transaction speed, reduce the cost of international transfers, fight corruption through transparency of transactions, etc., and on the other hand, it will threaten the data privacy and security of payments.

These issues are global in nature. An analysis of publicly available reports from both the EU (European Central Bank, 2022) and the United States on the introduction of digital currency allows us to identify the most pressing issues in this area. These include the expediency of involving intermediaries; compliance with the laws on financial monitoring (AML), identification (Know Your Customer policy (KYC)) and confidentiality of information, if a decision is made to issue a CBDC based on well-known DLT, such as blockchain technology etc. (U.S. Department of the Treasury, 2022).

In addition, issues regarding the choice of (1) a centralized or decentralized design of the digital currency ledger; (2) determining the entities that will be able to access the identity and transaction data in the CBDC system and the exceptional conditions under which they may be accessed; (3) the features of CBDC system in response to data leaks, cyber threats, etc., and compliance with data leaks notification requirements (both nationally and internationally) remain unresolved. As for the expediency of engaging intermediaries, it should be noted that there are different approaches in this area. Out of the twenty-one countries that have launched a CBDC pilot, only ten have clearly chosen the intermediary design, while the rest are still considering the advantages and risks of the relevant design as opposed to a non-intermediary design (Atlantic Council, 2023). Among the striking examples of the intermediary design are the CBDC pilot projects of China, Norway, Sweden, and other countries.

"E-CNY adopts two-tier operation whereby the PBoC is responsible for issuance and disposal, inter-institution connect and wallet ecosystem management. Additionally, it prudently selects commercial banks with certain strengths in capital and technology as authorized operators to take the lead in providing e-CNY exchange services. Other commercial banks and institutions, under the PBoC's centralized management, give full play to their creativity, and collectively provide services for e-CNY circulation" (People's Bank of China, 2021, p. 8).

In turn, the intermediary design in Sweden is presented as follows. At the first level, the Riksbank issues or buys back e-krona from selected intermediaries in the network, such as banks (Handelsbanken or Tietoevry). At the second level, the intermediaries will distribute the e-krona to end users by providing them with alias that are used as network addresses for CBDC payments.

Participants will be able to receive or redeem digital currency by debiting or replenishing reserves held directly by the participants or through a representative in the Riksbank's real-time money transfer system, known in Sweden as RIX. In the test design, the participants' e-krona node in the network is integrated with their internal accounting and payment systems. Handelsbanken has implemented its e-krona node in its own IT environment, while the Tietoevry e-krona node is hosted in the Riksbank's IT environment (Sveriges Riksbank, 2022). Nevertheless, clients of both banks were able to conduct transactions in the common e-krona network."

The Corda network design chosen by the Swedish central bank, in which information is shared with central banks, financial regulators, and financial intermediaries only on a need-to-know basis, provides a level of data privacy similar to the two-tier design used by central banks today. To prevent double spending in this design, specialists track incoming and outgoing transaction data and risks of double spending by noting transaction identifiers (Meher, 2020).

As for Norway's practice, CBDC is also planned to be distributed under a two-tier architecture: Norges Bank will issue CBDC to banks, which will then credit it (CBDC) to the accounts of their clients (end users). However, there are conflicting opinions on this intermediary design at the regulator's level (Syrstad, 2023).



However, a design that allows banks (or a part of them) to retain the function of intermediaries connecting the central bank and holders of the CBDC accounts seems more acceptable anyway. After all, it will guarantee that the balance between the availability of confidential information and the protection of private interests is not compromised. It will comply with the current legislation on: (1) financial monitoring, according to which banks, authorized payment system operators and others are subjects of primary financial monitoring, and the NBU is the subject of state financial monitoring in this case (Article 6 of the Law of Ukraine "On Prevention and Counteraction to Legalization (Laundering) of Proceeds of Crime, Terrorist Financing and Financing of the Proliferation of Weapons of Mass Destruction"); (2) storage and procedure for dissemination of personal data (Articles 14-16 of the Law of Ukraine "On Protection of Personal Data"). The fact that the practice of implementing compliance programs by banks to ensure compliance with all international and national requirements for data privacy and security has been developed over the years strengthens the argument in this direction. In other words, such institutions already have the experience and reliable infrastructure to verify account holders and suspicious transactions for compliance with KYC/AML requirements. In the case when the NBU assumes the responsibility for opening and maintaining CBDC accounts or chooses another centralized institution for this aim, there is a need to develop and implement data protection and financial privacy programs to ensure the security of new account holders from scratch. A more practical approach on the part of the regulator in this case is to use the private sector for these functions.

In view of the above, Ukraine should avoid disintermediation when developing a CBDC design. The experience of Sweden, where selected intermediary financial institutions are connected to a large CBDC network, but through their own IT infrastructure rather than the NBU's IT infrastructure, is relevant here. In addition, the legislative developments in Norway on the technical support for the issuance and circulation of this type of currency are useful for application at the national level.

In the future, the NBU should further investigate whether the national CBDC design can operate using different types of DLTs and at the same time comply with national and international requirements for data privacy and personal data protection.

The issues of determining the range of entities that will have access to identification data; the circumstances under which such access is possible; and the specifics of managing access to information (in particular, to protect CBDC system participants from unlawful disclosure of their personal and financial information or legal liability related to access to data) are of great importance in this case.

When developing a national digital currency design, the NBU will face a choice: whether the system should operate in (1) a centralized registry maintained by a single authority, or (2) a decentralized registry maintained and modified by all participants connected to the CBDC network. If the decentralized design is chosen, the central bank will have to decide whether access to the ledger and the history of the ledger will be public or private; permissioned or permissionless. In the case of a public ledger, the information in it will be publicly accessible to all members involved in the CBDC network (including end users); a private ledger will be accessible only to a selected subgroup of private business entities.

In general, CBDC systems can be "permissioned" (operated by a group of permissioned entities), "permissionless" (managed by a structure of system participants) and the combination of above. The main focus when choosing a CBDC design is not on the use of DLT itself, but on the system management structure regardless of the technology applied. If the structure has no trusted entities, permissionless systems show efficiency in making possible transactions without establishing trust relationships with third parties. Detailed drawbacks of permissionless design for CBDC are shown in report of the Office of Science and Technology Policy (USA) "Technical Evaluation for a US Central Bank Digital Currency System" (The White House, 2022).

Returning again to the pilot projects of the above countries, it should be noted that the Chinese CBDC project is an illustration of an operating design of a centralized ledger managed by the PBoC, using the concept of "controlled anonymity" to ensure the confidentiality of transactions. This method ensures that transactions remain private to those outside the system, with the exception of the PBoC, which can track the movement of electronic payments in digital currency, and the link between addresses and user identification is known to the central bank only through the KYC process.

However, the regulator takes additional measures to protect against unlawful state surveillance by using firewalls for any information related to CBDC, appointing special personnel to manage the information and prohibiting all arbitrary information requests (Ross, 2023).

Unlike China's CBDC project, the Swedish and Norwegian projects are examples of a DLT operating design using the Corda and Ethereum platforms, respectively.

In particular, e-krona "transactions are not recorded in a central database, but in the nodes of the participants directly involved in the transaction" (Sveriges Riksbank, 2022, p. 5). E-currency wallet holders - transaction initiator, in short, have access to the public digital ledger of e-currencies and can make changes to it. At the same time, this approach has raised concerns, including from the Swedish central bank. It is unclear how the exchange of information based on DLT/blockchain technology will be correlated with existing legislation on financial confidentiality and data protection. It is likely that the data accompanying a transaction in the transaction history will be considered personal data and subject to financial privacy protection. Therefore, legislative changes and/or information security measures may be required (Sveriges Riksbank, 2022). To ensure full compliance of the e-krona pilot system with data protection legislation, it is advisable to hold joint consultations between the Swedish and European Union data protection authorities on how DLT/blockchain technology relates to Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation (GDPR)).

Ukraine is also considering the possibility of issuing and circulating e-hryvnia based on the DLT operating design (Stellar) (Atlantic Council, 2023). To date, the central bank has no official finalized information on the national design of the digital currency. However, if the NBU decides to issue and circulate the e-hryvnia based on the Stellar distributed ledger operating design, Ukraine will also face issues of its security and compliance with data protection legislation. This has been repeatedly emphasized in the scientific literature. Sandner (2019) in his article "How Should Companies Choose a Specific Blockchain Framework?" notes that aspects of the GDPR remain unclear for DLTs

such as Ethereum, Stellar, Corda, etc. In terms of security, Ethereum is superior to all others in terms of resilience due to the fact that it exists as a public system.

These issues were investigated by the European Parliament's Research Service back in 2019. The analysis identified the following main critical contradictions between DLT and GDPR. First, the GDPR provides for the existence of at least one natural or legal person - a data controller - to whom data subjects can address to protect their rights under EU data protection law. In contrast, DLT replaces the single responsible entity with several entities, which "prevents the distribution of responsibility and accountability". Secondly, the GDPR contains a provision that data can be changed or erased if necessary to comply with legal requirements, in particular Articles 16 and 17 of the GDPR. Instead, "it is because of DLT's append-only nature that the modification and erasure of data that is required by the GDPR under some circumstances cannot straightforwardly be implemented" (European Parliament, 2019, p. 3).

This raises the question of whether it is possible to create a national CBDC design based on DLT in a way that does not contradict the requirements of national and international privacy legislation. As is well known, digital assets, which central banks are trying to develop their own currencies against, are attractive to citizens, businesses, and others because of the ability to conduct direct and instant transactions in an anonymous manner, as well as the ability to track and verify transactions through a public ledger.

However, the approach of creating a national CBDC design based on DLT with complete anonymity of transactions in such a currency may conflict with national legislation, in particular the Law of Ukraine "On Prevention and Counteraction to Legalization (Laundering) of Proceeds of Crime, Terrorist Financing and Financing of the Proliferation of Weapons of Mass Destruction". The requirement for permissioned operators to report suspicious transactions makes it impossible to develop a CBDC system that operates on the basis of a decentralized public ledger with complete anonymity of identification data.

A national CBDC design could be created on the basis of a centralized registry, similar to the way Ukraine's payment system is currently operating. Only selected financial institutions would have access to the transaction register and registry history in order to comply with legal

requirements, including personal data protection. Under such conditions, the legal risks associated with DLT will be levelled. At the same time, this approach may limit the ability to fully incorporate the latest features in areas such as encryption and programming, which may limit innovation but also arguably better protect consumers, investors and businesses (The White House, 2022). In view of the above, it can be concluded that a centralised approach (centralised design) would be a better option for Ukraine.

Alternatively, the NBU could consider creating a CBDC design based on a private and permissioned DLT, where details of digital currency transactions would be available to permissioned financial institutions. At the same time, the identifying data of CBDC transactions must be available to such institutions in order to comply with legal requirements, in particular with respect to financial monitoring, using highly secure cryptographic technology. Thus, permissioned financial institutions may assign a randomly generated alias to each end-user account after identifying the person at the account opening stage. This alias will be displayed in the private ledger for a while. As a result, information on the amount of the transaction associated with randomly generated account alias will be available to the relevant institutions (similar to the concept of e-krona pseudonyms) (Sveriges Riksbank, 2022). Under normal circumstances, such transactions will not be traceable to end users. However, in the event when it is identified that information is related to suspected money laundering, terrorist financing and/or financing of the proliferation of weapons of mass destruction and/or other illegal financial transactions, authorized financial institutions should be able to match anonymous pseudonym information with a specific account holder. The NBU could consider a number of approaches to securely block alias and at the same time allow for identification data matching. The World Economic Forum's Digital Currency Governance Consortium White Paper Series will be useful in this case. They present possible "cryptography methods, with examples of how they could be used to enhance privacy in CBDCs". These include: zero-knowledge proofs, symmetric key cryptography, public-key (asymmetric-key) cryptography, multi-party computation, differential privacy, and homomorphic encryption (WEF, 2021).

## Discussion

Implementing CBDC in practice may lead to a number of risks related to data privacy, security of payments (Islam & In, 2022; Fanti & Pocher, 2022; Auer et al., 2023; Tsang et al., 2022), unprecedented control over financial transactions by government agencies (Salter, 2022), disintermediation of the banking system (Eren et al., 2022; Banet & Lebeau, 2022; Chang et al., 2022) etc. As a result, the NBU should take a more careful approach to optimizing these risks. Given the predominant approach of countries to implementing CBDCs based on various types of DLT, the above is of particular importance. Continuing the debate in this area it should be noted that the data privacy and security of payments issues raised by DLT are relatively new and very complex. And they will only become more complex as technology advances. In order to create a national CBDC design based on DLT and take advantage of all the benefits of this technology while complying with national and international legislative on payment privacy and security, it is advisable that Ukraine (represented by the NBU and other government authorities involved in the CBDC research project) actively engages in international dialogue and joint research on relevant issues. After all, a digital currency design that, for example, does not meet the requirements of European documents (in particular, the GDPR) will limit its use in the global payment system and will have a negative impact on the image of Ukraine as a future member of the European Union. In order to prevent such negative consequences for the country, the authors formulate the following proposals and conclusions.

## Conclusions

Analysis of international approaches, drawing from reports on CBDC pilot projects in Sweden, China, and Norway, reveals potential negative consequences associated with CBDC implementation. These include data privacy and security risks, complications in financial monitoring, contradictions with current national and international legislation (such as GDPR and FATF recommendations), and the risks of disintermediation of banks. To mitigate these consequences, particularly in light of Ukraine's Association Agreement and its recent EU candidate status, it is imperative to expedite the harmonization of national legislation with international standards.

Addressing the technical features of Ukraine's CBDC design, it is recommended to proactively eliminate disintermediation risks by retaining private sector financial institutions as intermediaries. This approach, involving entities with robust data protection and security programs, ensures a balance between data privacy and the protection of private interests. Additionally, to align the technical design with international and national legislation, the proposal suggests operating the CBDC on a centralized ledger or, until common international legal approaches are established, on a private permissioned DLT. This necessitates intensified international participation by Ukraine to contribute to the resolution of pertinent issues. In summary, the proposed measures aim to ensure the seamless alignment of Ukraine's CBDC with legal and regulatory frameworks while safeguarding privacy, security, and financial stability.

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## State information security strategies in conditions of hybrid threats

### Стратегії інформаційної безпеки держави в умовах гібридних загроз

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#### Abstract


Hybrid information threats under the conditions of modern development of digital technologies are currently becoming one of the major issues for a modern democracy. The amount of damage that hybrid threats bring to the world economy contributes to the establishment of effective legal mechanisms to combat them. The purpose of the study was to single out the information security strategies under conditions of hybrid threats, including the spread of disinformation and fake news. The application of the comparative analysis method made it possible to identify the gaps in information security strategies for countering hybrid threats. The strategy of information security in the conditions of hybrid threats is a coordinated action plan aimed at countering and fighting hybrid threats to safeguard cyberspace and preserve a democracy. Information security against hybrid threats is based on such cornerstones as: availability, confidentiality, integrity of information data, and safety. Enhancement of information security under the conditions of hybrid threats should be carried out at the expense of digital


#### Анотація

Гібридні інформаційні загрози за умов сучасного розвитку цифрових технологій стають однією із основних проблем для демократичного суспільства. Обсяг шкоди, яку гібридні загрози приносять світовій економіці, сприяє встановленню ефективних правових механізмів для їх боротьби. Метою дослідження був визначення стратегій інформаційної безпеки за умови гібридних загроз, включаючи розповсюдження дезінформації та фейкових новин. Шляхом використання методу компаративного аналізу з'ясовано прогалини стратегій інформаційної безпеки щодо протидії гібридним загрозам. Стратегія інформаційної безпеки в умовах гібридних загроз є скоординованим планом дій, спрямованих на протидію та боротьбу з гібридними загрозами з метою захисту кіберпростору та збереження демократичного суспільства. Інформаційна безпека з протидії гібридним загрозам базується на таких принципах, як: доступність, конфіденційність, цілісність інформаційних даних та безпечність. Удосконалення інформаційної безпеки за умов

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transformation, increasing the level of digital literacy of society and establishing a fair responsibility measure for a purposeful spreading of disinformation. The perspective of further research is addressing information security strategies as well as elaborating practical guidelines for the formation of a secure information space.

**Keywords:** information security, threat, strategy, cyberspace, disinformation.

## Introduction

In 2014, the open Russian conflict with Ukraine became an external threat for many countries, as a rapid flow of disinformation, Russian propaganda and fake news began occurring in their information space. Ignoring such an information flow of false information can entail social destabilization with subsequent manifestation of violence, riots and crimes against the pillars of national security. Taking into consideration the need to create an effective system of discerning disinformation and deterring its spread, in particular the one that poses a threat to national security, the search for effective information security strategies becomes a priority for a number of states worldwide.

The relevance of the research topic under study is due to the fact that today's challenges create numerous external threats to the functioning of secure information space. Their volume and variety is rapidly changing and gaining momentum. An uncontrolled, systematic and ongoing flow of such information is one of the principal issues that threaten the country's national sovereignty. Taking into account the internal and external vectors of information dissemination in cyberspace, representatives of the international community are taking individual (first) steps in the direction of legal regulation of the dissemination of information, procedures for restricting access in the event that it becomes biased and unreliable (fake) and contains calls for violation of national interests of the state. At the same time, the initial steps are being taken to develop legal mechanisms for bringing to justice subjects involved in the spread of disinformation and fake news. A legal mechanism of punishment for the untimely implementation of appropriate response measures by both competent state bodies and private entities is also being elaborated.

The purpose of the current study is to examine the information security strategies of the world's

гібридних загроз слід здійснювати за рахунок цифрової трансформації, збільшення рівня цифрової грамотності суспільства та встановлення справедливої міри відповідальності за умисне розповсюдження дезінформації. Стратегії інформаційної безпеки вбачаються в подальшому дослідженні та обґрунтуванні з метою визначення практичних рекомендацій щодо формування безпечного інформаційного простору.

**Ключові слова:** інформаційна безпека, загроза, стратегія, кіберпростір, дезінформація.

leading countries and their countermeasures against hybrid information threats.

To address the specified purpose of the article, the following research objectives were set forth:

- to determine the content of the information policy and its functioning measures by analyzing the scientific literature;
- to conduct an analysis of the international legal treaties' provisions and the norms of the national legislation of the EU countries in the field of information security and to determine the legal mechanisms for countering hybrid threats;
- to analyze the current state of information security strategies' efficiency while tackling the hybrid threats of the EU member states and to establish the ways in enhancing thereof.

## Literature Review

Probing into the EU information legislation through the lens of hybrid threats, Lonardo (2021: 1077) and Khmel (2022: 92-93) argue that EU policy puts the main responsibility for countering hybrid threats on EU member states, i.e. at the national level, not at the regional level. The same viewpoint is maintained by Pijpers et al., (2021), examining NATO and EU cyberspace security measures against hybrid threats. In scholar's opinion, EU information security does not depend on regional mechanisms for countering hybrid threats, but rather on NATO's mandate as a indispensable partner in military and other frameworks of deterrence against hybrid threats. Being a full NATO's partner, the EU exercises the right to military assistance in the event of extraordinary threats to the national security of a NATO member state. On the other hand, threats in cyberspace area are not qualified as such to which physical force must be applied,

and assistance is beyond the scope of classical military powers. Probing into the issue of legal regulation of the information sphere in the EU, Datzer and Lonardo (2022: 2-3) claims that hybrid threats are external threats posing a threat to national security. Another scholar, Saurwein and Spencer-Smith (2020: 8254), while conducting an analysis of the impact of hybrid threats on the development of the information sphere, notes that the effectiveness of the information strategy will depend on the establishment of legal countermeasures against false news in cyberspace. One of these measures is the developers' provision of safe digital content on the Internet. Addressing information security strategies, Li et al., (2020: 192) and Alraja et al., (2023) maintain that Internet users' perception and awareness entails more efforts by the producers of digital software to ensure information security in cyberspace as well as on part of the government officials to create a balance between producers and users by introducing effective measures to develop the applicable policy of information security. According to Nord et al., (2020: 218-219) and Xue et al., (2021: 2-4), information security strategies should evaluate and take into account the level of users' legal awareness, their digital literacy and self-efficacy in ensuring information security.

As noted by Sari (2018) and Perot (2019: 40-43), countering hybrid threats in cyberspace is necessary by strengthening the legal basis of information policy and promoting one's vision of international order. According to Tenove (2020: 517-519) and Allcott et al., (2019: 2-3), the development of information policy in a legal state should include legal measures aimed at ensuring information security and legal mechanisms for the protection of the information space, based on international information standards. The combination of these information policy components will evidently contribute to countering threats in the information sphere.

Analyzing information security as a component of Taiwan's innovative development, Wu et al., (2020) concludes that information security in the era of the Internet is a strategic factor for the development of artificial intelligence and the development of a smart cities network in Taiwan. To ensure technological development of Taiwan, the government constantly adjusts the information security strategy, which ensures the proper functioning of innovative programs in cyberspace. The analysis of promising ways of improving the system of information security measures in such smart cities is implemented by

studying the relationships between the formulation, implementation, support and effectiveness of the information security policy, support and effectiveness of the information security policy.

Bajarūnas (2020: 62-64) and Kalniete and Pildegovičs (2021: 24-25) conducted the analysis of information security strategies in the EU and means of combating hybrid threats. The result of which was the statement that under modern conditions, after Russia's unprovoked open military invasion of Ukraine in 2014, countering hybrid threats and disinformation became a priority task for the EU. The introduction of universal and effective means of ensuring information security is a complex process. Due to the rapid changes occurring, external and internal threats in cyberspace take place requiring ongoing monitoring and updating the means of countering them. Investigating information security strategies in the Czech Republic under the conditions of external threats, Daniel and Eberle (2021: 432) notes that the means of combating hybrid information warfare should be based on proper defense, timely response, high level of education and media literacy, and effective protection methods. Datsenko (2019: 40-41) and Panchenko (2021: 29) presented their findings of probing into the means of ensuring information security through the prism of combating Russian propaganda in the information space of Ukraine. These were to the point of asserting the feasibility of introducing interconnected means of countering hybrid threats in cyberspace. According to the scholars, cooperation with international organizations, exchange of experience with leading countries in terms of information security strategies, monitoring of media resources, transparency of the work of competent authorities on information policy and public participation in the socio-political life of the state will sufficiently contribute to the creation of safe content in the information space (Semenyshyn et al., 2020).

That being said, despite quite a wide-ranging scholarly research on the above issue, questions regarding the effectiveness of state information security strategies through the prism of hybrid threats and war, which determines the relevance of the current research topic, remain scarce.

## Methods and Materials

The analysis procedure of the current research included three stages. At the first stage, a review of the scientific literature was carried out into the



subject of hybrid threats significance and their implications for a democratic society, as well as the possibilities for cyberspace and social networks to shape society's behavior. A review of the scientific literature was also conducted on the research subject in terms of information security measures, the improvement strategy and operation principles thereof. The provisions' selection of the EU countries' international and national legislation in the field of information security against hybrid threats was carried out. The materials of the leading organizations have been selected to assess the countries' rating regarding their capabilities to protect information in cyberspace.

At the second stage, theoretical and experimental research was conducted by comparing the obtained results and analyzing discrepancies. The provisions of the Convention on Cybercrime for determining the grounds and punishment measure for committing criminal acts in cyberspace have been considered. The provisions of the Action Plan against Disinformation were considered for the purpose of evaluating information security strategies for countering hybrid threats and the effectiveness of its measures in hybrid warfare. Furthermore, the provisions of the ISO/IEC 27000 series of international standards for the assessment of information security in hybrid warfare were also studied. A review of the national legislation in the field of information security of France, Germany, Poland, and Great Britain was carried out to determine the state of establishment of effective mechanisms for countering hybrid threats. By comparing the Global Cybersecurity Index 2020, National Cyber Security Index 2022 and Cyber Defense Index 2022/23 ratings, the current state of EU countries' cyber defense strategies is highlighted.

At the third stage, using the functionality of Microsoft Office software, the criteria for assessing the level of cyber protection of the EU countries were systematized, as well as the scientific discussion on the effectiveness of information security strategies in the fight against hybrid threats and ways to improve them. By means of the specified software product, an analysis of the processed materials was carried out on the subject of the assigned tasks and the findings of the conducted research were drawn into a report.

The application of comparative analysis method, scientific, legal, statistical and practical information about hybrid threats and their implications for a democratic state were analyzed. The cyber protection level of each EU country was evaluated relying on the system-logical method. Owing to the combination of empirical and theoretical methods,

an empirical interpretation of the theory and theoretical interpretation of empirical data was conducted, while also considering the legal principles of countermeasures and the fight against hybrid threats in the information space were distinguished. The doctrinal analysis of scientific works on the problematic issues of ensuring information security under the conditions of hybrid threats made it possible to identify gaps in information security strategies and find the measures to bridge them.

Taking into consideration the study objectives, the sample was as follows: general characteristics of information security and its relevance for the state; determination of the principles of information security under the conditions of hybrid threats; perceiving the information space as a digital platform for spreading misinformation and threats to national security; the system of international and national legislation of the EU countries in the field of ensuring information security; the system of legal measures against hybrid threats; assessment of cyber protection level of EU member states; national legislation of France, Germany, Poland, Great Britain in the field of combating and combating disinformation; the hands-on practice of combating hybrid threats. The comprehensive character of studying these objects contributed to the identification of information security strategies' through the prism of countering and combating hybrid threats in current social environment.

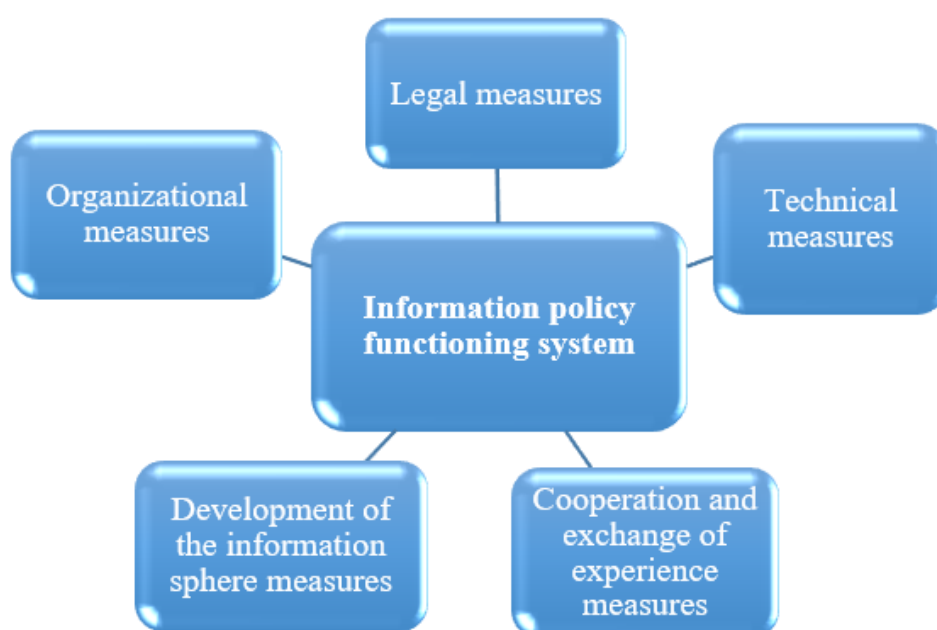
The principal materials on which the research was grounded are provisions of international documents as follows: Convention on Cybercrime, EU Action Plan against Disinformation and a series of international standards ISO/IEC 27000. Besides, there are provisions of national legislation of EU countries, namely: Code of Practice for Countering Disinformation on the Internet and *Netzwerkdurchsetzungsgesetz* (Deutschland), Law in the field of combating information manipulation (France), Anti-fake law (Great Britain). Furthermore, the research was carried out drawing on the practice of the joint unit of Great Britain with Poland for countering Russian disinformation and propaganda, and then the analysis was conducted into the data of the Global Cybersecurity Index 2020, National Cyber Security Index 2022 and Cyber Defense Index 2022/23 rankings. Consequently, the study of the selected research was carried out on the basis of scientific literature on information security and doctrinal analysis on the problems of combating hybrid threats.

## Results

The gaps analysis in the field of information legislation indicates an imbalance and unevenness between measures to ensure the functioning of information policy and information security protection (Figure 1).

Enhancing information security in cyberspace should be carried out by upgrading digital transformation as the major factor in the digitalization development of state authorities. This position is held by 87% of respondents included in the Global Cybersecurity Index 2020 (International Telecommunication Union, 2021). Similarly, (87%) heads of the organization and managerial directors point to the feasibility of improving legal

mechanisms for countering and fighting hybrid information threats. What is more, unauthorized access to a large amount of personal and confidential information, which is transmitted by electronic means, is likely to cause serious consequences. In 2020, the amount of losses due to cybercrime was estimated at 1 trillion US dollars, and in 2021 - almost 6 trillion US dollars (International Telecommunication Union, 2021). The said scale of losses from hybrid information threats testifies to the need to improve legal mechanisms for countering fake news and disinformation. In sum, the security of information and the creation of safe digital content is currently becoming a prerequisite for the information society development.



**Figure 1.** System of measures aimed at ensuring information security  
*Source:* Author's own development.

Time and again, European countries suffered negative consequences from external information threats. Accordingly, they quickly began to introduce means of countering such threats by improving legal mechanisms for regulating the information sphere. The level of information protection in cyberspace and the

state of secure Internet content in the EU are indicated in Table 1. The level of information security of EU member states is examined by assessing the date of Global Cybersecurity Index 2020, National Cyber Security Index 2022 and Cyber Defense Index 2022/23 for each EU country individually.

**Table 1.**  
*Level of cyber protection of EU member states*

Global Cybersecurity Index 2020			National Cyber Security Index 2022				Cyber Defense Index 2022/23		
Country	Rating	Indicator	Country	Rating	National Cyber Security Index	The level of digital development	Country	Rating	Indicator
Great Britain	2	99.54	Belgium	1	94.81	74.07	Netherlands	2	7.61
Estonia	3	99.48	Lithuania	2	93.51	67.34	Poland	6	6.91
Spain	4	98.52	Estonia	3	93.51	75.59	Great Britain	7	6.79
France	9	97.6	Czech Republic	4	92.21	69.21	France	8	6.78
Germany	13	97.41	Germany	5	90.91	69.21	Switzerland	10	6.45
Portugal	14	97.32	Romania	6	89.61	59.84	Italy	11	6.37
Latvia	15	97.28	Greece	7	89.61	64.02	Germany	13	6.24
Netherlands	16	97.05	Portugal	8	89.61	68.46	Spain	14	6.13
Norway	17	96.89	Great Britain	9	89.61	79.96			
Belgium	19	96.25	Spain	10	88.31	72.21			
Italy	20	96.13	Poland	11	87.01	65.03			
Finland	22	95.78	Austria	12	85.71	75.76			
Sweden	26	94.55	Finland	13	85.71	78.35			
Greece	28	93.98	France	15	84.42	77.29			
Austria	29	93.89	Sweden	16	84.42	81.51			
Poland	30	93.86	Denmark	17	84.42	82.68			
Denmark	32	92.6	Croatia	18	83.12	64.63			
Croatia	33	92.53	Slovakia	19	83.12	65.44			
Slovakia	34	92.36	Netherlands	20	83.12	81.86			
Hungary	35	91.28	Italy	23	79.22	67.26			
Cyprus	41	88.82	Latvia	25	75.32	66.23			
Switzerland	42	86.97	Ireland	26	75.32	75.18			
Ireland	46	85.86	Switzerland	27	75.32	82.93			
Iceland	58	79.81	Bulgaria	28	74.03	62.06			
Romania	62	76.29	Hungary	36	67.53	64.25			
Slovenia	67	74.93	Norway	38	67.53	80.19			
Czech Republic	68	74.37	Cyprus	39	66.23	68.83			
Bulgaria	77	67.38	Slovenia	56	59.74	69.74			

*Source:* Author's own development based on (International Telecommunication Union, 2021; MIT Technology Review, 2023; NCSI, 2023).

In 2018, the EU aimed to protect a democratic society and ensure the public's right to free access to a wide variety of verified information in order to form citizens' own political views in the future. In other words, to ensure a free and fair electoral process through the participation of citizens in political debates with the free expression of personal position, the European Commission approved the Action Plan against Disinformation (European Commission, 2018). Drawing on the said Plan, the EU outlined four main areas of information security strategies for countering and combating disinformation: improving the mechanism for detecting hybrid

threats in cyberspace; coordinated and timely response to the detected flow of false information that poses a threat to the foundations of national security; safety of digital platforms and social networks; raising awareness and supporting citizens. The plan defines the principle measures to combat disinformation. In particular, these are as follows: ongoing careful monitoring of the information flow in cyberspace for threats to the security of using digital platforms; creation of a system of rapid notification in case of detection of a flow of fake news containing a threat to the national interests of the state; enhancing the level of digital technologies used in the fight against

disinformation and increasing the level of digital media literacy of staff who take measures to counter disinformation.

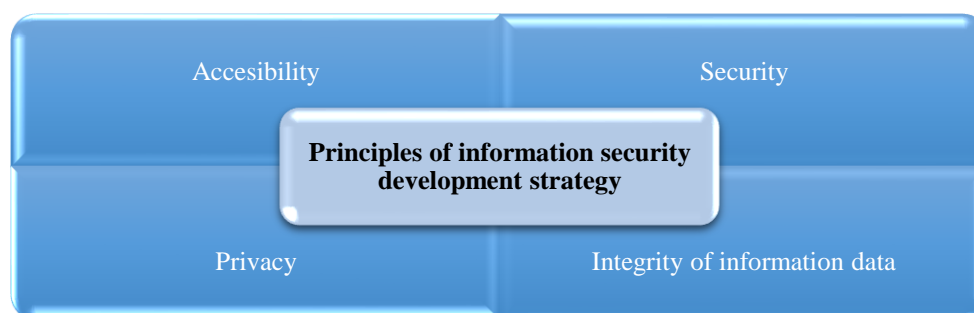
Being fully aware of the rapid development of digital technologies and their fast adaptation in the life of a person and the state, the international community approved the Convention on Cybercrime in 2001 in order to protect information that is promptly spreading in cyberspace (Council of Europe, 2001). This Concept not only defines the importance of information for a present-day digital society and digital state power, but most importantly establishes the measure of punishment - criminal liability for committing crimes in the digital space and for intentionally spreading disinformation with the aim of threatening the national interests of the state.

On the other hand, realizing the risks from hybrid information threats for a democratic state, the EU countries have started building their own national information security strategies aimed at combating hybrid threats. Thus, in order to stop fake information in social networks, Germany adopted the Law "On the Regulation of Social Networks" (Netzwerkdurchsetzungsgesetz) and the Code of practice for combating misinformation on the Internet. In order to combat external information threats, France adopted the Law on combating information manipulation, which introduced a mechanism for state monitoring and control of the information flow in social networks. The establishment of legal instruments for combating hybrid threats in cyberspace also took place in Great Britain through the adoption of the Anti-Fake Law.

In order to counter the flow of Russian propaganda and false information, Great Britain together with Poland formed a unit to counter Russian disinformation and propaganda. Russia's open aggression against Ukraine compels the whole global community to quickly find legal mechanisms to counter external informational threats.

Yet another way to tackle hybrid threats in the information space is the international standards of the information security management system. The ISO/IEC 27000 series of standards is a guideline and practical provision for the hands-on application of the necessary means, strategies, principles to ensure information security (organization, firm, government body, etc.). Moreover, those apply to provisions and approaches to risk management from hybrid information threats. The ISO/IEC 27000 series also contains provisions on taking practical actions aimed at overcoming information security threats, provisions on the level of professional training of personnel authorized to carry out anti-disinformation measures, as well as the level of digital technologies utilized to protect cyberspace, organizational resources and users.

The effectiveness of the information security strategy for overcoming hybrid threats in cyberspace will depend on the legal mechanism for implementing the principles on which it relies (Figure 2). The system of these principles reflects the entire spectrum of human rights and freedoms, the observance of which is a priority for every democratic state governed by the rule of law.



**Figure 2.** The principles of information security  
Source: Author's own development.

## Discussion

The rapid development of digital technologies contributed not only to the development of the information sphere, but also became a platform for an uncontrolled flow of false information that undermines the basis of national security. Currently, countering hybrid information threats

in cyberspace is becoming a priority task for the majority of countries worldwide. That being said, under the conditions of digital platforms' and social networks' safe use, it is expedient to safeguard the fundamental human right to free expression of views as well as the right to obtain information and freely use it.

According to Lonardo (2021: 1076), hybrid threats are measures of diplomatic, military, economic or technological tactics to destabilize a political opponent. Bajarūnas (2020: 62) maintains that combating hybrid threats is a constant, never-ending process that requires technological development of society, increasing the level of media literacy of the public, political stability and the introduction of effective information security strategies. Information security under modern conditions of hybrid information warfare requires effective strategies for the development of information policy from states, while its effectiveness depends on society's digital literacy level as well as the development of the state (Daniel & Eberle, 2021: 432; Weissmann, 2019: 18-19). The same viewpoint is shared by Datsenko (2019: 40-41) and Panchenko (2021: 29), who believe that the information security strategy should include the following measures: constant monitoring of media resources; publication of analytical studies' findings; society's undisputed participation in social and political life of the state through their work in state authorities; continuous cooperation with international organizations and other principal states aimed at sharing leading experience in combating hybrid threats in the information space and developing unified measures to counter fake news, propaganda and disinformation. The combination of these measures will contribute to the creation of safe content on the Internet.

Cyber threats in the digital information space are not characterized as threats that require physical effort to overcome them (Pijpers et al., 2021). Basically, hybrid threats in the information space are alarming to the integrity of the EU. Therefore, after Russia's open invasion on the territory of Ukraine, as noted by Datzer and Lonardo (2022: 2-3) and Dziundziuk et al., (2022), the EU actively began to develop new information strategies to overcome disinformation from false Russian propaganda in the EU's information space.

The overriding characteristic of EU information strategies is that they must establish countermeasures against hybrid threats in the information space throughout the EU (that is, at the regional level). Hence, in practice, measures of information strategies are uneven throughout the EU. Due to the fact that some member states insist on strengthening the regulation of digital platforms, while others stand firm on weakening the protection of liability and strengthening the compulsion to create safe content in the Internet

(George et al., 2021: 1067-1069; Saurwein & Spencer-Smith, 2020: 825).

Freedman et al., (2021: 38-39) and Bajwa (2021: 16-18) note that that uncontrolled hybrid threats as well as ignoring the scale of their consequences become the cause of civil society destabilization by way of leaking the fake information with anti-Semitic and anti-democratic implications through civilian information spaces, doing that with the aim of committing riots or crimes against the national security interests of the state. In such cases, ensuring information security is a strategic task for any economically developed country, and it is made possible only provided that the threats are eliminated in the information space (Allcott et al., 2019: 2; Tenove, 2020: 518).

As a result of the doctrinal analysis of the specified problems of the effectiveness of strategies for the development of information policy and ensuring information security for the purpose of overcoming hybrid threats, gives us the ground to note that scholars see the expediency in probing deeper into information security and its measures of support, which generally adjusts the scope and perspectives of safeguarding the interests of national security.

## Conclusions

The information security strategy for countering and combating hybrid threats is a general action plan aimed at counteracting hybrid threats in the information space, the implementation of which is established for a certain period. The system of measures aimed at ensuring information security consists of legal, technical, organizational measures as well as cooperation and experience exchange activities and measures for the development of the information sphere. Enhancing information security in cyberspace under the conditions of hybrid threats is possible by upgrading digital transformation, improving the level of digital literacy of society, establishing a fair measure of punishment for committing cybercrimes. The effectiveness of the information security strategy under the conditions of hybrid threats will depend on the level of implementation of the principles which it is built on (availability, confidentiality, integrity of information data, safety).

The prospect of further research is to elaborate practical guidelines for enhancing the field of information security by improving legal mechanisms aimed at combating hybrid threats. Therefore, we see a further perspective in the empirically researched and theoretical and



methodological substantiation of effective mechanisms for countering hybrid threats as the main obstacle to the creation of safe digital content for users to express in the digital space their own free views. Accordingly, the obtained research results can be used in elaborating certain mechanisms for improving information security strategies.

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## International mechanisms for the protection of human rights under martial law

Міжнародні механізми захисту прав людини в умовах воєнного стану

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
### Abstract


Human rights are fundamental to any just and equitable society. However, under martial law conditions, protecting them can be a challenge. However, in practice the situation of internal armed conflicts and violence is the largest threat and obstacle to their implementation. Hence, the perspective to the protection of the right to life during an armed conflict is based predominantly on the norms and regulations of international humanitarian law, which safeguard protection only to persons thereunder. The purpose of this article is to work out the priority measures for the protection of human rights in the conditions of martial law drawing on the insight into the foreign experience. To address the said goal, the present article utilized cognitive dialectical methods, the method of idealization, formalization and modeling of the response strategy in case of human rights violation. Because of the conducted study, a response strategy was elaborated in case of human rights violations under war conditions. The findings of this article are important for lawyers, public officials, and civil society organizations working to protect human


### Анотація


Права людини та їх захист визначають спрямованість діяльності держави, але на практиці ситуація внутрішніх збройних конфліктів і насильства є найбільшою загрозою і перешкодою для їх реалізації. Так, підхід до захисту права на життя під час збройного конфлікту ґрунтується переважно на нормах міжнародного гуманітарного права, які поширюють захист лише на осіб, які перебувають під захистом. Метою даної статті є визначення першочергових заходів із захисту прав людини в умовах військового стану на основі аналізу закордонного досвіду. Для досягнення поставленої мети в статті були застосовані когнітивні діалектичні методи, метод ідеалізації, формалізації та моделювання стратегії реагування у разі порушення прав людини. На основі проведеного дослідження розроблена стратегія реагування у разі порушення прав людини в умовах війни. Матеріали дослідження можуть бути корисними юристам та державним службовцям, які здійснюють законопроектну

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rights under conditions of martial law, seek to administer the standards and practices of international regulation of universal human and citizen rights in individual administrative cases.

**Keywords:** martial law, human rights, strategy, foreign experience, restrictions on human rights.

## Introduction

Following the military occupation of the Russian Federation, Ukraine officially notified international bodies that it renounced its civil and political obligations under the European Convention on Human Rights and the International Convention on Human Rights. This is due to the need for bolstered military service, restrictions on private life, freedom of religion and expression, the right to peaceful assembly, the right to effective defense, the right to property, the right to education and the right to freedom of movement. The introduction of martial law imposed certain restrictions on citizens' lives, which had nothing in common with the abolition of absolute rights.

The ground for the emergence of contemporary mechanisms of international human rights protection is the interaction of its two sources: the Geneva Convention of 1949 and the Hague Convention of 1907. The law of The Hague, or martial law, establishes the rights and obligations of the parties at war in relation to their enemies and restrict the likelihood of harm. Current Geneva legislation is based on four Conventions for the Protection of War Victims signed on August 12, 1949, namely the Convention on the Recruitment of the Wounded and Sick dated June 8, 1977, the Convention on the Improvement of Care of the Wounded and Sick at Sea, the Convention on the Treatment of Prisoners of War dated 12 August 1949. These laws comprise a set of laws designed to protect human rights during armed conflict. Notably, its application is mandatory regardless of whether the conflict is international (involving two or more states) or non-international (within one state).

The purpose of this article is to analyze and improve the national mechanisms for the protection of human rights in Ukraine under martial law based on the development and implementation of primary response measures in the event of citizens' rights violation.

Based on the purpose set, the following tasks were addressed:

діяльність, а також посадовцям і службовцям державного управління, які прагнуть застосовувати стандарти та практики міжнародного регулювання універсальних прав людини і громадянина в індивідуальних управлінських справах.

**Ключові слова:** військовий стан, права людини, стратегія, закордонний досвід, обмеження прав людини.

- analyze basic human rights that are ensured and protected at the national and international levels;
- distinguish the system of restrictions on human rights in the conditions of martial law;
- develop the strategic areas of response in case of human rights violation;
- select the main areas of improvement in the national system of human rights protection in the conditions of the military invasion of the Russian Federation in Ukraine.

## Literature Review

In the twenty-first century, the human rights agenda in public discourse, including the issue of raising awareness about international human rights law, has been gaining its significance and relevance. Given the current events worldwide, such as emergency situations, the urgency and demand for legislation and protection of human rights is becoming more and more critical. These events are likely to create or contribute to the conditions that are associated with the violation of human rights, above all the rights of the individual. Atadjanov (2023) claims that the concept of human rights is often perceived as social, moral, political, international and diplomatic phenomenon. However, it must be borne in mind that human rights also have a legal dimension. For instance, Perkumienė et al., (2022) argue that all rights arise in certain historical circumstances, they are personally approved by people's will, or accepted and recognized by certain traditions, institutions and bodies, or historically conditioned theories of human needs and aspirations, or human ideas about divine plan and purposes.

Human rights have two important features. On the one hand, they are indivisible – that is, they relate to human nature lifelong, from birth to death (Aliaga Guevara et al., 2022; Berman, 2019; Tomz & Weeks, 2020; Gryshchenko et al., 2021). The state does not grant rights to people

by legislating them, but only creates concepts and takes care of their protection. Therefore, the state cannot arbitrarily limit or abolish rights, this can only be implemented in accordance with the procedure established by law pursuant to the international standards for the protection of human rights (Guild et al., 2019; Reglitz, 2020; Semenyshyn et al., 2020).

On the other hand, citizens of the country are entitled to identical legal rights, that is, they enjoy the same rights and are all equal before the law (Madumarov & G'ulomjonov, 2021). In fact, the concept of equality is quite close to the meaning of non-discrimination (Strand, 2019; Rodrigues, 2020). Practice has basically demonstrated that it is possible to establish a legal order that does not contain discriminatory provisions. However, it is not virtually possible to elaborate the second condition of equality - a system where everyone is equal before the law.

No right is considered absolute and unlimited (with the exception of freedom from torture, slavery and freedom of thought). A democratic society has admissible limits that arise for objective reasons or are necessary to ensure the self-preservation of society (Hofman et al., 2019; Lawson & Beckett, 2021; Orwin & Pangle, 2019).

Restrictions relate to the level of socio-economic and social development. Thus, McCamant (2019) maintains that the nature of human rights concept means that it cannot be measured or addressed in terms of societal development, although development may include the creation of institutions that can more effectively tackle human rights violations.

The rights and freedoms of one person are limited by the rights and freedoms of another person. In other words, a person can use his rights as they deem it possible, as long as they do not violate the rights of others. Such scholars as Zuiderveen Borgesius and Steenbruggen (2019) analyzed the origins of the law to assess the rationale for its protection. To this end, it was determined that this right is currently protected by the European Convention on Human Rights and the legislation of the European Union.

Thus, the relevance of the study is determined by the need to establish the degree of interaction of universal rights and freedoms of the individual in civil and international law, as well as the possibility of limiting state sovereignty in the implementation of international obligations to ensure and safeguard people's rights.

## Methodology

This study is designed to assess the hypothesis that in the conditions of introducing martial law, human rights may be limited at the legislative level.

In order to systematically study human rights in the pre-war period and after the full-scale invasion of Russia into Ukraine, the article summarizes the human rights that are absolute and cannot be limited and highlights the rights that are subject to limitation. This analysis makes it possible to systematize and distinguish such human rights that may be violated in order to formulate recommendations regarding appeals in the event of the need for restoration thereof.

In the course of the current study, dialectical cognitive methods were used, predominantly the principles of systematicity, which enabled to analyze the human rights restriction degree in the conditions of martial law. With that in mind, legislative and regulatory documents were scrutinized in terms of ensuring human rights at the international and national levels.

Taking into account the specific features of the research object, the approaches to the analysis focused on an interdisciplinary approach. From this perspective, it was possible to combine the degree of human rights restriction, which are specified in international documents, predominantly those of the European Union, as well as national legislative documents. Depending on the degree of threat, the speed of response to messages is determined. According to the analyzed documents, restriction of human rights is not allowed. If a person's rights and freedoms are violated, including during the period of martial law, a person can seek help from national human rights protection bodies or international protection.

The article applies methods of idealization and formalization in terms of forming approaches to the protection of human rights in the conditions of martial law in case of their violation. In the course of the current research, an analysis of applying the norms of national and international law in the conditions of martial law was carried out, and the universal and regional components of the approaches. Besides, the response actions in case of human rights violations were identified.

The modeling method in the article is used to develop strategic courses of action in case of human rights violation in Ukraine and to improve



mechanisms for ensuring and protecting human rights. This strategy provides for the identification of citizens' actions algorithm in case of human rights violation. Furthermore, it enables to highlight the primary measures taken by the state regarding the introduction of priority actions to enhance mechanisms for human rights protection in the conditions of martial law. The main restrictions on the use of data are temporary unavailability for execution, for example, due to the occupation of a certain territory. In all other cases, the rights and freedoms of citizens are of primary importance and must be protected immediately.

## Results

Under the conditions of martial law, one of the reform objectives is to improve the system of democratic civil control of the Security Service of Ukraine, in particular, to ensure that its work complies with the requirements of the Constitution of Ukraine and current legislation, and to prevent violations of human and citizen rights and freedoms. Frequently, the basic human right, the right to life, appears to be vulnerable during war. Moreover, health problems caused by injuries and drug shortages violate the human right to health care.

Table 1 presents human rights that are absolute and limited during martial law.

**Table 1.**

*Absolute and limited human rights under martial law (developed by authors)*

Rights that are not subject to restriction during martial law (absolute rights)					
the legally enshrined equality of constitutional human rights, the right to citizenship, the right to life, the right to housing, the right to free marriage, the right to judicial protection, the right to compensation for damages, the right to disobey explicitly unlawful orders					
The rights that can be limited	the right to strike in order to protect economic and social interests	the right to engage in any commercial activity	the right to possess, utilize and dispose of one's own property	the right to manage state affairs	the right to freedom of thought
	intrusion in personal and family life	confidentiality of correspondence, telephone, telefax communication	the right to education	the right to work	housing integrity
	verifying persons' documents, carrying out inspections of items, vehicles, luggage and cargo, office premises and housing	coverage of information about the educational institution	limitation of the right to collect and disseminate information	use of air space	consent to photo and video recording
	forced alienation of property for the needs of the state	communication with the participants of the educational process	presentation of public information		
	prohibition of holding peaceful meetings, rallies, marches and demonstrations, other mass events	introduction of curfew			
Changes for able-bodied persons	use of capacities and labor resources of enterprises				
Changes in the sphere of education	form of educational activity				
Other restrictions					

In a democratic society, human rights may be limited by law to meet the requirements of public order and the common wellbeing. According to the current legislation of Ukraine, illegal restriction of a person's rights and freedoms is not allowed and entails legal responsibility. As a matter of fact, in the event that the Security Service of Ukraine violates human rights and freedoms during the performance of their official duties, it is necessary to undertake measures to

restore the said rights and freedoms, compensate for the moral and material damage caused, and bring the offenders to justice. According to the Constitution of Ukraine, citizens can undertake measures to protect their rights and freedoms. Table 2 examines basic human rights and the degree of their possible restriction under martial law.

Under martial law, national or international law protects people whose rights or freedoms are violated, representatives of human rights organizations, human rights experts, as well as the researchers. During the war, international forms and methods of human rights protection were included in the regulatory documents of international humanitarian law. The ratification of the Geneva Conventions by Ukraine is an additional basis for applying the provisions of the Criminal Code of Ukraine, which foresee the responsibility for war crimes. That being said,

according to the aforementioned Geneva Conventions of 1949, which comprise an integral part of the national legislation of Ukraine, states are obliged to investigate and prosecute serious violations of international humanitarian law. In the norms of international humanitarian law, the text of the convention maintains that states are obliged to prosecute persons who committed war crimes, and European human rights laws are obliged to prosecute the most serious violations of human rights.

**Table 2.**  
*Human rights under martial law*

Human right	Scope	Application	Limitation
The right to life	to ensure the protection of every person against intentional deprivation of life	does not apply when it is necessary to take a person's life to protect another person, to arrest or prevent escape, to prevent riot or lawlessness	These rights cannot be limited or suspended regardless of external conditions, as well as the possibility of their implementation and realization. The state and all its bodies are obliged to ensure them and, in case of violation, make maximum efforts to punish those guilty of the crime. If the state does not fulfill its obligations, the person can appeal to the European Court of Human Rights.
The right to freedom and personal integrity	no one can be deprived of liberty, except under special circumstances and in accordance with the law	may be limited if serious negative consequences are prevented, such as the further escape of the detainee or the spread of infectious diseases	
The right to a fair trial	access to justice, the right to confront witnesses, test court decisions, free interpreter assistance	this right is not limited, it must be exercised at all levels and in accordance with all persons, both residents of the country and foreign citizens	
The right to respect for private and family life	no one may be subjected to intrusion into personal or family life, family integrity and correspondence, social, national and public security relations	aimed at preventing civil disorders or criminal offenses, protecting the legal and democratic or general economic welfare indispensable for health or morals, or safeguarding other rights and freedoms	
The right to marriage and the equality of spouses	every man and woman of marriageable age has the right to marry and divorce	this right extends to the equal right of spouses to joint custody of their children, limited to the purpose of protecting the spouses' interests	is limited to the implementation of law-making procedures
The right to freedom of thought, conscience and religion	the right of every person to practice his religion publicly or privately, independently or collectively	may be subject to legal restrictions to protect public safety, public order, health, morals	is limited in case of abuse and imposition on other persons
The right to freedom of expression	includes the freedom to express opinions, receive and disseminate information, ideas without interference from state authorities	to ensure national security, territorial integrity or safety in society, prevention of civil unrest and mass crimes, protection of health or morals	prevention of disclosure of confidential information, protection of court jurisdiction
The right to freedom of assembly and association	the right to peaceful assembly and association, and the right to start and join trade unions for the protection of individual interests	is limited to the necessity of national security, public order, crime prevention, health, morals, as well as for the protection of individuals in a democratic society, rights and freedoms of others	laws may restrict members of the armed forces, police or government from exercising the above-mentioned rights

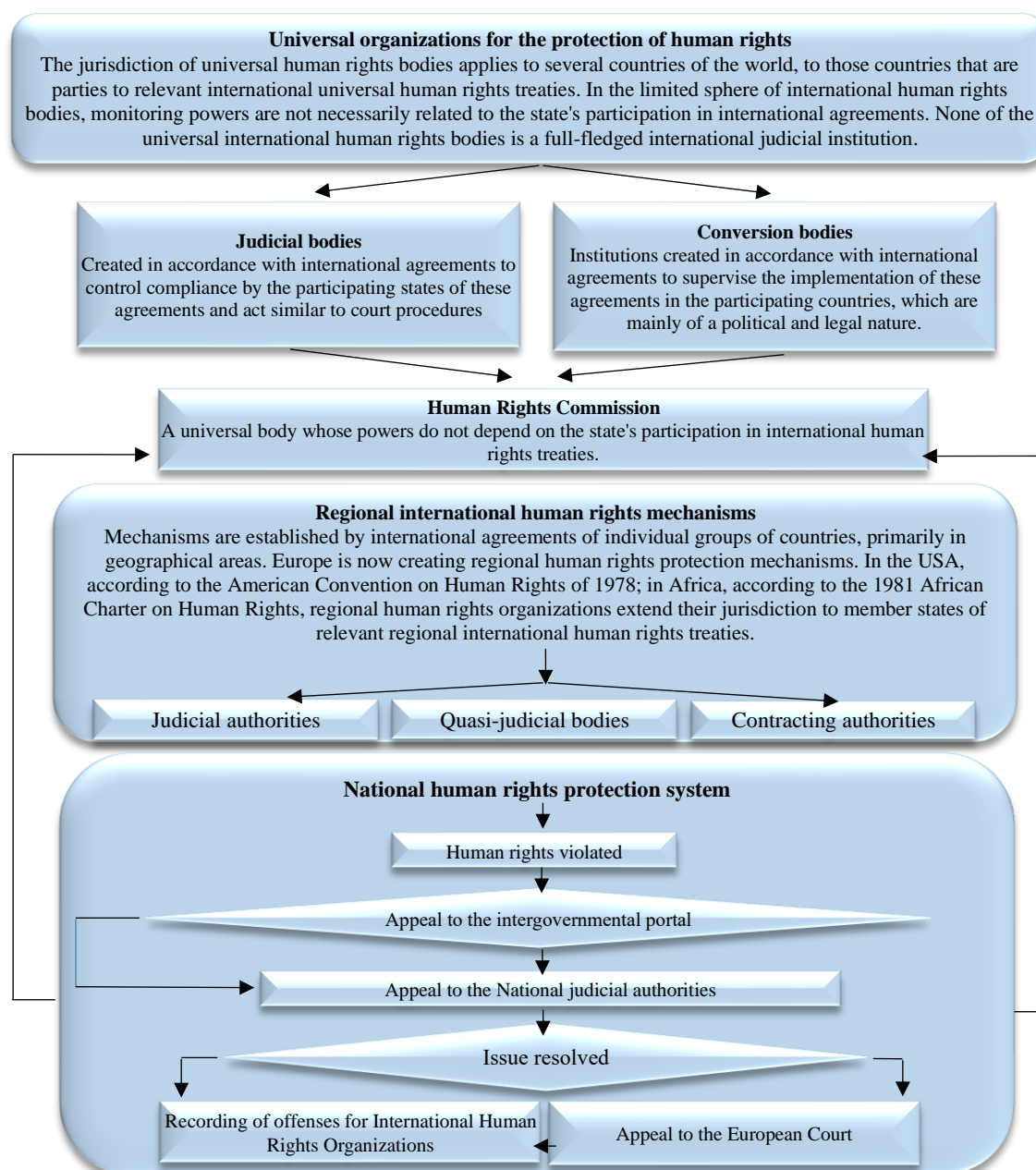
The right to property protection	every natural or legal person has the right to peacefully dispose of their property	is allowed only in the interests of society and in accordance with the law and general principles of international law	state restrictions regarding the use of property
The right to education	no one can be deprived of the right to education	the state protects the right of parents to obtain education in accordance with religious and other beliefs	is limited to forms of provision
Freedom of movement	every person has the right to move freely and choose their place of residence	when it is not required to ensure national security, maintain public order, prevent crimes	anyone can leave the country, including with their people

*(developed by authors)*

In accordance with Articles 2 and 3 of the Convention on the Protection of Human Rights and Fundamental Freedoms, the state must ensure the observance of rights and freedoms, as well as provide criminal procedural guarantees for the protection and realization of these rights and freedoms. That being said, an effective judicial system in these cases requires the application of punitive measures. The European Court of Human Rights has not restricted the application of international humanitarian law to

armed conflicts. In its verdict, it had to answer whether the country violated the Convention for the Protection of Human Rights and Fundamental Freedoms.

Drawing on the considered mechanisms for ensuring human rights in the conditions of martial law, it is possible to put forth the action plan as far as the observance and protection of human rights during war is concerned (Figure 1).



**Figure 1.** Mechanism of action in case of violation of human rights under martial law (build by authors)

In compliance with European requirements for the protection of human rights, Ukraine has approved feasible measures to protect the rights of its citizens.

First, submission of a proposal to the Verkhovna Rada of Ukraine. The proposal establishes the need to renew the Rome Statute of the International Criminal Court. Such restoration of legislation will allow national legislative bodies to respond to the challenges of armed conflicts. However, there is no concept of "crimes against humanity". The criminal legislation of Ukraine provides that they were committed by the Armed

Forces of the Russian Federation on the territory of Ukraine. Furthermore, the concept of a war crime should also be specified.

Second, the state should verify students' qualifications in the occupied territories according to the Ukrainian model and give them the opportunity to receive diplomas. In addition, it is necessary to simplify the process of issuing documents for working Ukrainians. Importantly, this procedure should be administrative in nature. Third, there is a need to provide comprehensive medical, social and psychological assistance to Ukrainian soldiers, citizens and their families.

Fourth, submission of proposals to the Ministry of Internal Affairs to change the method of providing housing benefits in order to avoid inspections. It is expedient to carry out systematic coordination of local authorities and public and international organizations in order to improve procedures for the evacuation of citizens from combat zones.

## Discussion

Human rights and the European Convention on Human Rights do not lose their relevance during war. The literature review supports the principle that states are obliged not to violate human rights during war and armed conflicts. As in current article, the authors emphasize that when the state violates its obligations, everyone has the right to demand compliance with their rights as well as to appeal to the European Court of Human Rights. From this perspective, Wise et al., (2021) maintain that the nature of armed conflict worldwide is extremely dynamic. In consequence, protection must constantly adapt to this ever-changing conflict environment. However, unlike in the current article, the authors consider new health threats, such as the COVID-19 pandemic, and new opportunities, such as modern trauma care, also created new challenges and opportunities for humanitarian assistance. In fact, the present research findings can be useful in the event of harm to human health during military conflicts.

The extensive bulk of literature on the topic under study puts forward a thesis to the point that one of the important issues that arise in current circumstances is the prevention of human rights violations. In the conditions of war, up to date there are no developed mechanisms for responding to of the citizens' rights violations (Bürgin et al., 2022; Carey & González, 2021; Pereira Ortega & Peñaloza Nuñez, 2022). The predominant bulk of scholarly inquiry is focused on research into the preservation of human rights in the post-covid period. To that end, Haggart and Keller (2021) concluded that only by considering legitimacy as a multifaceted phenomenon based on democratic accountability will it be possible to develop governance platform models that will not only stand the test of time, but will also be accepted by the people whose lives they affect. This research will be beneficial in the area of coordination of regulatory regulation in case of violation of human rights. For instance, Greitens (2020) argues that international relations will need to separate the pandemic's impact on democracy from its impact on liberalism. Thus, the research

conducted in the post-war period can be adjusted to the issues of restoring human rights in war and post-war times.

Also, the limitations of this study are that international mechanisms for the protection of human rights, especially those created within the framework of the UN, are only part of the international legal system of protection. Such scholars as Mejía Azuero, González Serrano, & Castro Londoño, (2022), McGregor et al., (2019) and Coynash and Charron (2019) maintain that transparency, which is emphasized in the current article, is fundamental to ensuring human rights, but is not sufficient to address the harm to human rights caused by the use of algorithms in decision-making. On the other hand, Toussaint and Martinez Blanco (2020) elaborated a human rights-based approach as a strategic tool for policymakers to strengthen international responses to loss and damage. In contrast to the strategy proposed in the current article, this approach is based on the parties' existing obligations under international and regional human rights treaties and provides a method of systematic integration of human rights that goes beyond the simple inclusion of human rights in the main field of activity. Costello and Mann (2020), in contrast to the object of this study, identified strategic limitations of human rights, probed into the role of both international criminal law and national tort law in ensuring responsibility. That being said, the scholars determined that citizens can be both victims and violators and pose threats to other citizens. Undoubtedly, this factor must be taken into account in further research on this topic.

At the same time, there are unresolved issues regarding the concept of international legal documents regarding the provision and protection of basic human rights. Ginsburg (2020) examined international law and found that, although formally neutral among regime types, it was largely a product of post-World War II liberal democracies. In the conducted studies, there are no international standards that directly define rights and obligations and international monitoring and law enforcement bodies, basic human rights and protection of citizens' rights. Among such studies, we can mention the scholars as follows: Rabinovych and Gawrich (2023), who distinguish between global funds, that is, funds created and used by the UN and the international community, as well as regional funds. This study will be beneficial in determining the mechanisms of restoration of human rights in the post-war period.



Furthermore, Scoble and Wiseberg (2019) noted that comparative study into international human rights is an extremely complex undertaking; it is also politically charged because human rights are a political symbol of high positive influence, to use Harold Lasswell's terminology (Espaliú Berdud, 2019). Thus, agreeing with this author, it is necessary to develop measures to protect economic, social and cultural rights.

The international legal system of human rights protection is constantly developing, which is confirmed by the creation of new institutions in the system. To that end, Caldeira (2019) and Hathaway et al., (2019) conducted a study of the democratic political systems and procedures that developed dynamically in Latin American countries such as Brazil, Argentina, Chile and Uruguay, where dictatorships prevailed until the 1980s. The current study is beneficial in further inquiries with the aim of forming a human rights protection system.

Donnelly (2021) argued that the integration of human rights into international peace and security became part and parcel of the actual UN activity. This study is limited to the statement that international human rights policy adheres to the mainstream of human rights, human rights monitoring, humanitarian activities and peace support.

## Conclusions

In the conditions of martial law, the need to protect human rights has considerably increased, especially in relation to the right to life. Due to the fact that Ukraine is a subject of international relations and, in particular, of the international human rights protection system, it must adhere to the norms and principles of international law enshrined in the Charter of the United Nations, the International Bill of Human Rights and the Convention on the protection of human rights and fundamental freedoms, the Helsinki Final Document, the Paris Charter for a New Europe and other documents of the United Nations, the OSCE and the Council of Europe. As a matter of fact, Ukraine recognizes that universal human values are higher than class values, and the recognized norms of international law are higher than domestic ones, and thus Ukraine recognizes basic values such as human rights, democracy and the rule of law, global peace and security, economic freedom and national responsibility, unity and solidarity, global integrity. However, in modern conditions, Ukraine cannot effectuate these obligations in full. Therefore, it is forced to record violations, consolidate them and transfer

them to international organizations for the safeguarding of human rights.

At the same time, the protection of human rights and freedoms does not negate the need to improve systems and mechanisms for the realization of these rights and freedoms. These questions remain important for legal research, lawmaking, and police practice.

It should not be forgotten that the participants of the current political process also demand constitutional reforms. It is clear that the success of their implementation directly depends on whether the legislative power will be able to include the ideas of democracy and the rule of law, the ideas of democracy and the rule of law, and the ideas of respect for man and society in the draft constitution.

To that end, the European Court of Human Rights undoubtedly plays an important role, as it can receive appeals from people who suffered from armed conflicts and whose rights cannot be restored, or whose rights they believe cannot be restored under national law. That being said, it goes without saying that there are certain restrictions on the types and types of cases that the court hears. Therefore, there is a need to create appropriate legal protection at the state level. However, if states fail to realize their obligations under the European Convention on Human Rights, the role of the European Court of Human Rights is to assist in tackling the problem.

The European Court of Human Rights underwent significant changes after the Russian invasion of Ukraine, as well as changes in the Council of Europe, other international organizations and Europe on the whole. Currently, the court is faced with the issue what to do with 18,000 pending cases against Russia and choose an appropriate strategy. Nevertheless, there is every reason to believe that the European Court of Human Rights will eliminate the backlog and lay down the law in due time.

The European Convention on Human Rights is a model for other mechanisms. The European Court of Human Rights, the largest and most comprehensive in the field of protection of the right to life, does not directly apply the norms of international humanitarian law, referring only to its individual articles, which is its most substantial achievement. The general test presupposes a double review: the obligation to evaluate the use of deadly force on a case-by-case basis, rather than on a general basis, as well as the establishment of strict standards of

proportionality and absolute necessity to kill in times of armed conflict, the Court wishes to safeguard the right to life as a fundamental human right.

There are certain difficulties with the implementation of international human rights standards into Ukrainian legislation. This is due to the fact that the national legislation of Ukraine does not clearly regulate the conditions for the implementation of international agreements. Some standards conflict with international legal norms, and some are outdated. Let's not forget about the shortcomings of our laws.

For example, according to Article 9 of the Constitution of Ukraine, ratified international treaties are part of national laws and, therefore, do not have priority over national laws. In addition, the second part of Article 9 of the Constitution of Ukraine stipulates that in case of contradictions between the provisions of the Constitution of Ukraine and international treaties, these contradictions are resolved by making appropriate amendments to the Constitution of Ukraine before adoption by the Constitution of Ukraine. As for the procedure for the implementation of international treaties, separate procedures for the implementation of international treaty rights should be regulated by the laws of special national norms since the standards do not directly affect the provisions of international treaties, which creates a problematic situation.

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## An exclusive phonological method of teaching a foreign language with a professionally oriented approach

Эксклюзивный фонологический метод обучения иностранному языку с профессионально-ориентированным подходом

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### Abstract

The relevance of the topic of the article is due to the reassessment of the goals and objectives of professionally oriented language education at the undergraduate level in the light of UNESCO initiatives. The hypothesis: use of the proposed methodology in the course of teaching English with the indicated approach at a technical university can significantly improve pronunciation. The purpose is to determine the effectiveness of the phonological methodology in teaching a foreign language based on a professionally oriented approach.

Methodology: pilot experiment, comparison, observation, description, Wilcoxon's T-test, induction. The experiment in 2019-2020 involved 60 students of the Moscow Aviation Institute (National Research University).

Most relevant results: repeated control testing revealed an increase in the level of foreign language proficiency. The Wilcoxon t-test confirmed the significance of differences in the results:  $T_{exp} < T_{cr}$  ( $n=4$ ;  $p \leq 0.01$ )=1. Practical testing of this study showed that the vocalism technique provides effective opportunities for implementing an individual learning path.

Thus, future research suggested by the results will continue to improve the phonology of pronunciation.


The novelty of the study lies in the fact that this experiment was conducted for the first time at an aerospace non-linguistic university.


### Анотація

Актуальность темы статьи обусловлена переоценкой целей и задач профессионально ориентированного языкового образования на уровне бакалавриата в свете инициатив ЮНЕСКО. Гипотеза: использование предложенной методики в процессе обучения английскому языку с указанным подходом в техническом вузе позволяет значительно улучшить произношение. Цель - определить эффективность фонологической методики в обучении иностранному языку на основе профессионально ориентированного подхода. Методология: экспериментальный эксперимент, сравнение, наблюдение, описание, Т-критерий Вилкоксона, индукция.

В эксперименте в 2019-2020 годах приняли участие 60 студентов Московского авиационного института (национального исследовательского университета). Наиболее важные результаты: повторное контрольное тестирование выявило повышение уровня владения иностранным языком. Студентный критерий Вилкоксона подтвердил достоверность различий результатов:  $T_{exp} < T_{cr}$  ( $n=4$ ;  $p \leq 0,01$ )=1. Практическая апробация данного исследования показала, что методика вокализма дает эффективные возможности для реализации индивидуальной траектории обучения.

Таким образом, будущие исследования, предложенные результатами, продолжают улучшать фонологию произношения. Новизна

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**Keywords:** phonetical aspect of speech, professionally-oriented approach, vocalism, Wilcoxon rank sum test.

исследования заключается в том, что данный эксперимент впервые проводился в аэрокосмическом неязыковом вузе.

**Ключевые слова:** фонетическая сторона речи, профессионально ориентированный подход, вокализм, критерий суммы рангов Уилкоксона.

## Introduction

One of the main problems of teaching a foreign language, in particular English, is the difficulty in pronunciation, the difference in the sound of vowels and consonants in languages. In connection with this, a phonological method of teaching is required. On the one hand, a lot of methodological literature has been written by innovative teachers, but on the other hand, specific methods for improving pronunciation are not enough. The topic is quite debatable and discussed, since each language other than English has its own melody, rhythm, duration of sounds, softening, hardness, that is, its own specifics. These linguistic features make learning English as a foreign language quite difficult in terms of pronunciation. In addition, in non-linguistic institutions, the number of hours for a foreign language is less than for exact sciences. The question arises: how to solve the problem of pronunciation? Considering the teaching of students with a professionally oriented approach, we have developed an Exclusive phonological method of teaching a foreign language for students of technical institutes.

The purpose of the article is to determine the effectiveness of the phonological technique in teaching a foreign language based on a professionally oriented approach.

The object of the study was the improvement of intonation, in particular, of the English language.

An exclusive phonological method of teaching a foreign language with a professionally oriented approach is an innovative technology that has been tested at the Moscow Aviation Institute and researchers are ready to share the results and discuss the methodology for further teaching English to students in technical universities. The study contains six chapters: Abstract (summary). In this part, the relevance, hypothesis, justification of the goal and research methods are defined; Introduction. An approach to the topic to be discussed, and the reader is provided with information about the problem raised in the study and its rationale. Also in this part of the article, we have provided an extensive theoretical study of the problem by various authors and sources.

The reader can get acquainted with various points of view on the research of the phonological side of teaching a foreign language in particular and in general in linguistics; Methodology. Research methods, diagrams, tables with explanations, the structure of the experiment, the proposed training model, the difficulties that may arise during the experiment are reflected in this chapter. Moreover, the phonetic aspect of students' speech was assessed through the synthesis and analysis of control loci in the following categories: Locus of consonant control (LCC), Aggregate pronunciation indicator (API), Locus of vowel control (LVC), Locus of diphthong control (LDC); Results and Discussion. Description of the experiment in the control and experimental groups increasing the level of foreign language proficiency, student's Wilcoxon test confirmed the significance of differences in the results summarized in this chapter; Conclusions and Bibliographic references indicates the sources that were used in writing the article.

## Literature Review

Learning and knowledge are commonly recognized the most valuable human re-sources deployed to bring variability into the teaching process during pandemics. A broad consultative process of the world community under the UNESCO International High-Level Commission has been brought up to realize this idea. It triggered the "Education Vision" program, according to which the periods before and after 2030 will be aimed at "providing inclusive and equitable quality education" (UNESCO, 2019).

Integration processes of today require the specialist to obtain professional knowledge as well as good command of foreign language essential in the process of the exchange scientific discoveries and maintaining fresh business relations. The institution of higher education, in its turn, are expected to provide trained specialists capable of using a foreign language for the purposes of communication, bearing properties of the knowledge trans-mission medium, means of personal development and

improvement personal qualities, as well as be the way of experience transfer and mastering the communication skills. Students have to integrate their language skills in process of learning a foreign language (Vepreva, 2012).

All the above mentioned facilitates productive usage of the professionally-oriented approach, which includes specific skills and experience together with understanding the importance of foreign language command and learning motivation of students developed through realizing the objectives of studies using the foreign language. The current foreign language program focuses on the formation and development of professionally significant general cultural and professional competencies. No less attention is paid to the development of the creative potential of students, preparing them to independently obtain new knowledge throughout their lives (Bygate, Skehan, & Swain, 2001).

A professional need to improve the pronunciation skills, constituting a fundamental feature of speech, is often realized by students as the basis for the development and perfection of all other foreign language skills. These skills presume the correct pronunciation of all phonemes in the flow of foreign speech being comprehended with the understanding of all sounds. Rhythmic intonation skills provide for intonation and rhythmically correct verbal image and, as a result, their understanding.

Specialists distinguish the phonetic side of foreign language speech as particularly important since speech is not only the goal of learning but also the main means of adapting cognitive and communicative activities. The phonetic side of speech stands out as an obligatory parameter of professional readiness and communicative skill. Success in communication depends on how comprehensively and clearly the speech is structured in a professional environment and how correctly the interlocutors perceive speech from a phonetic point of view. Therefore, students' speech must comply with generally accepted standards (Sheipak, Artyushina, & Zhurbenko, 2019; Li et al., 2021), which allow fixing phonetic material in dictionaries (Sheipak, Artyushina, & Zhurbenko, 2019).

The majority of students possess certain developed pronunciation skills and rhythmic intonation, although, not completely meeting the professional speech requirements (Tabakova, Maneshina, & Artyushina, 2017). The quality of pronunciation of future specialists may be

deteriorated due to several reasons, and some of them are not always associated with the method of teaching the phonetic side of foreign speech or vocalism. Vocalism is an integral system of vowels of a language, dialect, or subdialect and is studied (synchronously and in diachrony) aimed at improving the communication skills of students (Sapuntsova, 2018).

The English language may be confidently considered the most commonly studied in the course of professional orientation at the present stage of development of the global society and economy (Räisänen, 2020). Considering vocalism, it should be noted that modern British English distinguishes 12 vowel phonemes. Similarly, with German, English vowels vary in sounds quality (open/close) and duration (long/short). Among the distinguishing characteristics of phonemes, there is the degree of raising the back of the tongue (high/medium/low), the direction of raising the back of the tongue (front/middle/back), the participation of the lips (labialized / non-labialized vowels).

Many students tend to gradually forfeit their acquired pronunciation and rhythmic intonation skills (Mitchell, 2014), which affects all types of speech activity that students master within the framework of a communicative methodology. The vocalism system facilitates the improvement of pronunciation and ensures the correctness of foreign speech, and hence its accurate understanding. During the active practice of communication with native speakers, students begin to notice deviations from phonetic norms in their speech (Tabakova, Maneshina, & Artyushina, 2017). It is difficult to involve students in correcting errors in pronunciation since the deterioration in their performance is not significant in terms of unprofessional communication (Volodina, & Volodina, 2019). Nevertheless, students often make so many phonetic mistakes that they can be considered both a deviation from the norms of pronunciation, and factors hindering the very process of foreign language communication (Neverova, & Rybakova, 2017; Bai, & Yuan, 2019).

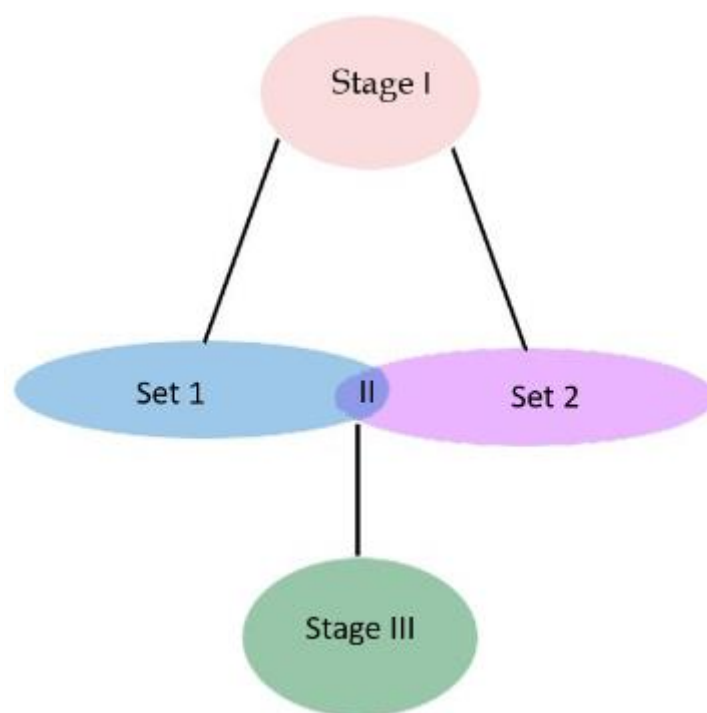
Before students start their first professional practice the indicated problem must be resolved. One of the ways implies the knowledge of the basics of the vocalism of a foreign language, accepting the learning process as a model of the communication process (Bezborodova, 2015). Pronunciation should be trained in real-time communication and, accordingly, serve as the

basis of speech, inextricably linked with mastering lexical and grammatical skills (Iaikaia, 2020). Thus, there is a constant need for professionally-oriented improvement of the phonetic aspect of speech among specialists using a foreign language. Still, insufficient theoretical and practical study of this issue makes the problem of this study the most relevant.

The purpose of the article is to determine the effectiveness of the vocalism methodology in teaching a foreign language based on a professionally-oriented approach in a technical university. The subject of the study is the mechanism of the formation of the correct pronunciation among students of a technical university. The object of the study is vocal-ism in teaching foreign languages in the implementation of a professionally-oriented approach.

## Methodology

A proposed staged learning model to improve pronunciation among students of a technical university, which includes three stages of learning using authentic video materials shall facilitate the achievement of the research objective (Figure 1). At the first (initial) stage (Stage 1) a training complex is proposed considering the traditional approach, and consisting of two blocks of phonetic exercises. It includes exercises on imitation and re-production of sound patterns/intonation patterns, i.e., exercises for training articulatory breathing with accurate reproduction of stress, rhythm, and intonation. Exercises in this sequence provide for a gradual complication of activities with phonetic phenomena, from training sound in individual words to working out a sound and intonation model in a group of sentences. These exercises are aimed at preventing common mistakes in pronunciation and overcoming language interference.



**Figure 1.** Vocalism methodology applied in stagewise foreign language teaching.  
(Source authors)

The second (basic) stage (Stage 2) provides for receptive-reproductive exercises to develop the auditory and pronunciation skills assimilated at the initial stage with the help of authentic video materials, like poems, rhymes, songs, dialogues, monologues, podcasts of relevant topics. This type of exercise is aimed at developing the ability to perceive the system of foreign vowels from the video material.

At the third (creative) stage, students should create their own videos or podcasts with sound/intonation pattern training exercises. At this stage, it is recommended to organize interaction, as well as the exchange of experience with students from other educational institutions or majors and faculties. The creative stage is aimed at developing phonetic awareness, proper conscious learning processes, as well as

demonstrating, analyzing, and explaining speech patterns.

The study of 2019-2020 involved 60 first-year students of the Moscow Aviation Institute (National Research University). Experimental (30 people) and control (30 people) groups were allocated according to the levels of foreign language proficiency. Groups were divided based on Education First test scores. Two variants of the test were carried out, for 15 and 50 minutes. The first test contained tasks to assess reading and listening skills. The students had their motivation in a message that, by the results of the test they receive an e-mail certificate, which can be presented when applying for a job. An additional test included Reading & Listening (30 minutes) and

Pronunciation & Fluency (5 minutes) was conducted.

Further curriculum presumed equal numbers of classes, in particular, 8 weeks for 1.5 hours a week using the author's interpretation and a comprehensive structure of phased teaching of a foreign language in a technical university, taking into account the method-ology of vocalism.

The phonetic aspect of students' speech was assessed through the synthesis and analysis of control loci in the following categories: Locus of consonant control (LCC), Aggregate pronunciation indicator (API), Locus of vowel control (LVC), Locus of diphthong control (LDC) (Table 1).

**Table 1.**

*Assessment of phonetic speech aspect with technical university students*

Control loci	Peculiarities
Locus of consonant control	<p>a) [v] — [w], [s] — [θ], [z] — [ð], [f] — [θ], [w] — [ð], [t] — [θ], [d] — [ð]. The ambiguity of pronunciation between the words: thing - sing - think - sink, three - free, this - with, what - that, first - thirst, Zen - then, as well as the widespread replacement of English [w] with Russian «В» — «ВОТ» instead of "what" and, conversely, using the [w] sound where [v] should be, etc.</p> <p>b) Replacing English sounds with similar Russian sounds: [н], [л], [с], [з], [т], [д]. English sounds [n], [l], [s], [z], [t], [d] should be pronounced on the alveoli, and not on the teeth, like Russian ones. The absence of aspiration (breathing) in English sounds [p], [t], [k], [h] is also a mistake.</p>
Aggregate pronunciation indicator	<p>a) Assimilation, the absence of a connection between words in a phrase (for example, linking). Sounds such as [s] and [θ], [z] and [ð], [v] and [w] should be pronounced as two different sounds when they are side by side. A very common mistake is the incorrect assimilation of these sounds to each other, as, for example, in combinations: is this [ɪz zɪs] or [ɪð ðɪs]; of water [əv wɔ:tə] or [əw wɔ:tə]. Words in the flow of speech must be connected to each other.</p> <p>b) Word stress. In Russian, a word can have only one stress, but in an English word, there can be two or three stresses. This presents some difficulties because English learners need to learn how to pronounce words with several stresses. Therefore, it is important to know the basic trends and rules of word stress in order to pronounce words correctly.</p> <p>c) The use of Russian intonation patterns instead of English ones: rhythm pauses, stress, and intonation, namely, rising, falling tone (especially in questions). What has been taken into account:</p>
Locus of vowel control	<p>a) English vowels: pronunciation /ɜ:/, /ʊ/, /ɔ:/.</p> <p>b) Four types of reading English vowels in stressed syllables</p>
Locus of diphthong control	[eɪ] [aɪ] [ɔɪ] [iə] [eə] [əʊ] [au] [əu]

(Source: authors)

Control loci were carried out by the methods of presentations, work with podcasts (listening to Luke's podcasts and compiling podcasts by the students independently at the last verification stage), reading literary texts with an aviation theme (in particular, Hailey "Airport", Bach "Biplane"). The volume of the presentation is 5-6 slides, the speaking time is 5-7 minutes.

Listening comprises 5-7 minutes, discussion time is up to 10 minutes. The reading volume makes 2000 characters, time is up to 5 minutes.

The following describes the features of a 5-grade system for assessing the phonetic side of speech:

- Speech is perceived easily, means, there are no unreasonable pauses; phrasal stress and intonation contours, pronunciation of words

without violations of the norm; no more than five phonetic errors are allowed, including one or two errors that distort the meaning, contributes to grade "5".

- Six or seven phonetic errors, including 3-4, distorting the meaning, contributes to grade "4".
- Speech is perceived with difficulty due to a moderate number of unnatural pauses, stutters, incorrect placement of stresses and errors in the pronunciation of words, or more than 8 phonetic errors made, or 5 or more phonetic errors made that distort the meaning, contributes to grade "3".
- Speech is perceived with difficulty due to a large number of unnatural pauses, hesitations, incorrect placement of stresses, and errors in the pronunciation of words, or more than 9 phonetic errors were made, or 6 or more phonetic errors were made that distort the meaning, contributes to grade "2".

At the end of the experiment, statistical calculations were carried out in the experimental and control groups. The purpose of the calculations was to establish the reliability of differences in the results of testing students of the experimental group, obtained before and after the application of the proposed methodology, using a statistical tool for testing hypotheses. Hypotheses put forward:

**H0:** The test results of the experimental group obtained after using the vocalism methodology are above the test results of the experimental group obtained before using the same.

**H1:** The test results of the experimental group obtained after using the vocalism methodology are below the test results of the experimental group obtained before using the same.

Testing the hypothesis about the reliability of differences in the results of testing the experimental group, obtained before and after using the proposed method, was carried out using the Wilcoxon rank sum test. This is a non-parametric statistical test to test for differences between two samples of paired or independent measurements on the level of some quantitative trait, measured on a continuous or ordinal scale. The implementation of the method involves comparing the absolute value of the severity of shifts in one direction or another. To do this, first, all the absolute values of the shifts are ranked, and then the ranks are summed up. If shifts in one

direction or another occur by chance, then the sums of their ranks will be approximately equal. If the intensity of shifts in one direction is greater, then the sum of the ranks of the absolute values of shifts in a certain direction will be significantly lower than it could be with random changes.

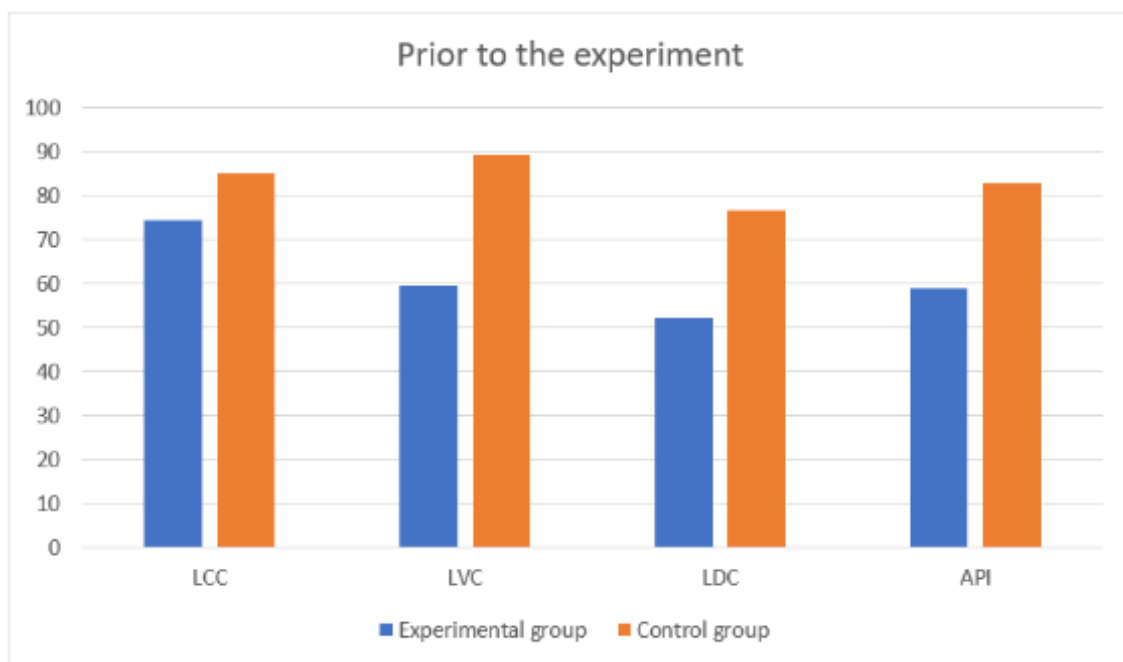
This technique was chosen among other alternatives as the most promising and accessible, since pronunciation is practiced every day. In practical classes in a foreign language, especially in non-linguistic institutes, it is important not only to improve the study and understanding of grammar, but also phonetics. Learn to speak correctly without dialects or accent. The experiment showed how and by what methods this can be done. There are also potential limitations of the purely phonological method of teaching a foreign language. We have looked at this method using a professionally oriented approach, but perhaps in alternative directions the methodology will be more specific. In addition, teaching pronunciation is important for developing students' listening and speaking skills. When reading, writing, listening, visual images become acoustic. They are combined with kinesthetic images, resulting in inner speech, which is then reproduced. And, as research has shown, it is vocalism and phonology that contribute to this process.

## Results and Discussion

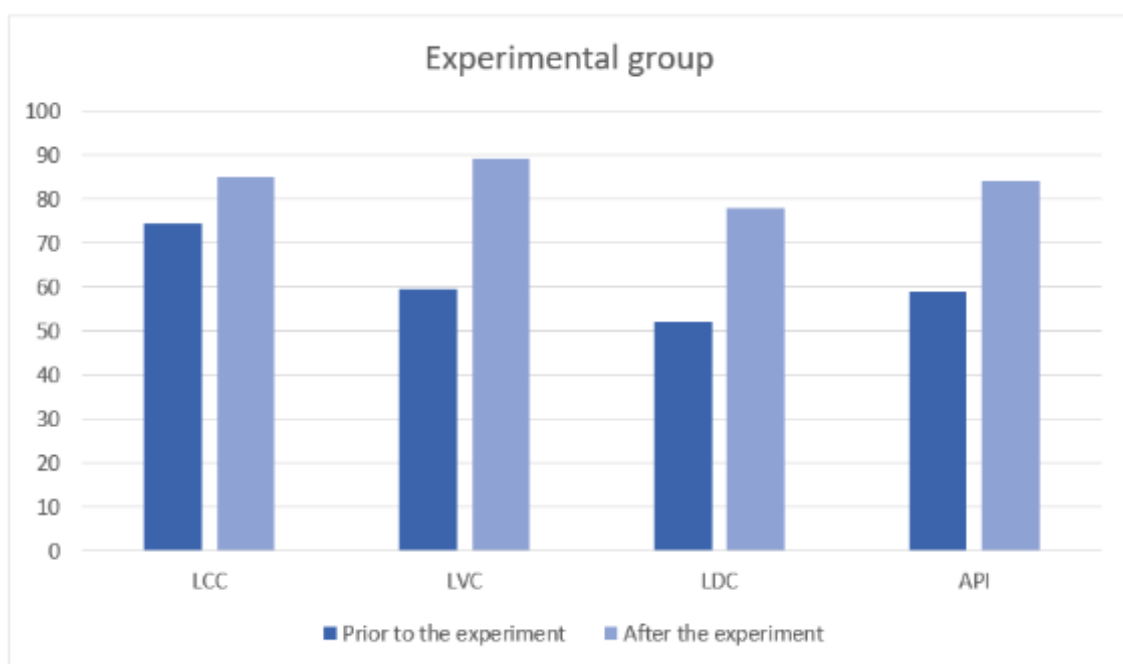
Before the experiment in the control group, positive assessments made 80%, in the experimental group they equaled 50%. After the end of the experiment, repeated control testing was carried out. Based on the results of the Education First tests, there was a determinately increased level of language proficiency. In the experimental group, the number of students at level A1 - Survival Level - Beginner and Elementary counted 2 people, A2 - Pre-threshold level (Waystage - Pre-Intermediate) there were 20 people, B - Independent User - 8 people. In the control group, the number of students of levels B - Independent User made 10 people and B1 - Threshold - Intermediate made 10 people, B2 - Threshold advanced level (Vantage - Upper-Intermediate) made 10 people.

After the experiment in the control group, positive assessments comprised 100%, in the experimental group it was 80%. Experimental data are presented in the form of histograms (Figures 2-5).

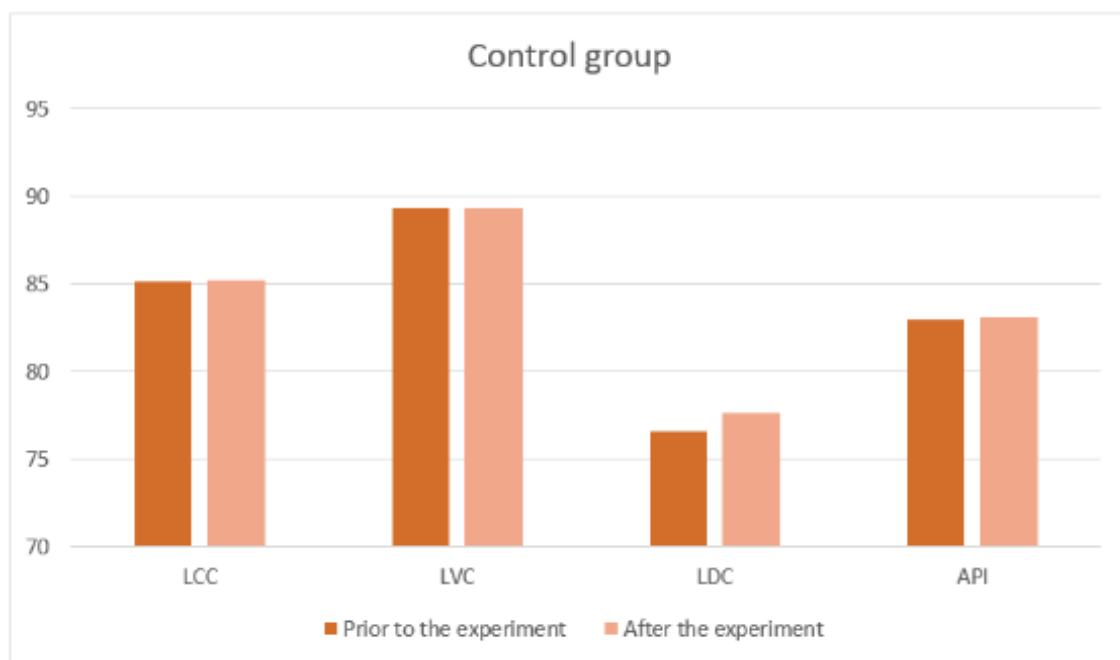




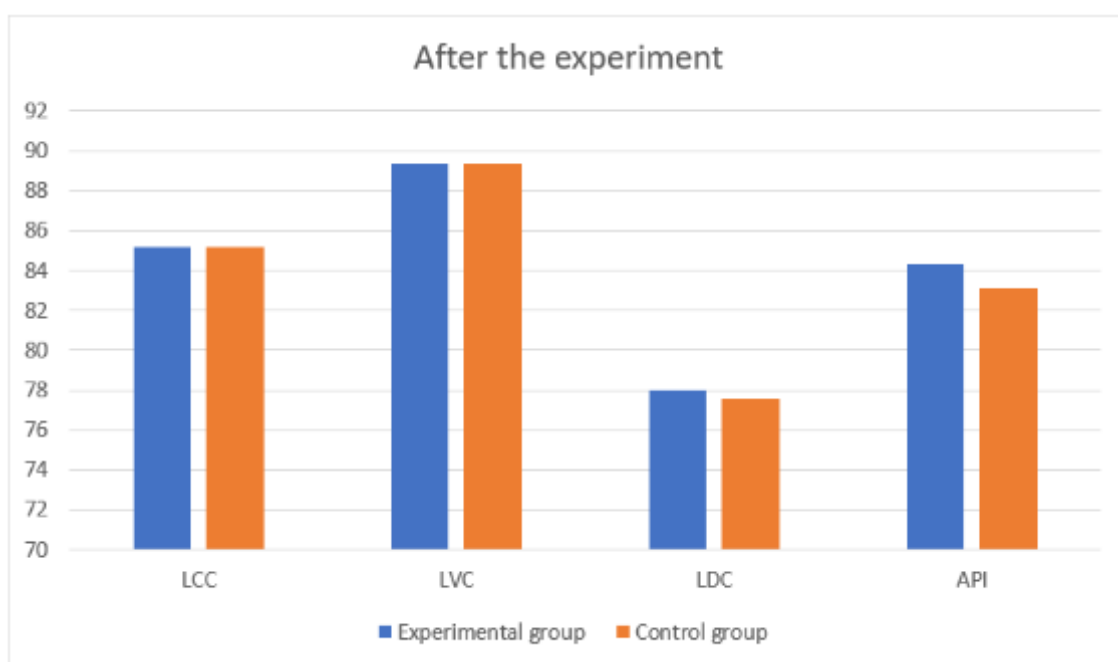
**Figure 2.** Control loci before the experiment in the experimental and control groups.  
(Source: authors)



**Figure 3.** Control loci before and after the experiment in the experimental group.  
(Source: authors)



**Figure 4.** Control loci before the experiment in the control group.  
(Source: authors)



**Figure 5.** Control loci after the experiment in the experimental and control groups.  
(Source: authors)

Table 2 provides statistical calculations in the experimental group, reflecting the results of

testing students before and after applying the vocalism methodology.

**Table 2.**

*The results of testing students in the experimental group.*

Testing results	Locus of consonant control	Locus of vowel control	Locus of diphthong control	Aggregate pronunciation indicator
Before experiment	72	65	51	70
After experiment	85	89	79	83

(Source authors)

The Wilcoxon rank sum test was applied to verify the hypothesis about the reliability of differences in the results of testing the experimental group, obtained before and after

using the vocalism methodology, was carried out using the Wilcoxon rank sum test. For this, each individual value "before" was first subtracted from the value "after" (Table 3).

**Table 3.**

*Determination of differences in results and their absolute values in the experimental group*

Before measurement, t before	After measurement, t after	Difference (t before-t after)	Absolute difference value
72	85	13	13
65	89	24	24
51	79	28	28
70	83	13	13

(Source: authors)

Since there are related ranks (the same rank number) of the 1st series, they are to be remodeled. It is implemented without changing the importance of the rank, i.e., the

corresponding ratios (greater than, less than or equal to) must be preserved between the rank numbers. The ranks remodeling is provided in Table 4.

**Table 4.**

*Ranks remodeling in the experimental group.*

Locations inside ordered series	Absolute difference of test results	New ranks
1	13	1.5
2	13	1.5
3	24	3
4	28	4

(Source: authors)

The results of the calculations and the total of ranks pairs are proposed in Table 5.

**Table 5.**

*Calculation of rank pairs total in the experimental group*

Before measurement, t before	After measurement, t after	Difference (t before-t after)	Absolute difference value	Difference rank index (Ri)
72	85	13	13	1.5
65	89	24	24	3
51	79	28	28	4
70	83	13	13	1.5
Total				10

(Source: authors)

Rank column total equals  $\sum Ri=10$ . Checking the correctness of the compilation of the matrix based on the calculation of the control sum:

$$\sum x_{ij} = \frac{(1+n)n}{2} = \frac{(1+4)4}{2} = 10$$

The column sum and the control sum are equal to each other; therefore, the ranking was carried out correctly.

Next, it is necessary to single out the atypical directions, in this case, the negative ones (that is, indicating deterioration in the test result after applying the vocalism methodology). The initial data of the experimental group do not contain atypical directions. The sum of the ranks of these atypical directions ( $R_{in}$ ) is the empirical value of the criterion ( $Temp$ ):  $Temp = \sum R_{in} = 0$ .

According to the table of critical values of the Wilcoxon rank sum test, the critical value of the criterion for  $n=4$  and significance level  $p \leq 0.01$  was determined:  $T_{cr}(n=4; p \leq 0.01) = 1$ . In the case under consideration, the empirical value of the Wilcoxon rank sum test ( $Temp$ ) falls into the zone of significance:  $Temp = 0 < T_{cr}(n=4; p \leq 0.01) = 1$ , so the null hypothesis ( $H_0$ ) is accepted.

Data on the results of testing the control group before and after the application of the vocalism methodology are presented in Table 6.

**Table 6.**  
*Test results of students in the control group*

Testing results	Locus of consonant control	Locus of vowel control	Locus of diphthong control	Aggregate pronunciation indicator
Before experiment	79	82	74	72
After experiment	85	89	78	83

(Source: authors)

Features of the Wilcoxon rank sum test are provided in Tables 7, 8.

**Table 7.**  
*Determination of differences in results and their absolute values in the control group.*

Before measurement, t before	After measurement, t after	Difference (t before-t after)	Absolute difference value
79	85	6	6
82	89	7	7
74	78	4	4
72	83	11	11

(Source: authors)

**Table 8.**  
*Calculation of rank pairs total in the control group*

Before measurement, t before	After measurement, t after	Difference (t before-t after)	Absolute difference value	Difference rank index ( $R_i$ )
79	85	6	6	2
82	89	7	7	3
74	78	4	4	1
72	83	11	11	4
Total				10

(Source: authors)

Rank column total (rank difference number) equals  $\sum R_i = 10$ . Checking the correct-ness of the compilation of the matrix based on the calculation of the control total:

The column total and the control total are equal to each other; therefore, the ranking was carried out correctly.

The table of critical values reveals that the critical value of the Wilcoxon rank sum test for  $n=4$  and significance level  $p \leq 0.01$ :  $T_{cr}(n=4; p \leq 0.01) = 1$ . In the case under consideration, the empirical value of the Wilcoxon rank sum test ( $Temp$ ) falls into the zone of significance:  $Temp = 0 < T_{cr}(n=4; p \leq 0.01) = 1$ , so the null hypothesis ( $H_0$ ) is accepted.

The study determined the following:

- the observed differences in pronunciation before and after using the vocalism methodology in the experimental and control groups are statistically significant;
- indicators of pronunciation control after the application of the vocalism methodology is above values of the indicators before its use;
- the use of the vocalism methodology in the course of teaching a foreign language can significantly increase the effectiveness of phonetic exercises.

It is supposed, that the authors Setter (2019), Mat Nayan & Setter (2016), Derakhshan (2015), Bebina (2015), Maksaeva (2016), and Voronina (2017), Anisimova et al., (2020). bring up a correct idea, that pronunciation is the main feature of foreign language speech, the basis for improving other foreign language skills. Accordingly, the success of foreign language communication depends on the clear and comprehensive structure of specialists' speech in a professional environment and how accurately interlocutors perceive this speech from a phonetic point of view. In this regard, teaching the phonetic material of a foreign language based on a professionally-oriented approach should be carried out in stages to develop both auditory pronunciation skills and rhythmic intonation (Furman et al., 2018).

This approach is recommended in teaching English pronunciation in specific speech situations so that students could demonstrate and train new patterns of sound and intonation in any given context. Obviously, in a speech stream, sounds represent a single phonetic system, and outside of any given context, they become disconnected. Linguists know that German, English, and Dutch are vocal languages, while Belarusian, Polish and Russian are considered consonant-type (Neverova, & Rybakova, 2017; Sokolyanskiy, 2017). This difference is based on the specifics of vocalism since the opposition of vowels in duration is attributable to the phonological systems of the Slavic languages. On the other hand, the softening of consonants when pronouncing vowels does not have a typical impact on Germanic vocalism.

Differential characteristics of vowels include various gradations of quality and duration, as well as their combinations. For example, quality includes closed, half-closed, half-open, open (Andronov, 2020). The participation of lips in the formation of vowels in the vocalism of the English language is much weaker than in

German. Labialized vowels are formed with relatively less labialization and no lip protrusion. English does not have labialized first row vowels. The differential feature of labialization in the articulation of diphthongs in German is inherent only in back vowel phonemes through the protrusion of the lips. It is noteworthy that the labialized vowels of the first row, characteristic of vocalism in German and Dutch, are absent in English. The degree of construction of English phonemes is also lower than that of German. In addition, when articulating vowels, the tip of the tongue does not come into contact with the lower incisors. The body of the tongue is pulled back, especially when pronouncing a vowel sound. It should be added that in English, unstressed vowels can change their duration and quality or experience complete elimination (Murtazina, 2010).

An analysis of the traditional approach to teaching phonetic material shows that the learning process runs as follows: a single phoneme, a combination of phonemes or a phrase, a phrase, or an intonation structure is chosen as a learning unit. By explaining the correct articulation and training it with the help of analytical simulation exercises, students develop the necessary quality of pronunciation (Medvedeva, & Bezborodova, 2016).

It is believed that foreign language teachers of technical universities should organize effective training to improve the pronunciation of each student, through an individual approach and due consideration of the principle of continuous learning. Such training should be carried out at the initial stage starting from the first semester, when graduates of schools and colleges are divided into groups and subgroups, by the level of foreign language proficiency. Pronunciation and intonation training should consist in repeating and systematizing the rules of pronunciation, correcting pronunciation, and in some cases, the formation of pronunciation skills among students. Starting from the second semester, systematic training aimed at improving pronunciation should be conducted throughout the year. Students, as future foreign-language speaking professionals, should go through a deep study of the features of vocalism, phonetic phenomena, and sound correction techniques together with practice in reproducing the correct intonation.

It is interesting to note, that the process of understanding or listening to the foreign-language speech means an active and purposeful action associated with the complex mnemonic



actions, being the more successful the higher concentration of attention is (Bezborodova, 2015). Attention is buildup and developed through emotions. However, human emotions always appear along with volitional processes. A teacher of a technical university should build the educational process with maximum reliance on the active mental activity of students, and use various teaching methods that promote internal motivation, directing students' attention to the main elements of the vowel system, to completely improve the phonetic aspect of foreign speech through the perceived material.

It goes without saying, that the success of the communicative approach of teaching a foreign language in a technical university depends on how effectively modern pedagogical and teaching methods are applied. In particular, the authors single out authentic video materials as a basic tool that allows careful observation of the use of a foreign language in real communication and training pronunciation features. Video material should be frequently employed by the teachers to intensify the learning process, enrich its content and increase motivation to learn a foreign language.

The success factors in the course of foreign-language speech improvement mainly depend on the level of learned phonetic skills, volume of gained and processed knowledge, and dynamic interference of these components on the background of overall linguistic and acquired phonetic awareness (Volodina, & Volodina, 2019). It must be stressed that phonetic awareness is the ability of people to practically use mastered pronunciation and intonation skills by building their own system of phonetic knowledge. This is the ability to consciously record and recognize sound units of different levels, their features and models of formation and functioning; analyze the phonetic aspect of vocalism in the speech and draw appropriate conclusions regarding the presence of serious deviations from the standard vowel pronunciation system, identify their causes, and choose effective ways to overcome them with the help of a teacher.

## Conclusions

The phonetic aspect of foreign-language speech is developed by the specialists as a result of the use of the vocalism methodology in a technical university in the course of a professionally-oriented approach considering communicative activity. Whenever authentic video materials are included in the training process, learning a

foreign language be-comes interactive and exciting. The three stages of learning using authentic video materials include both traditional and communicative methods. This type of learning intensifies the process of obtaining phonetic knowledge and phonetic awareness of the vowel system and, therefore, is a fundamental component in the formation of professional competence among foreign language learners. The prospect of further research entails the development of new ways of using interactive methods to train the phonetic aspect of foreign-language speech. These include online chats with native speakers and learning together with students from other countries, which significantly expands the range of opportunities for studying and developing foreign phonetics mastering, but as yet remains insufficiently included in educational activities.

**Supplementary Materials:** The following supporting information can be downloaded at: [www.mdpi.com/xxx/s1](http://www.mdpi.com/xxx/s1), Figure S1: title; Table S1: title; Video S1: title.

**Author Contributions:** For research articles with several authors, a short paragraph specifying their individual contributions must be provided. The following statements should be used “Conceptualization, X.X. and Y.Y.; methodology, X.X.; software, X.X.; validation, X.X., Y.Y. and Z.Z.; formal analysis, X.X.; investigation, X.X.; resources, X.X.; data curation, X.X.; writing—original draft preparation, X.X.; writing—review and editing, X.X.; visualization, X.X.; supervision, X.X.; project administration, X.X.; funding acquisition, Y.Y. All authors have read and agreed to the published version of the manuscript.” Please turn to the CRediT taxonomy for the term explanation. Authorship must be limited to those who have contributed substantially to the work reported.

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## Workplace dynamics and individual outcomes: Role of workplace ostracism in shaping inner resignation

ديناميكيات مكان العمل والنتائج الفردية: دور النبذ في مكان العمل في تشكيل الاستقالة الداخلية

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### Abstract

This study aims to examine the influence of workplace ostracism on horizontal workplace violence, occupational self-efficacy, and inner resignation in the faculty members working in higher education institutions of Pakistan. In this study, a survey was held for native Urdu speakers. The back-to-back method was used for the translation of the questionnaire. The translated questionnaire was pilot tested with a small group to ensure clarity. The total of 321 responses were collected by using self-administered questionnaires and online platform. The SPSS and Smart PLS4 software were utilized for hypothesis testing. The results of the study show that respondents have low workplace ostracism, horizontal workplace violence, and inner resignation, whereas they exhibit high occupational self-efficacy. The results also indicate that workplace ostracism has the strong and positive relation with horizontal workplace violence while negative relation with occupational self-efficacy. The findings of the study show that interrelationship between workplace ostracism and inner resignation is not an isolated one but is significantly influenced by horizontal workplace violence and occupational self-efficacy.

**Keywords:** Workplace ostracism, Horizontal workplace violence, Occupational self-efficacy, Inner resignation, Higher education institutions.

### Introduction


Workplace ostracism (WO) include practices involving excluding, ignoring, or socially isolating employees by other colleagues, has emerged as a critical issue in the modern-day workplace. With people spending considerable time at work, social interactions with peers and

هدفت الدراسة إلى معرفة تأثير النبذ في مكان العمل على العنف الأفقي في مكان العمل، والكفاءة الذاتية المهنية، والاستسلام الداخلي لدى أعضاء هيئة التدريس العاملين في مؤسسات التعليم العالي في باكستان. في هذه الدراسة، تم إجراء استطلاع للناطقين باللغة الأردية. تم استخدام طريقة العودة إلى الخلف لترجمة الاستبانة. تم اختبار الاستبانة المترجمة بشكل تجريبي مع مجموعة صغيرة لضمان الوضوح. تم جمع إجمالي 321 استجابة باستخدام الاستبيانات ذاتية الإدارة، وعبر منصة الإنترنت. تم استخدام برنامج SPSS و Smart PLS4 لتحليل النتائج واختبار الفرضيات.

أظهرت نتائج الدراسة أن المشاركين لديهم انخفاض في النبذ في مكان العمل، والعنف الأفقي في مكان العمل، والاستسلام الداخلي، في حين أنهم يظهرون كفاءة ذاتية مهنية عالية. كما أشارت النتائج إلى أن النبذ في مكان العمل له علاقة قوية وإيجابية بالعنف الأفقي في مكان العمل بينما له علاقة سلبية بالكفاءة الذاتية المهنية. تظهر نتائج الدراسة أن العلاقة المتبادلة بين النبذ في مكان العمل والاستسلام الداخلي ليست علاقة معزولة، ولكنها تتأثر بشكل كبير بالعنف الأفقي في مكان العمل والكفاءة الذاتية المهنية.

**الكلمات المفتاحية:** النبذ في مكان العمل، العنف الأفقي، الكفاءة، مؤسسات التعليم العالي، الذاتية المهنية، الاستقالة الداخلية.

superiors can significantly shape their workplace experiences. The existence of workplace ostracism (WO) has made it a growing concern for not only researchers but also for the organizations, and employees (Ferris et al., 2015; Wang et al., 2022). It can have extensive negative

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influence on employees, resulting in increased job dissatisfaction, psychological distress, decreased job performance, and organizational commitment. Beyond the level of the employees, WO can significantly impact organizations, resulting in lower morale, decreased productivity, and increased turnover rates (Ferris et al., 2015; Wu et al., 2016). As such, addressing WO is vital to promote a healthy and inclusive work environment that benefits individuals and organizations (Li et al., 2021).

As an interpersonal stressor, WO jeopardizes individuals' social resources, which are assets that can be used to solve problems or deal with challenging events as needed (Choi, 2020). Therefore, employees perceive it as a threat, when they observe a possible or actual loss of these resources. Resource loss events are responsible for most cases of depression (Hobfoll, 1989). WO significantly limits the resources that a person can keep. When ostracized people use their social resources to combat exclusion, they are less likely to replenish those resources like others, which causes their reserves to run low (Wu et al., 2021). Those who lack resources may feel stressed and exhausted since resources can help someone manage daily work activities (Zhao et al., 2022).

The impact of WO can also be observed in other organizational dimensions. When employees experience WO can lead to exhaustion and the depletion of their psychological, emotional, and material resources (Ferris et al., 2015). This passive interpersonal interaction can negatively impact employees' psychological state and behavior patterns (e.g., horizontal workplace violence), decreasing participation, self-efficacy, and emotional dependence on the organization and others (Chi & Liang, 2013). Ostracized employees may also experience negative attitudes and retaliatory behavior including burnout, emotional exhaustion, and inner resignation (IR).

The study aims to find the influence of WO on occupational self-efficacy (OSE), horizontal workplace violence (HWV), and inner resignation (IR) in the faculty members of higher education institutions in Pakistan. The purpose of the current study is to address and analyze the two significant literature gaps. The first is a population gap, with more research on WO required in the education sector as most research is only conducted in healthcare organizations. Although the issue of WO is prevailing in many organizations worldwide, research is still required to understand that how WO is

established in economically under developed country (i.e., Pakistan), where cultural and social norms may differ from those in other countries.

The second gap is a theoretical gap in understanding the relationship among WO, HWV, OSE, and IR. Workplace ostracism and its impact on HWV, OSE, and IR is a significant yet insufficiently researched area within the higher education sector, particularly in Pakistan. Most academic research has either examined these issues in isolation or primarily concentrated on explicit manifestations of interpersonal conflicts and their consequences, resulting in notable knowledge gaps regarding these phenomena' intricate and interrelated dynamics.

### **Theoretical Framework and Hypothesis Development**

Workplace ostracism is a destructive employee behavior, where colleagues, superiors or other employees deliberately excludes an employee from organizational activities (such as ignoring them, excluding them from meetings, or social events) (Bedi, 2021). This type of behavior goes against ethical norms and can cause significant harm to the victim, raising ethical concerns in organizations (Choi, 2020). Research shows that WO has negative impacts on psychological and work-related outcomes. WO can result in increasing job stress, burnout, and workplace violence, whereas it also decreases employee performance, self-worth, and loyalty (Wu et al., 2016; Ferris et al., 2015). Ostracism can not only negatively impact the mental and physical health of employees but can also hinder their work performance (Li et al., 2021).

### **Horizontal Workplace Violence**

Horizontal workplace violence (HWV) is a type of workplace violence that occurs internally and involves conflicts between groups (Al-Qadi, 2021; Jang et al., 2022). It can manifest in various behaviors, including sabotage, infighting, scapegoating, criticism, and other explicit and implicit non-physical hostilities (Jang et al., 2022). HWV also encompasses various forms of hostile conduct, such as aggression, harassment, detrimental actions, bullying, intimidation, or physical confrontations between colleagues (Hampton et al., 2019). The causes of this phenomenon are diverse, stemming from competitive environments, personal grievances, organizational culture, or stress (Blackstock et al., 2018). Studies conducted by Al-Qadi (2021) and Hampton et al., (2019) stated that the significant and extensive consequences of HWV,



as it leads to reduced job satisfaction and performance, and increased turnover intention, mental and physical health issues.

WO can act as a precursor or catalyst for HWV (MacLean et al., 2016). As employees feel marginalized, they may resort to aggressive behaviors as a coping mechanism or a means of asserting their presence (Mendonca & D'Cruz, 2021). Given its passive-aggressive nature, ostracism can be an insidious means by which colleagues inflict harm on one another (De Clercq et al., 2019). As ostracized employees are perceived as weak and having lack of social support resulting in increased employee's exposure to other forms of HWV (Shorey & Wong, 2021).

*H<sub>1</sub>: Workplace ostracism has a direct and significant impact on horizontal workplace violence.*

### **Occupational Self-Efficacy**

Occupational self-efficacy is an individual's belief in their ability to perform specific tasks efficiently in the workplace (Hartman & Barber, 2020). Bandura's social cognitive theory defines faculty self-efficacy as teachers' confidence in influencing student performance (Bandura, 1986). The OSE of faculty members is a major factor in enhancing their occupational effectiveness and retention (Muhangi, 2017). Pfitzner-Eden (2016) stated that faculty members having lower levels of OSE experience higher job-related stress resulting in facing difficulty in fulfilling their teaching responsibilities.

### **Horizontal Workplace Violence and Occupational Self-Efficacy**

According to research, exposure to HWV can significantly affect a person's sense of self-efficacy (Hsieh et al., 2019). Employees experiencing HWV, frequently state feelings such as helplessness, a loss of control, and doubt regarding their professional success (Shorey & Wong, 2021). Explicit and implicit consistent negative feedback, can reduce an individual confidence to carry out their work activities and to deal with their work-related issues (De Clercq et al., 2019).

Bandura's social cognitive theory (SCT) explains that experiences like mastery, vicarious, verbal, physiological, and affective influence self-efficacy (Bandura, 1986). These experiences involve direct experiences of job success or failure, with success increasing self-efficacy and

failure decreasing it (Hui et al., 2023). In an organization where hard work values HWV is prominent, peers may deliberately undermine an individual's efforts, leading to perceived failures and lower occupational self-efficacy (Suggala et al., 2021).

Furthermore, HWV can produce a pervasive insecurity that makes victims more fearful of upcoming interactions and difficulties at work (Tziner et al., 2023). Because bullies frequently target those, they believe to be weak or vulnerable, this anxiety can create a vicious cycle in which the person is exposed to more violence tactics (Shorey & Wong, 2021).

*H<sub>2</sub>: Horizontal workplace violence has a direct and significant impact on occupational self-efficacy.*

### **Inner Resignation**

Inner resignation (IR) refers to declining to perform tasks or duties that extend beyond the contractual obligations to restore fairness or balance (Hartner-Tiefenthaler, 2021). This occurs when employees feel that their organization must fulfill its obligations but also perceive an inherent injustice in the employee-organization relationship (Hämmig, 2017). As employees should follow their organizational policies and procedures, it is also important for the organizations to understand their psychological processes their long-term effects. For instance, employees who experience IR may initially perform their tasks at similar levels but eventually lose interest and loyalty (Sirsawy et al., 2016).

A strong sense of OSE can act as a buffer against IR (Weissenfels et al., 2021). Employee experience less feelings of helplessness or overwhelm, when they believe that they possess the skills, knowledge, and abilities to handle their job demands (Ampofo et al., 2020). An individual with high OSE typically approaches tasks with confidence, believing that they can handle challenges and navigate workplace obstacles. This proactive and confident approach can help reduce feelings of emotional exhaustion because the individual feels equipped to manage work stressors (Pereira et al., 2021). Belief in one's abilities is positively correlated with task and colleague connection, personal achievement perception, and further reducing one of the core symptoms of IR (Lee & Liu, 2021).

*H<sub>3</sub>: Occupational self-efficacy has a direct and significant impact on inner resignation.*

***Workplace Ostracism, Horizontal Workplace Violence, and Occupational Self-Efficacy***

The dynamic between WO and experiencing HWV can greatly affect an individual's feeling of professional competence and efficacy (Mendonca & D'Cruz, 2021). Employee's experiencing ostracism, may become more inclined to aggression or discouraging behaviors from colleagues, which can further damage their self-confidence (Zhang et al., 2023). Essentially, the isolated employee not only feels alone but also faces intentional actions from peers that can cast doubt on their skills or competence. This sense of rejection can lead to negative emotions, such as self-doubt and isolation, which can be amplified by HWV, ultimately leading to a significant decrease in OSE (Suggala et al., 2021).

Research has shown that exposure to or witnessing HWV may harm employees OSE (Shorey & Wong, 2021; Hui et al., 2023). The harmful behaviors and attitudes linked with HWV can profoundly impact employees, causing them to internalize these negative experiences and thereby compromise their confidence and competence on the job (Tziner et al., 2023).

*H<sub>4</sub>: The relationship between workplace ostracism and occupational self-efficacy is mediated by horizontal workplace violence.*

***Horizontal Workplace Violence, Occupational Self-Efficacy, and Inner Resignation***

According to social cognitive theory, OSE is the employee's belief that he/she can succeed in specific work-related situations (Bandura, 1986). When an individual experiences HWV, their belief in their ability to perform their tasks effectively (OSE) may suffer (Ma et al., 2023). If HWV depletes an individual's OSE (an essential

resource), it could pave the way for the emergence of IR (Livne & Goussinsky, 2018).

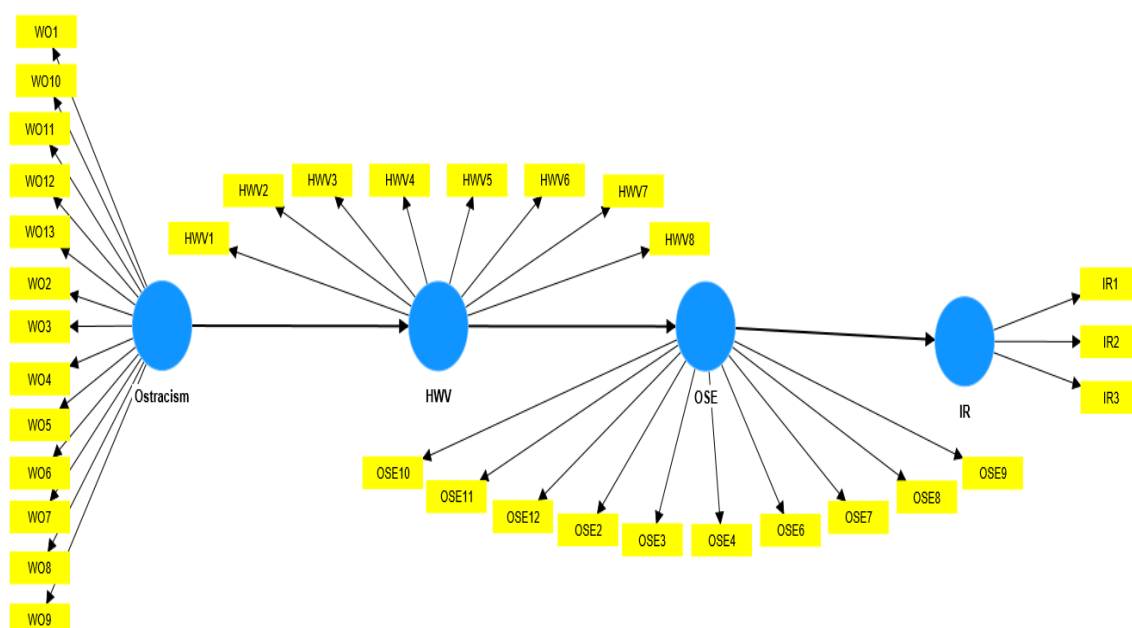
In COR theory, Hobfoll (1989) provides an additional perspective that people try to keep, protect, and build their resources, and the potential or actual loss of these important resources can cause stress. The potential impact of HWV on an individual's OSE, considered a crucial resource, may contribute to the development of IR (Xiao et al., 2022).

*H<sub>5</sub>: The relationship between horizontal workplace violence and employee's inner resignation is mediated by occupational self-efficacy.*

***Workplace Ostracism, Horizontal Workplace Violence, Occupational Self-Efficacy, and Inner Resignation***

An adverse consequence of WO is the heightened probability of HWV (MacLean, et al., 2016). According to Jahanzeb and Fatima (2018), it is suggested that individuals who experience WO may engage in these behaviors to regain lost power, react to perceived threats, or manage feelings of isolation. This self-belief can be undermined by repeated exposure to HWV, making a person feel less competent and valuable in their roles (Bandura, 1986). A diminished perception of OSE can play a significant role in fostering a sense of IR (Ampofo et al., 2020). Employees are more likely to withdraw from tasks and mentally "check out" of their duties when they doubt their abilities, which results in this IR (Chang & Lee, 2020).

*H<sub>6</sub>: The relationship between workplace ostracism and an employee's inner resignation is serially mediated by horizontal workplace violence and occupational self-efficacy.*



**Figure 1.** Theoretical Model

## Methodology

### Research Methods

This study utilizes quantitative research methodology to achieve the research objectives. The study analyzed the influence of WO on IR through a mediated mediation analysis. The researchers employed Partial Least Squares-Structural Equation Modeling (PLS-SEM) to assess and analyze their theoretical framework. This methodology enables researchers to analyze the associations between observed and latent variables while taking into consideration discrepancies in the data.

### Sample and Procedure

The data were gathered from the faculty members (i.e., Lecturer, Assistant professor, Associate professor, and Professor) of higher education institutions of Pakistan. Based on the barriers like time and cost, to acquire representative sample for the study, purposive sampling technique was utilized. The study questionnaire was rigorously tested for accuracy, equivalence, and suitability for native Urdu speakers. The back-to-back translation method was used for the questionnaire with the support of language experts to preserve the original questions' meaning.

### Sample Size

The data collection process was planned and executed quickly using an online platform and

personal administration to reach a diverse group of participants. A total of 321 complete responses were in three phases, between March 2023 to August 2023. Demographic and IR data were collected first. In the second phase, HWV and OSE were collected, and in the last phase data were collected for WO.

After conducting Cook and Leverage's outlier test yielded 309 valid responses. Women numbered 137, while the rest were men. 59.5% were Ph.D. degree holders, whereas the remaining were having Master degree in various fields. In the respondents, 33.9% were Lecturers, 37.2% were assistant professors, 20.7% were associate professors, and 0.8% were professors.

### Research Instruments

The measurement section of this study utilized a questionnaire as a tool for data collection. To explain the overall objectives of the questionnaire, the questionnaire includes statements included the purpose, benefits, and assurance of anonymity of the respondents. The questionnaire consists of five subsections, with the first subsection being demographic. The participants were asked to rate each statement on a Likert 5-point scale (1=never to 5=always). The second subsection assessed WO using the 13-items scale developed by Ferris et al., (2015). The third subsection assessed OSE of the faculty members by using the 12-item scale developed by Caprara et al., (2003). Two items were removed from the OSE analysis because of low factor loading (value < 0.4). The fourth

subsection assessed HWV, and the 08-item scale was developed by Einarsen et al., (2003). The fifth subsection assessed employee IR using three items scale developed by Schmitz et al., (2002).

## Result Analysis

### Testing Descriptive Statistics

**Table 1.**  
 Descriptive Statistics and Pearson Correlation Analysis

Descriptive Statistics			Pearson Correlation Analysis			
Construct	Mean	S. D	WO	HWV	OSE	IR
Age	4.241	1.154				
Experience	2.647	1.241				
Education	1.672	0.582				
Employment Status	3.547	0.353				
WO	1.700	0.451	1			
HWV	1.550	0.338	0.671**	1		
OSE	4.371	0.267	-0.400**	-.514**	1	
IR	1.613	0.382	.470**	.556**	-.485**	1

Note 1: \*\*. Correlation is significant at the 0.01 level (2-tailed).

Note 2: Workplace Ostracism (WO); Horizontal Workplace Violence (HWV); Occupational Self-Efficacy (OSE); Inner Resignation (IR)

### Assessment of Reflective Measurements

The researchers employed the method Dijkstra and Henseler (2015) recommended to evaluate the reliability and validity of the reflective constructs. Overall, the measurement tools used in this study proved reliable, valid, and relevant for measuring the constructs of interest in the study. The Cronbach's alpha, rho-a, composite reliability, and AVE values, respectively, for the WO (0.945, 0.946, 0.952, 0.604), HWV (0.844,

0.845, 0.880, 0.580), OSE (0.722, 0.731, 0.783, 0.553), and IR (0.770, 0.775, 0.821, 0.564) were found to be in an acceptable range. This suggests that the constructs are reliable and that the items measure the same underlying construct. All constructs have loadings between 0.623 and 0.816, meeting the 0.40 or higher recommended criteria. Variance inflation factor assessed multicollinearity. VIF values (1.169–2.156) are below threshold 3 (Table 2).

**Table 2.**  
 Assessment of Reflective Measurement

Construct	Items	Type	Loading	CA	rho_A	CR	AVE	VIF
Workplace Ostracism	WO 1 - WO 13	Reflective	0.720 - 0.816	0.945	0.946	0.952	0.604	1.169 - 2.156
Horizontal Workplace Violence	HWV 1 - HWV 8	Reflective	0.623 - 0.762	0.844	0.845	0.880	0.580	1.378 - 1.877
Occupational Self-Efficacy	OSE 2 -4 & 6 -12	Reflective	0.713 - 0.794	0.722	0.731	0.783	0.553	1.210 - 1.753
Inner Resignation	IR 1-3	Reflective	0.704 - 0.741	0.770	0.775	0.821	0.564	1.247 - 1.299

Note: CA= Cronbach Alpha; CR = Composite Reliability; AVE = Average Variance Extracted; VIF = Variance Inflation Factor; BCCI = Bias Corrected Confidence Interval

### Discriminant Validity

The discriminant validity of the study constructs (i.e., WO, HWV, OSE, and IR) was evaluated based on two criteria. One of them was the Heterotrait-Monotrait (HTMT) ratio, which facilitated the comparison of correlations between constructs. According to Henseler et al., (2015), constructs were considered non-unique if their values exceeded 0.90. Furthermore, the Fornell-Larcker criterion involves comparing the

variance explained by each construct with its correlation with other constructs. The diagonal numbers in bold indicate the amount of variance explained by each construct, while the remaining numbers represent the correlation between constructs. The unique constructs exhibited higher variance than their correlation (Fornell & Larcker, 1981). Table 3 demonstrates the distinctiveness and uniqueness of each construct, as evidenced by the higher variance compared to the correlation.

**Table 3.**  
*Discriminant Analysis (HTMT and Fornell-Larcker Criterion)*

Hetro-Trait Mono-Trait (HTMT) Criterion					Fornell-Larcker Criterion				
	Ostracism	HWV	OSE	IR	Ostracism	HWV	OSE	IR	
<b>Ostracism</b>					<b>0.777</b>				
<b>HWV</b>	0.707				0.712	<b>0.762</b>			
<b>OSE</b>	0.587	0.750			-0.588	-0.693	<b>0.743</b>		
<b>IR</b>	0.735	0.830	0.768		0.594	0.627	-0.637	<b>0.751</b>	

*Note 1: The bold numbers in diagonal in Fornell- Larcker section are the square root of AVE of each construct, and other numbers are correlations between constructs*  
*Note 2: Horizontal Workplace Violence (HWV); Occupational Self-Efficacy (OSE); Inner Resignation (IR)*

### Model Evaluation

Table 4 reveals that all variables have SRMR values of 0.079 and NFI values of 0.91, indicating that the model fits the empirical data accurately. In addition, the Q2Predict values for HWV (0.655) and OSE (0.358) indicate high predictive relevance with large effect sizes. In contrast, the Q2Predict value for IR (0.286)

indicates high predictive relevance with medium effect sizes (Henseler et al., 2015). These Q2Predict values exceed the recommended minimum threshold of 0.00 and demonstrate the model's strong predictive ability for each variable. In addition, the Q2 effect sizes for HWV, OSE, and IR indicate that these variables substantially influence the endogenous variable (WO).

**Table 4.**  
*Model Evaluation*

	SRMR	R <sup>2</sup> <sub>adj</sub>	NFI	Q <sup>2</sup> <sub>predict</sub>	Q <sup>2</sup> Effect
<b>WO</b>					
<b>HWV</b>	0.079	0.659	0.915	0.655	Large
<b>OSE</b>		0.492		0.358	Large
<b>IR</b>		0.404		0.286	Medium

*Note: SRMR (Standardized Root Mean Square Residual); NFI (Normed Fit Index); Q<sup>2</sup><sub>Predict</sub> for Predictive Relevance*

### Hypothesis Testing

The results of the hypothesis evaluation are presented in Table 5 and Figure 2. The table provides the results of a path analysis examining

the relationships between WO, HWV, OSE, and IR. The results suggest that all the proposed hypotheses are supported, with significant direct or indirect effects between the variables.



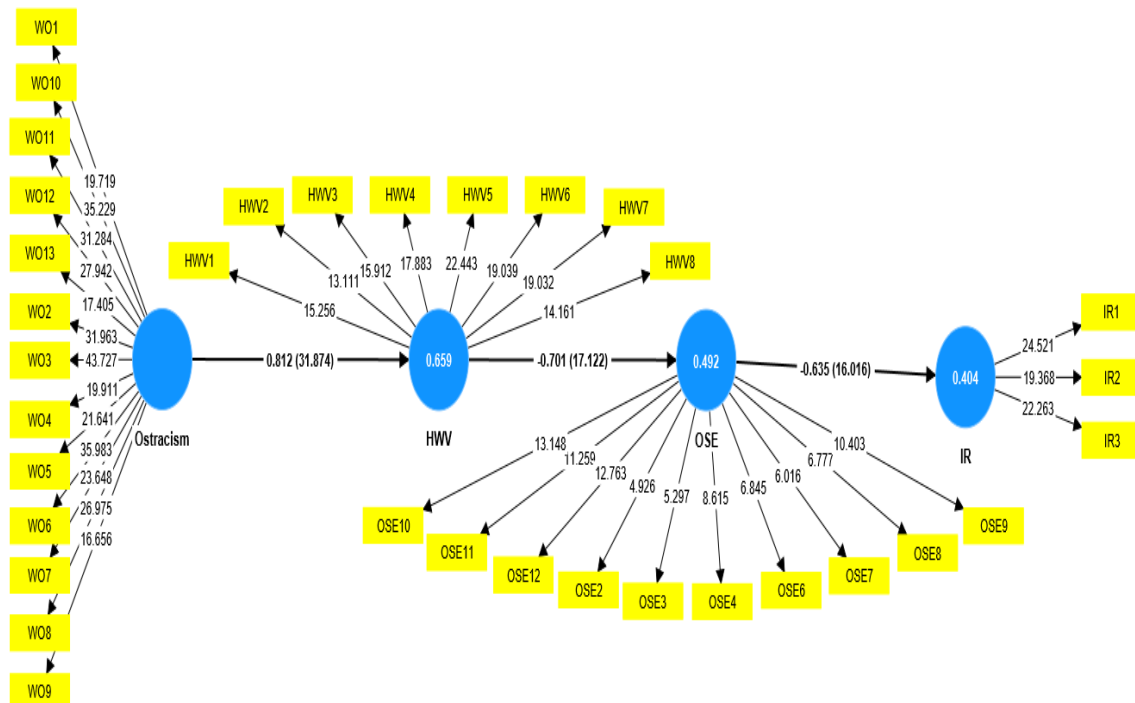
**Table 5.**  
*Results of Hypothesis Testing*

Hypothesis	Direct / Indirect Effects	Path Coefficient	T statistics	P values	Bias	BCCI		Hypothesis Support
						2.50%	97.50%	
H <sub>1</sub>	WO -> HWV	0.812	31.874	0.000	0.001	0.759	0.857	Supported
H <sub>2</sub>	HWV -> OSE	-0.701	17.122	0.000	-0.002	-0.759	-0.594	Supported
H <sub>3</sub>	OSE -> IR	-0.635	16.016	0.000	-0.004	-0.702	-0.546	Supported
H <sub>4</sub>	WO -> HWV -> OSE	-0.569	12.409	0.000	-0.001	-0.652	-0.474	Supported
H <sub>5</sub>	HWV -> OSE -> IR	0.446	9.211	0.000	0.003	0.339	0.532	Supported
H <sub>6</sub>	WO -> HWV -> OSE -> IR	0.362	7.756	0.000	0.003	0.267	0.448	Supported

Note: Workplace Ostracism (WO); Horizontal Workplace Violence (HWV); Occupational Self-Efficacy (OSE); Inner Resignation (IR); Bias Corrected Confidence Interval (BCCI)

Specifically, WO was found to have a significant positive direct effect on HWV ( $\beta = 0.812$ ,  $p < 0.000$ ,  $t = 31.874$ ), supporting H<sub>1</sub>. HWV, conversely, has a significant negative direct effect on OSE ( $\beta = -0.701$ ,  $p < 0.000$ ,  $t = 17.122$ ), thus supporting H<sub>2</sub>. In addition, a significant negative direct effect of OSE on IR was observed ( $\beta = -0.635$ ,  $p < 0.000$ ,  $t = 16.016$ ), supporting hypothesis H<sub>3</sub>. The product coefficient approach (Indirect effect) was used to evaluate the significance of indirect effects using bias-corrected confidence intervals (BCCI) (Rasoolimanesh et al., 2021). Furthermore, the analysis found that the indirect effects of WO on OSE through HWV [ $\beta = -0.569$ ,  $p < 0.000$ ,  $t =$

12.409, BCCI = (-0.625, -0.474)], and HWV on IR through OSE [ $\beta = 0.446$ ,  $p < 0.000$ ,  $t = 9.211$ , BCCI = (0.339, 0.532)] were also significant, indicating that these variables partially mediate the relationship between WO and IR. These results support hypotheses H<sub>4</sub> and H<sub>5</sub>. The results indicate that the impact of WO on IR is sequentially mediated through HWV and OSE [ $\beta = 0.362$ ,  $p < 0.000$ , BCCI = (0.267, 0.448)], thereby proving H<sub>6</sub>. Nevertheless, as the WO rises, the projected direct relationship's direction shifts, indicating that as IR rises, so do the levels of HWV and consequential decrease in the levels of OSE. This demonstrates the significance of the impact of IR on sequential mediation.



**Figure 2.** Results: Assessment of Structural Model

## Discussion

The findings of this study shed light on the relationship among WO, HWV, OSE, and IR. The study employed a path analysis approach to examine the direct effects of these variables and utilized the product coefficient approach to assess potential mediating effects.

Firstly, the results indicate that WO has a significant positive direct effect on IR. This finding suggests that when employees experience WO, their intention to remain with the organization diminishes. WO refers to the act of excluding or isolating individuals in the workplace, leading to feelings of exclusion and reduced belongingness. The positive direct effect implies that WO positively impacts IR, potentially leading to higher turnover rates.

Secondly, the study reveals a significant positive direct effect of WO on HWV. The findings suggest that employees experiencing WO are more likely to involve in activities that are harmful to the organization. WO can elicit negative emotional responses, such as resentment or frustration, which may manifest as HWV. These behaviors can include intentionally underperforming, spreading rumors, or engaging in acts of sabotage. The positive direct effect highlights the role of WO in fostering HWV.

Furthermore, the findings demonstrate a significant negative direct effect of WO on OSE. This suggests that individuals who experience work ostracism may develop lower levels of OSE. WO may result in reducing employee's self-efficacy about themselves and their occupation. The negative direct effect indicates that work ostracism has a detrimental impact on employees' OSE.

The study also examined the indirect effects of WO on IR through the mediating variables of HWV and OSE. The analysis revealed that these indirect effects were also significant. Specifically, both HWV and OSE partially mediated the relationship between WO and IR. These findings suggest that WO not only directly affects IR but also exerts its influence indirectly through the mediating variables of HWV and OSE. Employees who experience work ostracism may be more inclined to engage in HWV and develop negative OSE, which can contribute to their emotional exhaustion and intention to leave the organization.

## Conclusion

The research findings strongly suggest that WO profoundly impacts the development of IR among faculty members in HEIs in Pakistan. It is important to note that this connection is not an isolated one but is significantly influenced by the occurrence of HWV, which, in turn, undermines OSE. It is essential to implement thorough interventions that specifically address ostracism and its detrimental effects due to the complex interplay of these factors. Such interventions are required to promote the well-being and participation of faculty members in the academic setting of Pakistan's HEIs.

## Implications

The cultural, social, and organizational differences in Pakistan's HEIs give rise to unique implications for the relationships within these institutions. It is imperative to examine the issue of ostracism and its consequences to foster a cooperative academic atmosphere within HEIs in Pakistan. WO can have a profound effect on a faculty member's sense of belonging and motivation in Pakistan's academic setting. This is particularly concerning in an environment that values collaboration, collective research endeavors, and teaching rooted in community engagement. Ostracism is associated with a psychological state known as role disengagement, wherein individuals disengage from their roles despite outwardly appearing engaged (Kašpárková et al., 2018).

When faculty members feel excluded, they may become more susceptible to peer aggression or engage in such behaviors themselves to assert their social standing (Haldorai et al., 2020). Acts of violence, including verbal confrontations, professional sabotage, and the deliberate withholding of vital information, can worsen the isolation and potential for interpersonal conflict.

Consistent exclusion of faculty members can decrease their professional self-assurance. The direct consequence of HWV is a decrease in self-efficacy, which can be further diminished by WO. Improving OSE can mitigate the adverse psychological consequences experienced by faculty members due to exclusion, thereby safeguarding their professional productivity and well-being.

To promote a dynamic academic environment within HEIs in Pakistan, it is essential to acknowledge and address WO and its associated consequences. The convergence of WO, HWV,

and diminished OSE has the potential to generate a pervasive state of interpersonal conflict within the academic faculty. This can result in a decrease in research quality, teaching standards, student mentorship, and academic productivity. These problems can ultimately result in faculty turnover, decreased employee engagement, and negatively impact the institution's reputation. For the success and wellbeing of the faculty members and HEIs, it is essential to address issues like WO, HWV, OSE, and IR.

### **Future Directions and Limitations**

It is imperative to comprehend the dynamics of WO in specialized contexts, particularly in HEIs in Pakistan. Future research should adopt a hybrid methodology that explores mechanisms across diverse cultural contexts to gain a deeper understanding. Investigating the comparable dynamics among administrative staff, graduate assistants, and even postgraduate students who may assume roles like those found in academic settings would be interesting. Longitudinal research can provide insight into WO's cyclical nature and long-term consequences. Future studies might examine alternative mediators or moderators like social support or organizational justice and emotional exhaustion as a mediator. Understanding these intricate interactions can lead to a more comprehensive perspective. Finally, during and post COVID-19 pandemic, online teaching methods (through Blackboard, Team, and ZOOM) has increased, research in the area of virtual ostracism and its impact on effective learning environment or faculty efficiency is essential.

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## Development of professional communication in English (experience of Ukrainian military officers)

### Desarrollo de la comunicación profesional en inglés (experiencia de los militares ucranianos)

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#### Abstract


The purpose of the research is to analyse the development of professional communication in English among Ukrainian military personnel. To achieve this goal theoretical methods of cognitive science were used, particularly, analysis, synthesis, comparison, abstraction, and content analysis. The results substantiate that due to the training opportunities in the European countries and the United States, it was possible to prepare significant reserves to counter Russian troops. Acquiring necessary language skills for foreign training required the introduction of new standards to internal training of military personnel. An important step was the launch of the STANAG 6001 standard, which aims to unify the training of officers, cadets, and other military personnel in order to achieve a high level of language competence. The project approach expanded the application of this standard providing with new prospects. Creative projects are characterised by discussion and agreement on


#### Resumen


El objetivo del artículo es analizar el desarrollo de la comunicación profesional en inglés entre el personal militar ucraniano. Para lograr este cometido, se utilizaron métodos teóricos de cognición científica, en particular, el análisis, la síntesis, la comparación, la abstracción y el análisis de contenido. Los resultados corroboran que, gracias a las oportunidades de formación en países europeos y en Estados Unidos, fue posible preparar importantes reservas para contrarrestar a las tropas rusas. La adquisición de los conocimientos lingüísticos necesarios para la formación en el extranjero exigió la introducción de nuevas normas para la formación interna del personal militar. Un paso importante fue la introducción de la norma STANAG 6001, cuyo objetivo es unificar la formación de oficiales, cadetes y demás personal militar para alcanzar un alto nivel de competencia lingüística. Las posibilidades de esta norma se revelan mediante el uso de un enfoque por proyectos. Los proyectos creativos se caracterizan

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the results and the form of their presentation. The conclusions emphasise that training military personnel in foreign language communication during a full-scale war was a significant challenge for all participants in the educational process.

**Keywords:** language competence, English, military training, education.

## Introduction

Professional communication in English is the key to success in the globalised world today. It opens up a lot of opportunities for personal and professional growth, improves the chances of success in today's environment, and enables effective interaction around the world. Moreover, new opportunities appear for a particular military specialisation that has been left out of the general process of globalisation so far.

Russia's aggression against Ukraine in 2014 drew the attention of Ukrainian government circles to the problem of qualitative reform of the Armed Forces, the main goal of which was to integrate them into the structures of the North Atlantic Alliance, the army structures of the European Union, etc. to adopt best practices in countering terrorist, hybrid and military threats. Already at this stage, difficulties arose with the adaptation of Ukrainian servicemen, as language training in military higher education institutions of Ukraine was not of paramount importance. Besides, after February 2022, when the Kremlin regime decided to launch an overt military aggression, another problem arose with the new high-quality training of the military staff of the Armed Forces of Ukraine. Fulfilling the obligations of the Budapest Memorandum, the governments of the European countries and North America organised training for military personnel, exercises on the use of advanced military equipment, weapons, physical and moral training, coordination, etc. This process has re-emphasised the need for language training and the acquisition of appropriate communication competencies. First of all, it was about the use of English, as it is currently the language of international communication and education. Thus, it enabled further improvement of theoretical and practical training of the Ukrainian military.

The peculiarities of improving professional communication among the military, the development of this process, and the potential difficulties and challenges that need to be further

por el debate y el acuerdo sobre los resultados y la forma de presentarlos. En las conclusiones se subraya que la formación del personal militar en comunicación en lenguas extranjeras durante una guerra a gran escala supone un reto importante para todos los participantes en el proceso educativo.

**Palabras clave:** competencia lingüística, inglés, formación militar, educación.

addressed constitute a topical issue of the present research. This field of research deals among others with the development of relevant recommendations in order to perfect the level of the English language proficiency among Ukrainian military officers. Addressing these issues is also an important area for research related to the development of potential recommendations for improving the situation with the level of English language proficiency among military personnel.

Ukraine has received support from various international actors, including military assistance and advisors from countries like the United States and NATO member states. Effective communication with these international partners is crucial for coordinating military operations and leveraging support. Strong language competency is essential for ensuring smooth collaboration. In the context of Russian-Ukraine war, Ukrainian military personnel must be able to communicate with and gather information, which requires language skills to understand important information and knowledge. Also, in modern conflicts, propaganda and information warfare play a significant role. Ukrainian military personnel need strong language skills to counter disinformation and effectively communicate the Ukrainian government's position to both domestic and international audiences. Ukrainian military personnel may receive training from foreign militaries or attend international military academies. Proficiency in the languages commonly used in these training programs is crucial to ensure that Ukrainian military personnel can benefit from these opportunities.

Therefore, the purpose of the article is to analyse the development of professional communication in English among Ukrainian military personnel. The realisation of this goal involved addressing particular issues: analysing the specifics of the application of the STANAG 6001 standard and the possibilities of improving the language

competence of military personnel using available tools, techniques and methods as well as applying creative approach to the educational process.

### Theoretical Framework or Literature Review

The problem of developing professional competence of military specialists is multidimensional and multifaceted, as evidenced by the intensification of research efforts in the field of forming a new generation of professional military personnel. To begin with, it is worth delving into the fundamental concept underlying this study: professional communication. Professional communication is the process of exchanging information, ideas, thoughts, and other communicative interactions aimed at achieving specific professional goals or objectives (Groysberg, 2012). The book "The Art of Communication" (Hanh, 2013) describes the

importance of conscious communication in personal and professional life. At the same time, Kohnen (2008) focused on effective communication techniques in critical situations that can be valuable in a professional environment.

According to the results obtained by modern scholars, namely Kozyar et al., (2020), professional communication of military personnel has its own characteristics and requirements, as it is extremely important for the effective functioning of the armed forces. Modern literature proves that professional communication in the military sphere involves the use of specialised vocabulary, terminology, and speech structure that are characteristic of this field of human activity (Prontenko et al., 2019). The main characteristics of professional communication of military personnel include several important aspects (See Table 1).

**Table 1.**

*Main characteristics of military personnel professional communication*

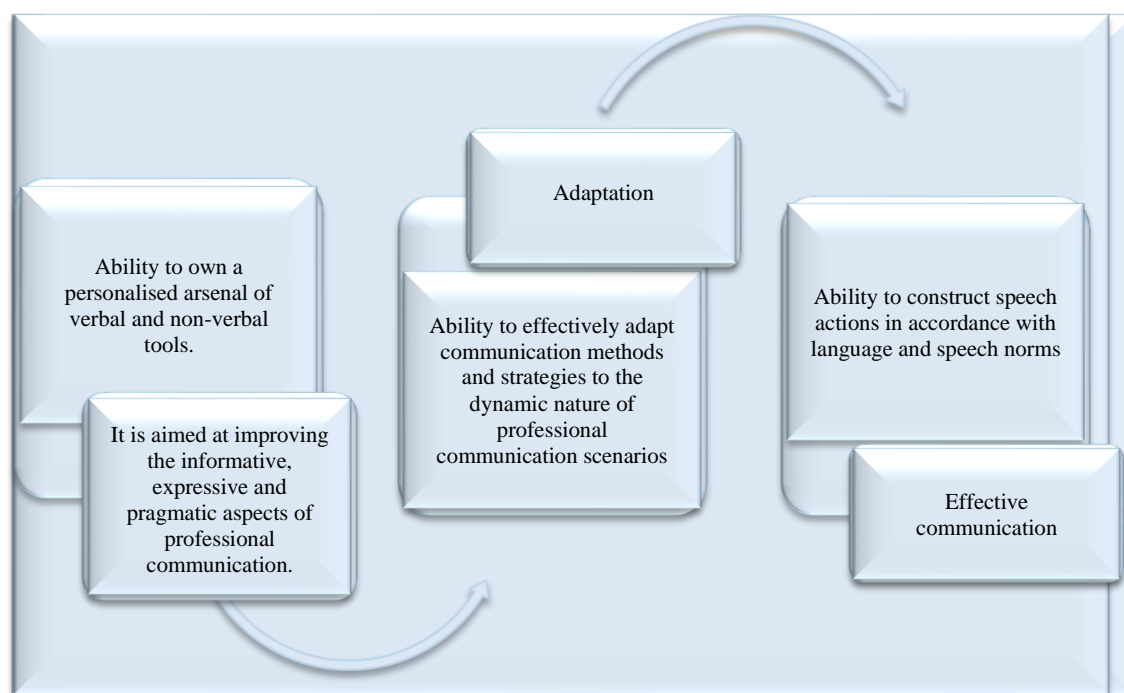
Aspect	Explanation
1. Specialised language	The use of terms, concepts and phraseology that are typical for the military sphere (Dariusz, 2017)
2. Clarity and precision	Soldiers must understand their instructions, orders, and other information clearly and precisely. Misunderstood commands can lead to danger to life and limb.
3. Discipline	Military personnel must adhere to military discipline in communication. This includes accuracy in the transmission of information, timeliness of tasks, and responsibility for words and actions (Kravchenko et al., 2022).
4. Confidentiality	In a military environment, confidential and classified data is often discussed. It is important to maintain confidentiality and not disclose classified information.
5. Listening skills	Military communication includes the ability to listen and understand others. This is especially important during combat operations and when working together as a team.
6. Adaptability	Military personnel must be able to adapt their communication style to different situations and audiences. They may communicate with their subordinates, superiors, partners, etc.
7. Stress tolerance	Military personnel often find themselves in stressful situations, and it is important to keep their cool and communicate effectively even under high pressure.
8. Ability to cooperate	Military personnel often work in teams, and their communication should contribute to a common goal and coordination.
9. Ethics	It is important adhering to ethical norms and standards in all types of communication, including with subordinates, colleagues, and civilians
10. Commitment to the mission	Military communication should contribute to the achievement of the mission and tasks assigned to the military forces.

Source: compiled based on literature analysis Elmhurst & Adler (2004); Oleniev et al., 2021; Prontenko et al., 2019; Kos (2020), Kustinsky (2022).

All these characteristics are important for ensuring the effectiveness and security of military service.

At the same time, based on the essential characteristics of professional competence, researcher Krykun (2018) identifies the value-motivational, cognitive, operational, and subjective components of the formation of a professional serviceman. According to Samoiloova & Serhiienko (2021), this term is also clearly related to communicative competence - the ability to interact effectively with other people through speech, written communication, non-verbal means (gestures, facial expressions) and other means of communication in order to convey and understand information, ideas or feelings (Samoiloova & Serhiienko, 2021). Communication competence includes a range of skills and abilities such as listening, speaking, writing, interpersonal skills, and cultural sensitivity. For the military, communication competence is particularly important for several reasons. First, it is important for security. Military operations often require precision and

clarity in communication to avoid mistakes and misunderstandings that could lead to danger for military personnel (Safonova, 2020). The modern literature has repeatedly emphasised that the command process is important for military personnel (Kustinskyy, 2022). However, communicative competence helps to ensure co-operation and co-ordination between different members of the team. A high level of communicative competence is particularly important in understanding instructions and orders, as it is important that soldiers understand and follow the orders and instructions given to them by their superiors. This can affect the successful completion of tasks. Overall, communication competence helps to ensure that soldiers interact effectively both within internal military structures, as well as with civilians and other military formations, which can lead to improved overall military operations and security (Harbar, 2019). A detailed review of the current literature suggests that communicative competence of future professionals includes three fundamental components (See Figure 1).



**Figure 1.** Main Components of communicative competence.

Source: compiled by the authors

Furthermore, the term “foreign language communicative competence.” is worth paying attention. Modern scholars, in particular Samoiloova & Serhiienko (2021), argue that it is an integral facet of a person's professional communicative competence. This includes proper mastery of language, speech, and socio-

cultural competencies. The development of foreign language communicative competence depends on a “knowledge to practice” approach, which is cultivated in a carefully created communicative environment loaded with values. The foreign language competence is an important capability for the military, especially in the

context of global operations and cooperation with other countries and international partners (Verbytska & Kuzo, 2021). Foreign language competence includes the following aspects of language proficiency, interpretation, intercultural sensitivity, communication and cooperation, and information security. In modern hybrid warfare, the ability to communicate effectively with other military personnel and partners from other countries is key to achieving common goals and coordinating actions (Antonian & Popovych, 2021). When working with other countries, it is important to adhere to the rules of confidentiality and protection of classified data, even in international communications. Foreign language competence helps military personnel to interact with other countries, creating opportunities for cooperation, information exchange, and achievement of common goals in important operations and initiatives. This contributes to the security and effectiveness of military efforts.

### Methodology

A number of theoretical methods of pedagogical research, including analysis and synthesis, were used to achieve the research goal. The analytical method was used to assess the current state of English language teaching among military personnel and the results of the implementation of new educational standards that meet modern challenges. The research was also based on the method of abstraction, which involves moving from the analysis of general theoretical positions to the formation of specific recommendations and generalisations. At the same time, the comparative method was used to identify the main problems in the formation of professional communication in English during the training of the Armed Forces of Ukraine, and the importance of organising international cooperation, which is extremely relevant in the Ukrainian context, was traced.

The prognostic method was used to study the issue of further changes in the establishment of English language teaching processes for the acquisition of relevant communicative competencies. In addition, the article was based on the principles of critical analysis, which makes it possible to assess the possibilities of introducing innovative teaching methods. An important stage in the study was the content analysis of professional scientific literature, which made it possible to identify vulnerabilities in the existing education system and the best international practices. In general, content analysis is a valuable research method used to

systematically analyze textual or visual data, providing insights into various aspects of a given topic. In the context of the development of professional communication in English among Ukrainian military officers, content analysis was be a useful tool to investigate the relevant scientific literature and extract meaningful information. The content analysis began with a systematic search for relevant articles in academic databases such as PubMed, Scopus, and military or pedagogical journals. The selection criteria for articles included:

1. **Relevance.** Articles had to address the development of professional communication in English among Ukrainian military officers.
2. **Publication Date.** Articles published from 2004 to 2023 were included to ensure relevance to contemporary practices.
3. **Language.** Only articles published in English or Ukrainian were considered.
4. **Credibility.** Preference was given to articles published in peer-reviewed journals and those authored by experts in the field.
5. **Scientific.** Preference was given to specialized scientific articles, not to popular scientific ones.

Thus, using the content analysis helped to identify problem areas in the functioning of military vocational education and the overall level of language competence.

### Results

The Russian regime's military aggression against Ukraine has opened a new chapter in the training of Ukrainian servicemen, who had to be qualitatively superior to the more numerous enemy. Moreover, along with mastering new European and American equipment and updating tactical training, qualitative changes also affected the system of training and education introduced in Ukrainian military institutions (Kanova, 2023). Focusing on the best examples of modern NATO education has led to the development and implementation of new standards in education, including those for improving language training. The war led to the fact that on the government-controlled territory of Ukraine, education was initially conducted remotely, which in 2023 changed to the blended education with the use of distance learning in the frontline areas. However, this approach is not the most appropriate for students of higher military educational institutions, as they need to learn practical military skills and acquire abilities and apply them in military situations (Dariusz, 2017). It



should be stated that English-language training for future military personnel is becoming very relevant, as Ukraine's international partners (the United States, the United Kingdom, Sweden, Hungary, Romania, Slovakia, etc.) provide organised intensive training for Ukrainian military personnel.

The challenge posed by the need to improve practical language training has led to structural changes in the system of English language instruction among military personnel and officer training.

In the context of international education, the prerequisite for enrolling in courses at educational institutions abroad is a high level of English proficiency, a requirement assessed through standardized language testing. Notably, this assessment adheres to the STANAG 6001 standard, as referenced by Antonian and Popovych (2021). STANAG 6001, developed and utilized by NATO (the North Atlantic Treaty Organisation) member states' military forces, plays a pivotal role in standardizing English language proficiency expectations for military personnel.

STANAG 6001 sets forth comprehensive standards and criteria for evaluating military

language skills, encompassing the domains of reading, writing, listening, and speaking. These established norms serve the paramount purpose of fostering uniformity in communication among military personnel hailing from diverse NATO member states, as emphasized by Kornyska et al. (2023).

A distinguishing feature of STANAG 6001 is its hierarchical structure, delineating proficiency levels from "A" (beginner) to "C" (advanced). Significantly, for many military occupations, the foundational benchmarks often revolve around the B1 and B2 levels. Military personnel engaged in or aspiring to partake in international operations or collaborate with foreign allies invariably encounter prerequisites that demand a specific level of English language proficiency, aligning with the standardized criteria dictated by this pivotal standard.

It should be emphasised that a high level of foreign language proficiency at SMR-2, in accordance with the international standard STANAG 6001 on the level of language competence of military personnel (See Table 2) is one of the mandatory requirements for members of the Armed Forces of Ukraine, especially officers.

**Table 2.**

*Requirements for mastering English according to the new educational standards*

Requirement	Characteristics
Competence-based	Servicemen, cadets, and officers should have knowledge of the basic aspects of the English language at all levels, including phonetic, morphological, lexical, and syntactic aspects. They should understand the rules for the construction of different types of sentences - narrative, interrogative, imperative, and exclamatory - and be able to use grammatical structures and the rules for their application.
Terminology	It is important to have knowledge of the terminology related to military affairs and weapons used by NATO member states. Servicemen and women also need to become familiar with specific terminology for professional communication with their European and American counterparts.
Communicative	It is important to know the socio-cultural peculiarities of communicating in English with foreign-speaking colleagues. Ukrainian military personnel should be familiar with the language culture, history, and context of countries and organisations where English is used as an official or working language. Particular attention is paid to intensive foreign language courses in higher military educational institutions, as they play an important role in the development of professional foreign language competence.

Source: Krykun (2018), Ostanina et al., (2023)

The implementation of the basic principles of foreign language training based on the North Atlantic Alliance STANAG 6001 standard in the MoD involves two stages of implementation during the period from 2019 to 2030. At the first stage (to be implemented in 2019-2024), it is planned to continue measures aimed at developing and strengthening (optimising) the

system of foreign language training for the personnel of the AFU (Kanova, 2022). The second stage (planned for 2025-2030), include steps to gradually introduce the requirement for professional English proficiency to be made compulsory for personnel of the Armed Forces of Ukraine who are promoted to positions related to the use of English in their official activities

(Kanova, 2022). It is also envisaged to increase the number of military units of the Armed Forces of Ukraine, which will be on par with the relevant military units of NATO member - states.

The ongoing implementation of the STANAG 6001 standard is anticipated to yield significant improvements in communicative competence and the mastery of fundamental English language skills and knowledge, as noted by Kharitonenko (2022). The development of communicative competence in English encompasses a multifaceted set of competencies.

1. Linguistic Competence. Central to this development is linguistic competence, denoting the ability to effectively employ language tools and comprehend language materials, along with a grasp of the rules governing their usage. Researchers underscore the pivotal role of linguistic competence in this context.
2. Thematic Competence. A complementary component is thematic competence, defined as the understanding of foreign language information pertaining to specific topics or fields of knowledge. Proficiency in this area enables individuals to navigate domain-specific discourse with ease, as highlighted by Didenko et al. (2021).
3. Pragmatic Competence. Equally vital is pragmatic competence, which pertains to the capacity to construct coherent and meaningful speech, facilitating the conveyance of information and articulation of thoughts. This aspect is considered integral to effective communication, as emphasized by Didenko and colleagues (2021).
4. Socio-Cultural Context Awareness. Beyond linguistic aspects, a nuanced understanding of the socio-cultural context in which English is employed is deemed essential. This awareness extends to comprehension of cultural norms, characteristics, and communication conventions. It equips individuals with the ability to foster mutual understanding and navigate language challenges that may arise due to misinterpretation or incomplete grasp of English, an aspect underscored by Kanova (2023).

As this new standard, aligned with practices in NATO member states, continues to gain traction, it is poised to foster the evolution of effective learning and growth within English language environments. The amalgamation of these competencies represents a new echelon of

foreign language proficiency, a prerequisite for adept task execution and successful communication in English-speaking foreign environments.

### **Ways to improve professional communication among Ukrainian military personnel in English: the pedagogical aspect**

In order to implement distance and blended learning technologies, foreign language teachers in higher military educational institutions should have computer literacy, which goes beyond simple orientation in computer basics and involves the ability to perceive, create, exchange, distribute, and use educational material using modern technologies. The computer literacy of foreign language teachers allows achieving the goals of the educational process, in particular, it increases the motivation of military personnel, helps to achieve learning objectives, develops cognitive and creative skills, and stimulates active participation in local and global network communications (Kanova, 2023). Teachers' level of computer literacy is based on their practical skills in selecting and using appropriate technologies to solve specific tasks in distance learning. However, the effective implementation of blended learning technologies requires the active involvement of academic staff, who play a key role in the development and maintenance of distance learning courses. At the same time, it is important to take into account that some teachers may be conservative and resistant to the use of new technologies (Mushyrovskaya et al., 2022). Therefore, in addition to conducting appropriate outreach, it is necessary to create motivational approaches to encourage academic staff to actively use blended and distance learning technologies.

The use of a project approach is also important (Zinchenko et al., 2023). Creative projects do not require a set structure; they only require discussion and agreement on the results and the form of their presentation. These outcomes can be creative products, films, newspapers, videos, holidays, games, expeditions, and other forms of expression. Delivering the results of a creative project can include creating a script for an outline for a piece of writing, a research article, a video, a report, etc. Training military personnel in the field of foreign language communication during a full-scale war poses great challenges for both officers and cadets of the Armed Forces of Ukraine and teachers of military education institutions. The role of teachers has changed - they have become not only language transmitters but also designers who help to form a

comprehensive understanding of the subject matter by military personnel, psychologists who can identify and respond to the emotional state in the context of language communication, mentors who provide practical advice and promote the development of English language learning skills (Kanova, 2023). It is also important to use creativity to help unlock the potential of the individual and stimulate creativity and comfort for learning.

Teachers who represent the culture of English-speaking countries design relevant tasks and promote the development of reading and comprehension skills (Jalilbayli, 2022). To optimise the methodological adaptation of language training of military personnel to the process of military professional training for complex information systems, it is also necessary to provide adequate motivation, psychological support, and psychological support for this process, contributing to the development of the volitional sphere, self-regulatory skills and abilities of military specialists.

## Discussion

The development of professional communication in English among Ukrainian military personnel may face various challenges. Some of them are related to structural problems in Ukrainian education (Didenko et al., 2021). In general, there is a low level of English language proficiency. As a result, military personnel may not have sufficient knowledge, especially in terms of professional communication. This can complicate the exchange of information with foreign colleagues and partners (Zinchenko et al., 2023). Structural changes in the area of specialised language training and education for officers, cadets, and enlisted personnel will require additional funds. However, the lack of resources to provide high-quality language training may be problematic. For this reason, training materials, courses, and trainers might be unavailable or limited (Kanova, 2023). Besides, some servicemen and women may not see a direct link between English language proficiency and their professional duties, resulting in low incentives to learn a foreign language.

Resolving these challenges demands concerted efforts and a multi-pronged approach. Notably, scholars propose various avenues for enhancing the cultural and communicative English competence of military personnel, each contributing to the creation of a more cohesive and proficient team (Kozyar et al., 2020; Kanova, 2023).

1. Interviews and Collaborative Work. Engaging in interviews and collaborative work on communication forms a solid foundation. These interactions foster understanding, promote active participation, and encourage open dialogue within the team.
2. Joint Training and Team Building. Joint training initiatives and team-building exercises not only enhance technical skills but also nurture effective teamwork and inter-personal relationships. These experiences fortify the bonds among military personnel.
3. Special Events and Training. Organizing special events, such as tests and training in novel methods of communication within English-speaking environments, can serve as a pivotal learning platform. These events expose military personnel to practical scenarios that demand effective English communication.
4. Corporate Trainings and Creative Tasks. Integrating corporate trainings and creative tasks introduces a dynamic element to the learning process. These activities stimulate innovative thinking, promoting adaptability and skill development.
5. Psychological Training and Sports Competitions. Psychological training empowers military personnel with the tools to handle high-pressure situations and enhance mental resilience. Concurrently, sports competitions instill discipline, teamwork, and physical fitness, reinforcing holistic development.
6. Fostering a Positive Environment. All these measures underscore the imperative of fostering a positive environment that fosters strong interpersonal relations within the military team. To effectively nurture a culture of interpersonal relations, attention must be paid to several key aspects:
  - a) Motivation: Instilling motivation to enhance communication quality among personnel is paramount.
  - b) Active Participation: Creating situations that encourage active participation and interaction among servicemen is crucial.
  - c) Role Development: Providing an environment that supports the development of individual roles in communication within the team is integral.

In summary, this holistic approach not only addresses the challenges at hand but also propels the military team toward higher cultural and communicative competence, ultimately

strengthening their collective capabilities and harmonious working relationships.

It should be stated that application of STANAG will provide necessary conditions for improvement of the English language proficiency. Moreover, new standard criteria and methods for measuring foreign language proficiency are being developed (Kanova, 2023). Promoting international communication in line with STANAG 6001 enables effective interaction of military personnel from different countries, especially those participating in international military operations or exercises. In the long run, this will improve the coordination and security of military operations, and in the current Ukrainian reality, it will also provide opportunities for training in the European countries, Canada, and the United States. In addition, a high level of English language proficiency can increase the competitiveness of a serviceman in the labour market and contribute to his professional growth both in the Armed Forces and in civilian life (as many modern servicemen are mobilised from the reserve). Therefore, further application of NATO standards in the training and development of additional language competencies among Ukrainian military personnel will significantly improve on the solution to the problematic issues noted by scholars.

## Conclusions

Summarising all the mentioned above, it should be pointed out that the formation of a communicative culture in English involves the development of flexibility and fluency in using various means of communication. This process can be defined as a system that controls the relationship within the military team and helps to improve required skills for further learning and communication, which is important for the integration of the Ukrainian Armed Forces to the North Atlantic structures. The process of improving the communicative English language competence of military personnel is based on organising joint work, holding team-building events and teaching new methods of communication in an English-speaking environment.

STANAG 6001 can contribute to further improvement of the level of English language proficiency among military personnel. In particular, new standardised criteria and methods for measuring foreign language proficiency are being developed ensuring consistency and clarity in assessment. Therefore, the further use of

NATO standards in the training and development of additional language competencies among Ukrainian military personnel will facilitate the solution of problematic issues in the process of their language training.

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## Digital journalism and the role of social media in shaping public perception of Russian aggression in Ukraine

### El periodismo digital y el papel de las redes sociales en la percepción pública de la agresión rusa en Ucrania

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
#### Abstract


The purpose of the article is to study the role of digital journalism and social media in creating public perception of Russian aggression in Ukraine. To achieve this goal, theoretical general scientific research methods were used: analysis and synthesis. The use of the content analysis method to study the content of messages on social media and Internet platforms, the use of a descriptive qualitative approach combined with discourse analysis and language reconstruction became relevant. The results of the study indicate that among the obvious advantages of online journalism are a variety of information sources, the ability to disseminate news quickly, interaction with the audience, global reach, and open access to information. In addition, in the Ukrainian context, coordinated efforts have effectively raised the visibility of Ukraine's


#### Resumen


El propósito del artículo es estudiar el papel del periodismo digital y los medios sociales en la creación de la percepción pública de la agresión rusa en Ucrania. Para lograr este objetivo, se utilizaron métodos teóricos generales de investigación científica: análisis y síntesis. Resultó relevante el uso del método de análisis de contenido para estudiar el contenido de los mensajes en los medios sociales y las plataformas de Internet, el uso de un enfoque cualitativo descriptivo combinado con el análisis del discurso y la reconstrucción del lenguaje. Los resultados del estudio indican que entre las ventajas evidentes del periodismo online se encuentran la variedad de fuentes de información, la capacidad de difundir noticias con rapidez, la interacción con la audiencia, el alcance global y el acceso abierto a la información. Además, en el contexto ucraniano,

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current needs in search engines, which has contributed to their resolution. However, it should also be recognised that online journalism has its drawbacks. The manipulation and spread of fake news used by Russian propaganda has highlighted the vulnerability of this form of journalism. The scale and intensity of Russian propaganda had a significant impact on the formation of public opinion among Russians and partly among foreigners. They began to use imposed narratives to understand Russian aggression and the role of other countries in the conflict. The conclusions emphasise that these trends underline the importance of the theory of use and gratification, which indicates that audiences have their own views on information sources and are influenced by them according to their own beliefs.

**Keywords:** online journalism, social media, manipulation, Russian-Ukrainian war, digitalization.

## Introduction

The Russian-Ukrainian war was a large-scale hybrid conflict that had a significant impact on world public opinion. This war affects public opinion through various channels, including the media. Thus, in the information landscape of the 21st century, digital journalism and social media are becoming important tools for shaping global discussion and perception of key episodes in public life. One such event that has played a significant role in the current global debate is the Russian aggression in Ukraine. This event not only triggered political and geopolitical changes but also transformed the way the world receives, perceives, and discusses information. In this context, digital journalism and social media have played a key role in shaping public opinion on Russian aggression in Ukraine.

The media, in general, play an important role in shaping and disseminating public opinion. They are modern communication channels, such as the press, television, radio, and the Internet, which serve to disseminate information. However, it should be acknowledged that the tools, which are using in the mass media have a manipulative possibilities. In the modern society online journalism plays an important role and becomes a tool that can directly influence people's minds. Russia's information manipulative aggression in the context of events related to Ukraine emphasises that journalists can use various methods to manipulate society. Unfortunately,

los esfuerzos coordinados han aumentado eficazmente la visibilidad de las necesidades actuales de Ucrania en los motores de búsqueda, lo que ha contribuido a su resolución. Sin embargo, también hay que reconocer que el periodismo en línea tiene sus inconvenientes. La manipulación y difusión de noticias falsas utilizadas por la propaganda rusa ha puesto de manifiesto la vulnerabilidad de esta forma de periodismo. La escala e intensidad de la propaganda rusa tuvo un impacto significativo en la formación de la opinión pública entre los rusos y, en parte, entre los extranjeros. Empezaron a utilizar narrativas impuestas para entender la agresión rusa y el papel de otros países en el conflicto. Las conclusiones subrayan que estas tendencias ponen de relieve la importancia de la teoría del uso y la gratificación, que indica que las audiencias tienen sus propias opiniones sobre las fuentes de información y se dejan influir por ellas según sus propias creencias.

**Palabras clave:** periodismo en línea, redes sociales, manipulación, guerra ruso-ucraniana, digitalización.

this aggression is often aimed not only at shaping certain views but also at undermining the Ukrainian ethnos.

When analysing the interaction between digital media and social platforms, it will be important to determine how they influence the construction of the information landscape, defining and redefining the public's views on these events. For this reason, it is extremely important to consider the role of digital media and social networks in determining public perception of Russian aggression in Ukraine and to reveal the key mechanisms of this influence.

The aim of the paper is to research of the role of digital journalism and social media in shaping public perception of Russian aggression in Ukraine. This goal will involve several important tasks: to consider the advantages of online journalism and social media in shaping public opinion during the Russian-Ukrainian war, to identify the shortcomings in their use (on the example of Russian propaganda activity).

## Conceptual Framework or Review Literature

The issue of online journalism and their impact on public opinion is not new to the scientific community. Certain aspects of this broad phenomenon have been the subject of lengthy consideration and analysis. Some researches

identified the main problems in the use of and trust in Internet resources and the information posted on them. A similar issue was also addressed by Bakić-Mirić (2018), who critically assessed the impact and development of social media and their independent influence on public opinion. Bakić-Mirić (2018) initiates his paper by suggesting that a comprehensive grasp of social media necessitates viewing it through the lens of critical theory. This perspective offers a sharp examination of power dynamics and economic exploitation. It employs dialectical reasoning as an analytical tool, while also serving as a critique of prevailing ideologies and political economies. Furthermore, critical theory represents an intellectual dimension of societal struggle. But the author does not provide concrete examples, in particular, how media manipulation functions in modern Central-Eastern Europe.

Bor (2014) studied the transformation of journalism education on a global scale under the influence of new digital realities. Therefore, this work outlines the theoretical foundations of the influence of social media. An important shortcoming of the work is the lack of examples related to the media of Central and Eastern Europe. Bossio (2017), on the other hand, characterised the combination of factors (education, new practices, digitalisation) that influence modern journalism, identifying its strengths and weaknesses. This work is more specific than the previous ones. However, the disadvantage is that the author tries to cover a large amount of information for analysis, however, does not explain the influence of the media in practice.

The researchers paid considerable attention to the unfolding of Russian aggression and a response of the international community, which was partly shaped by social media. For example, the problem of falsifications was an important topic of discussion in the study by Kiliçaslan (2022). Similarly, difficulties in verifying the work of online journalists were identified by Hristakieva et al., (2022) and Kiliçaslan (2022). Also, Plekhanova et al., (2023), based on the study of numerous scientific literature, summed up some of the doubts about the work of online journalists, the impact of propaganda on their work, etc. At the same time, important aspects of the formation of new ethics in the handling of information, the use and verification of facts, etc. were left out of the study. The study also did not take into account the OSINT factor, which has become particularly popular in the wake of the Russian-Ukrainian war. Instead, the possibilities of

positive use of social media and online journalism in covering complex political and social events, including Russian aggression and its consequences, are being actively discussed. In their research project, Norwegian scientists Karlsen and Aalberg (2021) in their study, explored the influence of online media on shaping consumer trust in content. In the same vein, Pavlik (2022), an American scholar specializing in the examination of digital technologies' impact on public opinion, conducted a compelling study that underscored the paramount importance of disseminating accurate information to counteract potential distortions introduced by Russian propaganda. To illustrate this, Pavlik drew upon the example of media coverage during the Russian-Ukrainian conflict. His analysis predominantly concentrated on the developments that transpired after the commencement of a new phase of the conflict in 2022. However, the weakness of the work is that the author focused on the analysis of events from 2022, by passing the details of events from 2014. This problem is present in many modern works, since even before 2022 this issue was not so popular among modern scholars.

Furthermore, it's worth noting that an extensive exploration of the key dynamics in the information warfare between Ukraine and the Kremlin regime was already documented in a comprehensive study authored by Romanian academics Bină and Dragomir (2020). This work offers a thorough examination of the subject matter, shedding light on the complexities of this ongoing information battle. The importance of overcoming information myths through the use of social media was identified by Geissler et al. (2023). Similarly, Yuskiv (2022) emphasised the peculiarities of journalists' work on the Web. Thus, against the backdrop of general dissatisfaction with the spread of propaganda and fake news, researchers also note positive opportunities in using the Internet for journalism and shaping public opinion. It is worth noting that the principles of a professional journalist's work on the Internet are not much different from traditional paradigms. It is probably more about the peculiarities of dissemination and assimilation of information by users of online information channels, which will require additional research in the future.

It is important to emphasise the philosophical paradigms (Durmishi & Durmishi, 2022) that become the basis for understanding modern information society. From this point of view, the classic works of Jürgen Habermas (2014) and Michel Foucault (Allan, 2022) are extremely

important. Although these works do not relate to specific examples of manipulative influence, but the studies of these authors constitute the theoretical and methodological basis of the research. At the same time, interpretations of the future development of the public and public opinion under the influence of future challenges are relevant (Shakun, 2022), which will definitely lead to transformations in the information environment and its perception by users (Sofilkanych, 2022). The issues of reading and understanding texts are also important, and the Internet and new forms of journalism have a particular impact on them (Lavriv, 2023). Taking these studies into account allows us to reassess the possibilities for the development of online journalism and its impact on public opinion.

Therefore, as the analysis of the literature shows, modern authors mainly paid attention to the general theory of media influence on the consciousness of citizens. These papers form a powerful methodological basis of this research. In addition, other authors detailed this issue. However, in view of the development and use of more and more new hybrid mechanisms in this in this war, the problem needs to be reviewed and certain aspects clarified.

## Methodology

Through analysis, the complex phenomenon of digital online journalism and social platforms was examined through the prism of a combination of individual elements. The application of the synthesis method made it possible to make certain generalisations on the proposed issues. The use of the content analysis method was also relevant, as it allowed us to study several important elements at once. In particular, at the initial stage of the work, the main opinions and views of scholars on the subject were considered. On the other hand, the content analysis made it possible to determine the content of digital information platforms and social networks, to characterise the manipulative and truthfulness of content created for the respective platforms, and their impact on public opinion around the world.

Conducting a content analysis on this topic involved a systematic assessment and classification of the content of literature and individual digital media sources. Here are some criteria that are taken into account:

### 1. Source selection

Various sources of digital media are identified. A mix of sources with different perspectives and affiliations is provided

### 2. Definition of content

Classified content by different types:

1. General theory
  2. Empirical works
  3. General reviews of articles
  4. News articles
- 
3. The key topics or topics related to Russian aggression in Ukraine, which are discussed in scientific works and individual media, are identified.
  1. Relations between Ukraine and Russia
  2. Ukraine's relationship with NATO and the EU
  3. Propaganda
  4. Oppression of Russian speakers in Ukraine
- 
4. Definition of language and tone

The language and tone used in the content was checked, including the presence of hate speech, inflammatory language or propaganda in Russian media.

The methodology used involves a descriptive qualitative approach combined with discourse analysis and language reconstruction, which was inspired by Michel Foucault in his research. According to him, discourse is not just a set of words or sentences in a text; rather, it has the ability to generate something completely new (Allan, 2022). Therefore, when analysing discourse, it is imperative to consider linguistic events through a double lens: one that delves into both the spheres of meaning and reference. Foucault's concept of discourse is a valuable tool for understanding the construction of perception that underlies communication with an audience. Our analysis focuses on discourses that develop within a sphere of influence, often held by powerful stakeholders who create dominant narratives aimed at controlling public discourse.

The selection of social media content and information platforms for analysis was based on a random sampling from social media catalogues along with specific findings related to propaganda related to the Russia-Ukraine conflict during 2014-2023. Our dataset includes both primary and secondary data obtained



through direct observation during visits to social media platforms to collect information and content, supplemented by a review of relevant literature. The selection of specific data samples for this study includes the determination of criteria that ensure the appropriateness and representativeness of the data obtained. Here are some criteria that are taken into account:

1. Time period: The time frame of the study covers the period from 2014 to 2022.
2. Geographical focus: primarily interested in events in Eastern and Southern Ukraine.
3. Data language: English, Ukrainian, Russian.
4. Type of source: News articles, social media posts, scientific studies, reports, reviews. Each type of source can provide a different understanding of a topic.
5. Key Events or Milestones: Focuses on specific key events or milestones of the war, such as the annexation of Crimea, major battles, or diplomatic negotiations.
6. Bias and Objectivity: Potential biases in selected data sources are considered. For example, news outlets may have their own biases, and social media content may be influenced by algorithms and user behavior.
7. Variety of data. In the paper, the authors sought to diversify their data sources to capture a wide range of perspectives, including different media outlets, political leanings, and social media influencers.

By defining and following these criteria, a well-structured and relevant set of data was created, which made it possible to effectively trace the role of digital journalism and social media in the effective formation of public perception of Russian aggression in Ukraine.

## Results

### The importance of modern online journalism for shaping public opinion

Internet journalism, as understood by contemporary researchers, is a field of journalism

that deals with the creation, editing, and distribution of information materials via the Internet (Morris & Ogan, 2018). This form of journalism uses various online platforms, such as websites, social media, blogs, and others, to present news, articles, photos, videos, and other types of journalistic material online. Online journalism is evolving along with technological changes and is influencing the way we receive and consume news and other information. It is currently having a significant impact on the media landscape, as many traditional publications are moving to an online format, and new digital publications and blogs are gaining popularity. It is also important to note that online journalism covers a variety of topics, from politics and news to sports, science, culture, and many other areas, making it accessible and diverse to a wide range of readers.

An important feature of this type of journalism is that it allows to quickly focus public attention on current events, forming certain perceptions about them and influencing public opinion (Selvarajah & Fiorito, 2023).

The unfolding of the Russian-Ukrainian war has demonstrated the speed with which information about the hostilities spread in the global context. According to experts, the Russian-Ukrainian war (its second phase, which began in 2022) is one of the most widely covered military conflicts of our time. Thanks to the deployment of the latest digital technologies, photo and video recording, materials from the battlefields instantly spread across social media and other resources. Supplemented by professional commentary and reviews, they were at the top of the viewing and public interest list around the world (Shevchenko, 2022). At the same time, access to the Internet has also helped to shape public opinion within Ukraine, thereby strengthening resistance to Russian aggression.

Therefore, the use of online journalism and social media has numerous advantages for shaping public opinion (See Table 1):

**Table 1.***Advantages of social media and online journalism in shaping public opinion*

Advantage	Characteristics
Wide access to information	The Internet provides quick and easy access to a variety of information sources from around the world. This helps citizens to get multiple perspectives on events and issues and to make informed decisions.
Diversity of sources	There are various types of information sources on the Internet, including news sites, blogs, social media, video blogs, and more. This allows citizens to receive information from a variety of authors and sources, which contributes to a more objective consideration of issues.
Instant relevance	Online journalism allows you to provide up-to-date information in real time. This is especially important when covering fast-moving events such as emergencies or political changes.
Ability to interact	Online journalism and social media create opportunities for interaction between journalists and readers or viewers. This fosters active discussion and exchange of views, which can enrich public opinion.
International coverage	The Internet allows journalists and citizens to obtain information about events abroad and to cover international issues. This contributes to a broader global understanding and appreciation of different cultures and perspectives.
Open access	Many online information resources are available free of charge, allowing more people to access information regardless of their financial means.

Source: created by the authors based on Lestari (2019), Pickard (2020), Douglas, & Phillips (2022)

All of these factors make online journalism and social media a powerful tool for shaping public opinion and contributing to a more open and informed society. Similarly, coordinated action in the Ukrainian context has made it possible to bring the most pressing needs of Ukraine to the top of the search results, thereby putting significant pressure on their implementation. In general, the efficiency and comprehensiveness of the Internet has opened up opportunities for information dissemination.

### **Propaganda on the Web: the Russian case of the invasion of Ukraine 2014-2023**

Online journalism, in addition to its many advantages, has a number of propaganda capabilities. The entire arsenal of such vulnerabilities was demonstrated by Russian propagandists when they began to justify the Kremlin regime's aggression against Ukraine (Drugă, 2023). This is especially true of Russian websites or special accounts on social media that spread false or partially true information. In particular, almost since the end of February 2014, the vast majority of Russian online media have joined the information and psychological warfare against Ukraine, trying to support the attack against Ukraine. Such well-known Russian new media websites as newspapers and news outlets such as Vesti (Izvestia), Rossiyskaya Gazeta (Rossiyskaya Gazeta), Moskovskiy Komsomolets (Moskovskiy Komsomolets), Kommersant (Kommersant), Vzglyad (Vzglyad) as well as entire powerful companies such as RIA Novosti, ITAR-TASS, ROSBALT, AIS, etc., not

only actively disseminated uncertain information, but also formulated and disseminated false information themselves.

For example, since the winter 2014, the same Izvestia, Rossiyskaya Gazeta, Moskovskiy Komsomolets, Kommersant, Vzglyad and other media outlets have been spreading false information about the defection of the Ukrainian Black Sea Fleet's flagship, the Ukrainian Navy frigate Hetman Sahaidachny, to Russia. The prevalence of destructive hostile propaganda and the dissemination of false news through newspapers in the occupied territories of eastern Ukraine since the spring 2014 has been one of the main reasons for the high prevalence of anti-Ukrainian sentiment and separatist rhetoric among the local population (up to 70 percent) (Afanasiev et al., 2023). Some publications actively use Internet resources and do not prohibit their website administrators from using fictitious or false information to disseminate propaganda messages (Zhabotynska & Ryzhova, 2022). Such a "source" is, for example, Pravda.ru. The history of this resource is illustrative, as it was among the first Russian information and analytical publications to appear on the Russian-language Web. If we trust the information posted on the website, the publication has a respected reputation and high ratings. Every day, more than 250,000 unique users visit the website and read at least a few of the materials on offer. A closer look at the materials on this site reveals that much of the information is openly propagandistic and does not reveal the true nature of the phenomena

described. In addition, the “journalists” use a number of methods that openly indicate the presence of paid propaganda goals (Fredheim, 2016). For example, on 15 October 2015, Pravda.ru published an article with the vocal title “With the help of the ‘Insurgent Alphabet’, Ukrainians are taught to ‘kill Muscovites’”. The content of the material allegedly points to a new Ukrainian school doctrine and new textbooks, where the main characters with strange names Adolfik and Alarmik “demonstrate” to students how to get rid of Ukraine’s enemies - Russians and Poles. In this particular case, a method of outright distortion of reality was used, which was intended to appeal to those Russians who are not familiar with the internal situation in our country and tend to consider it a “wild country”. The issue of 17 August 2015 contained an article “Stephen Cohen: The idea of “two Ukraine’s” is not so bad”. The article states that Ukrainian and American politicians are not averse to dividing Ukraine and separating the entire Donetsk region from it. Thus, “two Ukraine” would have to emerge - an option, according to the publication, that is quite acceptable to world politics. In fact, the method of stating a fact was used in the formation of this news: the official position of the state (in this case, the United States of America) was replaced by the subjective opinion of a little-known American professor Stephen Cohen.

In addition, Pravda.ru’s contributors often use the method of labelling. Words and phrases that evoke negative associations on an unconscious level appear systematically in articles: “fascists”, “punishers”, “punitive troops”, “junta”, “people’s mayor”, “people’s governor” (meaning self-proclaimed), “thugs”, “far-right”, “Nazis”, etc. (Yadlin-Segal & Oppenheim, 2021).

Since the beginning of the full-scale invasion of Ukraine, these narratives have only intensified, with Russian cyber forces actively spreading false information on social media. On 23 May 2023, the Permanent International Media Monitoring Mission, which examines disinformation related to Ukraine and was launched by the NGO Ukraine 2050, presented a report available in five languages (English, German, French, Spanish, and Ukrainian). This report covers the media monitoring of disinformation about Ukraine from 24 February 2022, when Russia’s full-scale war against Ukraine began, to 24 February 2023. The report combines the various disinformation narratives into seven general meta-narratives to better highlight the information base that Russian propaganda created during the active phase of the

war. These seven disinformation metanarratives are as follows:

1. “NATO, led by the United States and supported by the West, is the aggressor that launched military operations against Russia in Ukraine”.
2. “Ukraine is an aggressive, artificial, and neo-Nazi country”.
3. “Europe and the West, in general, are making mistakes by providing weapons and any other assistance to Ukraine, as well as by using sanctions against the Russian Federation”.
4. “Ukraine is committing a number of war crimes and terrorist acts against its population and staging civilian casualties to blame the Russian government”.
5. “Ukraine oppresses everything Russian: language, culture, etc.”.
6. “Russia is a humane state that fiercely defends its interests”.
7. “Russia is the last pillar of spirituality in modern Europe and the leader of the movement against the spread of Western neo-colonialism”.

These meta-narratives reflect various attempts to manipulate public opinion and create alternative narratives about the war in Ukraine (Käihkö, 2018). It is important to analyse and critically evaluate the information presented in the media, especially on social media, in order to achieve an objective perception of events. It is worth remembering that Russian bots often operate on social media, spreading false information to discredit the Ukrainian population. In particular, it has been proven that Russian bots spread the idea on social media that Ukrainian refugee women fled abroad not to escape the war, but to “take away” their husbands from Polish and German women (Martinez de Bartolome & Rivera Martín, 2023). Of course, all these narratives are subject to fact-checking and have nothing to do with reality, but they have a certain impact on public opinion.

## Discussion

The concept of the “public sphere” is of key importance for understanding the functioning of modern societies, as the German philosopher Jürgen Habermas proposed to study in his time (Habermas, 2014). Habermas was inclined to understand public perception and public opinion as a kind of social mechanism that participates in the organisation and conduct of certain critical public debates, emphasising the importance of promoting social discourse and shaping

perceptions (Habermas, 2014). This vital area of public engagement, fundamental to democracy, provides citizens with a sanctioned platform to express their views. Any arena where people, in their individual capacity, can express their views on specific topics qualifies as a manifestation of the public sphere.

In today's landscape, the emergence of digital communication technologies, often referred to as digital cultures, has brought about profound changes in the media industry. Researchers have drawn parallels between this technological evolution and Habermas's conceptualisation of the public sphere. Instead of being static tools, information and communication technologies are dynamic mechanisms that change our cognitive capacities and create effective models of social and political interaction (Mateus, 2020). Thus, the public sphere, in the Habermasian sense, is being re-established as an intermediate space between the government and the public sphere, on the one hand, and the private spheres of individuals and groups, on the other (Astuti et al., 2022). Today, citizens are not just passive media consumers, but active contributors and participants in the public sphere of media. In addition, a number of different public forums, including exhibitions, meetings, conferences, protest marches, street performances, theatre productions, universities, cafes, public spaces, and clubs, play a key role in maintaining discussions in the public sphere.

The emergence and functioning of digital channels of information transmission has greatly expanded the possibilities for shaping public opinion. Online journalism and social media have become key tools for disseminating information and have become convenient mechanisms for consumers to absorb it (Geissler et al., 2023). It is worth discussing that in modern works detailed attention is paid to the advantages of digital journalism. In particular, an important aspect is the rapid dissemination of information, global coverage, multimedia content, and diversity of viewpoints. In addition, it is worth considering that Internet news is available 24/7, allowing people to stay informed at their convenience, given their busy lifestyles.

At the same time, other shortcomings of digital journalism have been identified in detail in scientific studies. For this reason, disinformation is important. Digital journalism is susceptible to the spread of false information. In the conditions of Russian aggression in Ukraine, this can lead to the spread of misleading or fabricated stories, which will affect public perception. A significant

problem is the lack of editorial supervision. Some digital platforms may lack rigorous editorial oversight, leading to lower journalistic standards, sensationalism, and a focus on bait rather than accuracy. On the other hand, social media algorithms can create filter bubbles where people only receive information that matches their existing beliefs. This can reinforce prejudices and polarize public opinion. There also forms of deliberate manipulation and the use of false information, which, in times of rapid information transfer, can multiply in the information space in a matter of hours.

Globally, social media users do not simply fall victim to deceptive information (Hristakieva et al., 2022). Many of them accept false narratives due to the influence of their political context and in order to conform to their own political beliefs. This approach to understanding audience behaviour in media is known as the Usage and Gratification Theory (UGT) (Karlsen & Aalberg, 2021; Selvarajah & Fiorito, 2023). The UGT assumes that media users are not passive consumers, but rather have freedom of choice and play an active role in interpreting and using media in their lives (Durmishi & Durmishi, 2022). This theory argues that audiences are responsible for their choice of media that meets their needs and provides them with satisfaction.

It can be argued that in the Ukrainian context, this concept is confirmed, as the possibilities for choosing information sources are tangible, and many people have made a conscious choice to trust some messages (social media posts) and ignore others. It can be used to spread manipulative materials. The power wielded by netizens, who have the ability to generate, consume, and reproduce information online, has led to an alarming surge in disinformation and misinformation about the Russian-Ukrainian war. This trend often involves the dissemination of false statements and racially charged information and propaganda materials. The formation of perceptions, which in turn shape the perception of reality, can have both a direct and indirect impact on public opinion about the Russian-Ukrainian war. These perceptions, once formed, are transmitted through both verbal and non-verbal means, contributing to the creation of further discourse.

Instead, OSINT platforms specialising in publishing information from private investigations and being highly effective have become an under-researched phenomenon during the Russian-Ukrainian war. Open-source intelligence (OSINT) is a abstract approach or set

of implements for finding and extracting information from economic, political and military sources available in the public domain and not violating the law (Horska et al., 2023). This type of analysis is widely used in the field of national defence and security, as well as in investigative operations. Typically, the OSINT methodology includes the following steps: searching for information sources, registering them, processing and analysing actual data, storing the information, and establishing some measures. Even raw information from the Net, if properly processed, can contain a significant amount of useful information that, if necessary, can be classified as secret and given the status of a state secret (Horska et al., 2023). Broadly speaking, OSINT analytics stands out as a highly promising facet of journalism, with a notable capacity to disseminate pertinent information across various online platforms. This field of journalism is dedicated to sourcing and analyzing publicly available data from the internet, making it a valuable source of up-to-date, meaningful information. Despite the fact that such research can also spread fake news and propaganda materials, some research groups value their reputation and only share verified data.

## Conclusions

Therefore, at the present stage, online journalism and social media are important elements in shaping public opinion, which is also evident in the case of the unfolding Russian aggression. First of all, it is worth noting that online journalism has made it possible to focus the world's attention on important events taking place in the world. The Russian aggression has also become an event, so the prompt coverage of the events has shaped a certain public opinion about the Russian aggressors. Among the unequivocal advantages of this form of information presentation are a variety of sources, instant relevance, the opportunity for feedback and interaction, global international coverage, and open access. In addition, coordinated activities in the Ukrainian context made it possible to effectively raise the needs of Ukraine in search results, which significantly contributed to their implementation. In general, the efficiency and comprehensiveness of the Internet have opened up wide opportunities for information dissemination. This has also led to the spread of negative manifestations of online journalism and the influence of social media on public opinion. The manipulations and outright fakes used by Russian propaganda demonstrated the vulnerability of online journalism. The massiveness and activity of Russian propaganda

information influenced the formation of public opinion among Russians and partly foreigners, who began to use imposed narratives to explain Russian aggression, define the role of the United States in the conflict, etc. This trend proves the theory of use and satisfaction, which shows the audience's commitment to certain sources of information.

## Implications for the future:

An important aspect of this article is to discuss the implications of this research for future conflicts. Extrapolating the conclusions regarding the role of digital journalism and social networks in shaping the public perception of Russian aggression in Ukraine, it is called to reveal how similar dynamics can affect future conflicts. In addition, it is in this context that the development of media literacy, after the spread of misinformation through digital journalism and social media, emphasizes the need for increased media literacy and education. Education programs can help the public distinguish between reliable and unreliable sources of information by developing critical thinking skills. A separate aspect is the regulation of the accountability process. It says that governments and tech companies may need to strengthen regulations and accountability measures to counter the spread of false information. This could involve stricter content moderation, fact-checking and penalties for those who deliberately spread misinformation. An important point is the development of ethical reporting. Journalists and news organizations must adhere to high ethical standards, fact-checking and appropriate reporting practices. Ethical journalism can counter sensationalism and misinformation. In addition, the international community can work together to counter state-financed disinformation campaigns and cyberwarfare during conflicts. Multilateral efforts can help mitigate the spread of false narratives. Meanwhile, fact-checking organizations can play an important role in debunking false claims and providing accurate information. Supporting fact-checking efforts can help combat the spread of misinformation.

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## Lecturas filosóficas de la posición política e ideológica de Batman

### Philosophical readings of Batman's political and ideological position

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#### Resumen

Aunque los personajes (super héroes) de las ficciones propias de los comics y otros productos audiovisuales como el cine, las caricaturas y los videojuegos, entre otros, están diseñados –en teoría– para un público joven, no significa con esto que sean neutrales o que estén desprovistos de una definida posición política e ideológica que sea susceptible al estudio filosófico, para revelar su esencia, atributos característicos y, en suma, su ser verdadero. Considerando que el impacto de estos personajes propios de la cultura popular anglosajona ha sido significativo en las representaciones sociales globales en general, el objetivo del artículo consistió en efectuar una relectura filosófica de la posición política e ideológica de Batman. Metodológicamente hablando, se empleó la hermenéutica semiótica para revelar los aspectos cruciales del discurso del principal super héroe de Ciudad Gótica. Todo permite concluir que, en su ser y hacer, el llamado “hombre murciélago” es un anarquista, en la forma predominante del anarcocapitalismo de tipo anglosajón, que desconfiaba de la capacidad de las instituciones de justicia de su mundo ficcional para vencer el crimen y crear, además, espacios verdaderos de justicia en las relaciones intersubjetivas de la comunidad.


**Palabras clave:** lecturas socio-filosóficas, posición política e ideológica de Batman, anarquismo, cultura popular, ficción y política.


#### Abstract


Although the characters (super heroes) of comic book fictions and other audiovisual products such as movies, cartoons and video games, among others, are designed - in theory- for a young audience, this does not mean that they are neutral or devoid of a defined political and ideological position that is susceptible to philosophical study, in order to reveal their essence, characteristic attributes and, in short, their true being. Considering that the impact of these characters of Anglo-Saxon popular culture has been significant in global social representations in general, the aim of the article was to carry out a philosophical re-reading of Batman's political and ideological position. Methodologically speaking, semiotic hermeneutics and Socratic maieutics were employed to reveal the crucial aspects of the discourse of Gotham's main superhero. Everything allows concluding that, in his being and doing, the so-called "bat-man" is an anarchist, in the predominant form of Anglo-Saxon type anarcho-capitalism, who distrusts the capacity of the institutions of justice of his fictional world to defeat crime and to create, in addition, true spaces of justice in the intersubjective relations of the community.


**Keywords:** philosophical readings, political and ideological position of Batman, anarchism, popular culture, fiction and politics.

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## Introducción

Los comics en general no solo son un producto cultural de consumo masivo para el entretenimiento de los niños y jóvenes, sino que, además, dan cuenta de las los signos, símbolos y discursos que sirven de paquetes cognitivos en la configuración de las representaciones sociales que identifican a la sociedad contemporánea de tipo consumista y occidental. Por estas razones, han sido comunes los estudios interdisciplinarios: semióticos, lingüísticos, antropológicos y filosóficos sobre diversas tiras cómicas, historietas, mangas y comics (de Cabeza, & Cabeza, 2009), para revelar el impacto de su estética, narrativa y contenido en la realidad social.

El hombre murciélago o más comúnmente Batman en un super héroe taciturno que desde su creación por los estadounidenses Bob Kane y Bill Finger en 1939, ha ido evolucionando en forma y comportamiento con arreglo a las especificidades de cada época en la que le toca luchar contra el crimen, en la ficticia *Gotham City*. No obstante, ontológicamente en Batman hay ciertos atributos y narrativas que no cambian y que, por lo tanto, definen su identidad en esencia y existencia, tales como: su desconfianza en el sistema policial, en el sistema político y en la administración de justicia para reprimir exitosamente a las personas y grupos criminales, lo que configura en este personaje, un posicionamiento filosófico en torno a la gestión personalizada e individual del conflicto social, al margen de las instituciones públicas propias del orden establecido.

El objetivo del artículo consistió en efectuar una relectura filosófica de la posición política e ideológica de Batman. Definitivamente, como uno de los personajes ficticios más icónicos y héroes de cómic, el hombre murciélago ha capturado la imaginación de millones de personas en todo el mundo. Como actividades contiguas al objetivo planteado, examinamos también las capas intrincadas del mundo de Batman, explorando la Liga de las Sombras. Además, analizamos *Gotham City* como un reflejo de los sesgos en los sistemas judiciales actuales, arrojando luz sobre los fundamentos ideológicos de Batman a través de las pistas proporcionadas por Gordon. De igual modo, discutimos la representación de *Gotham City* como una metrópolis oscura y plagada de crimen, así como las ideas provocadoras presentadas en el libro 'Batman, El Héroe, sin olvidar la Trilogía de Christopher Nolan' que desarrollar

cinematográficamente la ideología subyacente de este enigmático personaje.

## Marco teórico y literatura revisada

En este apartado se reseñan los diferentes artículos científicos y monografías que, en líneas generales, orientaron nuestra visión científica de los superhéroes en general y del Batman en particular, como una figura icónica y, por qué no, hasta arquetípica, susceptible a un acercamiento filosófico o sociológico que puede ser capaz de revelar su verdadera significación política y cultural. Con este propósito, que configura una hermenéutica semiótica de los productos culturales de entretenimiento para consumo masivo, la obra de García (2020) fue de importancia heurística crucial. Para este sociólogo, el Caballero Oscuro o Batman es la expresión por antonomasia de la figura heroica que identifica a la industria cultural estadounidense, en el que se sintetizan las ideas y discursos de la heroicidad de la época clásica, medieval y moderna, que responden en su ser y hacer a los enemigos históricos del occidente hegemónico y los Estados Unidos.

Por su parte, Coca (2020), en un análisis de un conjunto de novelas graficas sobre Batman supone que, este personaje está constituido en su esencia e identidad por la impronta de referentes filológicos propios de la tradición renacentista, barroca y neobarroco, de modo que:

Todo ello podría recordar, en cierto modo, a lo que había mostrado Nietzsche cuando defendía el espíritu libre como opción humana contra aquello que nos ata. Es decir, la presencia de elementos propios de la concepción liberal de la primera modernidad. En este sentido, el personaje de Bruce Wayne parece ser el humano libre y, por tanto, expresión de ese hombre libre nietzscheano que, más tarde, denominó superhombre. Pero esta idea es ilusoria. (Coca, 2020, p. 224)

Queda claro entonces que el Batman es un personaje complejo y multifacético desarrollado por sus autores en los comic, cine, video juegos o novelas graficas por varias capas psicológicas y filosóficas. Según el texto y contexto donde se ubica, este super héroe puede simpatizar a su modo con ideas liberales, anarquistas o posmodernas. Y es que, si Coca (2020) tiene razón al ser expresión del super hombre de Nietzsche, el Hombre Murciélago tiene la capacidad simbólica de rebasar la moral

judeocristiana para construir su propio posicionamiento ético, que vendría a justificar en cada momento su visión no jurídica de la justicia y su agenda heroica para vencer al crimen, en una ciudad erosionada por la corrupción y la violencia producida y reproducida por villanos en muchos casos dementes y desalmados.

En la trama de Batman todo indica que su antagonista principal es el Joker personaje que, al decir de Ribes, & Fernández (2021), simboliza la relación disruptiva que se da entre las enfermedades mentales y el orden social. De hecho, en la película Joker de 2019, dirigida por Todd Phillips, con guion del mismo director y Scott Silver, pareciera que las enfermedades mentales son no solamente causadas por desequilibrios neuroquímicos, sino, además, por las múltiples prácticas de discriminación, violencia y segregación que padecen en su vida individuos marginados y vulnerables que, al calor de esta realidad, terminan configurando una identidad criminal y sociopática como respuesta a un conjunto de calamidades e injusticias sistemáticas. Esta narrativa permite formular preguntas en el universo del Batman ¿Es la locura una enfermedad social producto de un sistema enfermo? ¿En el fondo es el Joker una víctima desquiciada más que un victimario? ¿El caballero de la noche es una alternativa al contradictorio orden establecido de *Gotham City* o, una fuerza que intenta perpetuar este orden de cosas?

### Metodología de la investigación

La tradición hermenéutica en filosofía significa en sus varias escuelas, en intento por interpretar acertadamente el mensaje codificado en un texto, extendiendo el texto en un sentido amplio, no solo como un libro, sino, además, como la realidad misma constituida por las relaciones objetivas e intersubjetivas condicionadas simbólicamente por un tiempo y espacio sociocultural determinado. Es precisamente en este sentido que, Losada y Casas (2008):

En otras palabras, dado que cada acción humana refleja una forma muy personal de entender el propio yo de quien la ejecuta y de interpretar el sentido de las acciones de los otros seres humanos, la preocupación central de los "hermeneutas" o "hermenéuticos" es llegar a una *comprensión* profunda de los fenómenos, entendida no en términos de empatía o de actitud tolerante, sino de un **comprender el significado de las acciones desde el punto de vista de quien las lleva a cabo**, habida cuenta **del contexto dentro del**

**cual tienen lugar y en cuanto condicionadas por este.** (2008, pp. 52-53) (negritas añadidas).

En efecto, la metodología hermenéutica se desarrolla mediante la interpelación razonada de un texto en su contexto o lugar de enunciación, en el cual dialógicamente un sujeto exegeta o interprete formulada una serie de preguntas que buscan revelar el sentido y significado del ser y hacer de personas reales o ficticios, desde su propio punto de vista. Como es lógico suponer, para entender en profundidad un personaje como El Caballero Oscuro, se debe comprender primero las características que envuelven a su contexto, de lo contrario el acto dialógico e interpretativo no sería fructífero. Bajo estas premisas metodológicas, las preguntas formuladas por los autores fueron: ¿Quién es el Batman realmente? ¿Cuáles son los posicionamientos filosóficos que subyacen en su acción heroica? ¿Es el hombre murciélago un agente del cambio o de alguna manera propende a la conservación del orden de *Gotham City*?

Por su parte, conviene recordar que la semiótica o semiología es, al decir de la obra clásica de Saussure: "La ciencia general de todos los sistemas de signos (o de símbolos) gracias a los cuales los hombres se comunican entre ellos" (Citado por Klinkenberg, 2006, p. 34). En este punto es crucial evidenciar que el lenguaje es un sistema semiótico conformado por un conjunto de símbolos y signos, con múltiples funciones y expresiones. Por lo tanto, una hermenéutica semiótica sería entonces una herramienta para la interpretación de, en este caso, la forma como los comics, historietas y películas de Batman representan a un personaje icónico con posiciones políticas e ideológicas claramente definidas y como la sociedad lo representa, esto es, vive y siente a estos productos cultores icónicos.

### La Creación de Batman por Bob Kane y Bill Finger

La asociación entre Bob Kane y Bill Finger dio origen a un personaje que ha cautivado a generaciones de lectores y espectadores: Batman. Las mentalidades imaginativas y los esfuerzos colaborativos del dúo les permitieron crear un héroe multifacético que ha trascendido las páginas de los cómics y se ha convertido en un ícono cultural. A través de su genio creativo, Kane y Finger diseñaron el traje, las armas y todo un elenco de personajes secundarios de Batman, todos los cuales se han convertido en figuras icónicas por derecho propio.



La influencia del trabajo de Kane y Finger se ve reflejada en las numerosas películas basadas en su creación. Desde el estilo gótico de 'Batman' de Tim Burton hasta el realismo crudo de la trilogía de 'El Caballero Oscuro' de Christopher Nolan, los cineastas se han inspirado en el mundo creado por los dos artistas de la primera mitad del siglo XX. Estas adaptaciones cinematográficas no solo han entretenido al público, sino que también, han generado conversaciones sobre los temas más profundos y los mensajes incrustados en la historia de Batman. Por lo demás, el éxito duradero de estas películas es un testimonio del legado perdurable del personaje creado por Kane y Finger.

Definitivamente, la creación de Batman por Kane y Finger es un factor clave para comprender la posición política e ideológica del personaje siempre en sintonía con la ideología dominante de democracia liberal y economía de mercado en los Estados Unidos de América. Sus mentes imaginativas y sus esfuerzos colaborativos han convertido a Batman en el icónico superhéroe que conocemos hoy en día, y su influencia se ve no solo en los cómics, sino también en las numerosas películas que han cautivado a audiencias de todo el mundo. La importancia de su trabajo es innegable: desde la atmósfera oscura y sombría hasta la trama intrincada, el impacto de la creación de Kane y Finger es vasto y perdurable en la cultura popular.

### **Lecturas de la Posición Política e Ideológica de Batman**

#### **La Liga de las Sombras**

Todo análisis hermenéutico-semiótico de una obra de ficción requiere describir, como condición de posibilidad para su realización exitosa, los principales temas, personajes y tramas recurrentes que configuran a la misma, desde sus orígenes hasta la época actual. En este sentido, destaca el enigmático Ra's al Ghul quien en el universo de Batman lidera una asociación clandestina conocida como la Liga de las Sombras, que desempeña un papel importante en la trilogía de Batman de Christopher Nolan. Definitivamente, esta organización es una fuerza impulsora en la transformación del Caballero Oscuro, empujándolo en su complejo entrenamiento más allá de sus límites físicos y mentales. Sin embargo, de manera ominosa, los métodos y objetivos de la Liga plantean profundas preguntas sobre el poder y la ideología.

Su posterior enfrentamiento con el Caballero Oscuro –quien en principio fue un miembro de esta logia– se convierte en un reflejo de las batallas sociales libradas contra regímenes opresivos en busca de justicia, pero con métodos equivocados. Además, el programa político de Liga de las Sombras, que tiene por objetivo general la destrucción de Gotham City, como única forma de purgar sus pecados colectivos y supuesta corrupción generalizada, demuestra una ideología fundamentalista y profundamente dogmática, propia de una organización terrorista que no cree en ninguna forma de diálogo, reformismo o concertación social (Álvarez Gómez, 2020).

En este orden de ideas, *Batman Begins* explora la Liga de las Sombras como un agente oculto de cambio en Gotham City, revelando los prejuicios y problemas sistémicos de las estructuras de justicia formales y de los mecanismos de control social existentes. Sus particulares estándares de justicia desafían la comprensión aceptada de la moralidad y la ética, lo que provoca el debate entre el heroísmo y el vigilantismo, que recuerda a los dispositivos de control social que describe de manera magistral Michel Foucault, en su obra *Vigila y Castigar* (2002) (Foucault, 2002). Investigar los objetivos y prácticas de la Liga brinda una mayor comprensión del significado multifacético de la justicia y sus efectos en la sociedad contemporánea, donde las fisuras entre justicia, como un bien social superior y el derecho, como una práctica instrumentalizada al servicio de los poderosos, es muy evidentes.

#### **Gotham City como un Reflejo de los Sesgos en los Sistemas de Justicia Actuales**

Desde nuestra perspectiva, la ciudad desesperada Gotham City, hogar del famoso héroe que lucha contra el crimen, sirve como un espejo de las injusticias y prejuicios presentes en los sistemas sociales de hoy en día. En este sentido, el oscuro paisaje de Gotham City resalta las disparidades de poder y riqueza que existen en la sociedad capitalista contemporánea. Desde los niveles más altos del gobierno hasta las calles empobrecidas, queda claro que la justicia puede ser influenciada por aquellos con dinero y conexiones. En este contexto, como un faro de esperanza, el Caballero Oscuro lucha contra este sesgo, con el objetivo de restaurar el equilibrio y la equidad en la ciudad azotada por la desigualdad, la violencia y el crimen, no obstante, en Batman no hay una propuesta revolucionaria de transformación radical de las estructuras institucionales y sociales que soportan a esta ciudad.

Como en la mayoría de los países del mundo, la brecha entre los ricos y los pobres en Gotham City es significativa. Los ciudadanos adinerados, como Bruce Wayne, tienen cierto grado de autoridad, mucho más cuanto en las sociedades actuales: socialistas o neoliberales, la acumulación de dinero en una persona es un símbolo definitivo de autoridad y poder, lo que le permite manipular el sistema político a su favor. Mientras tanto, las personas desfavorecidas de Gotham están sujetas a la opresión sistemática y al desprecio, sin ser escuchadas en sus demandas y necesidades. Por lo tanto, en una lectura benévola El Caballero oscuro se erige como un símbolo de resistencia, luchando para asegurar que la justicia sirva a todos, pero no en términos de redistribución de los ingresos de la ciudad, sino, en lo que a la lucha contra el crimen se refiere únicamente. Esta situación perfila a Batman en todo momento, insistimos, no como un revolucionario, sino más bien, como un reformista con sensibilidad social.

La ineficacia de la justicia en Gotham City se destaca aún más por la presencia de funcionarios e instituciones corruptos. La fuerza policial, que se supone protege a los ciudadanos, es usada por aquellos en el ejercicio del poder para favorecer sus oscuros intereses. Este entorno de corrupción permite que los criminales y las pandillas operen impunemente, dejando que los ciudadanos inocentes sufran las consecuencias. A la luz de estas circunstancias, el vigilantismo del Caballero Oscuro lo posiciona en un panóptico nocturno (Foucault, 2002), y se convierte en una necesidad social, revelando el sistema defectuoso y sesgado y proporcionando un catalizador para el cambio. No obstante, en Batman no hay una propuesta de comunidad alternativa a Gotham City, sino una acción clandestina contra los criminales para conservar el legítimo orden social.

### **Las Claves de Gordon sobre los Fundamentos Ideológicos de Batman**

La confianza de Gordon en la capacidad del héroe para llevar justicia a una sociedad corrupta en *Batman Begins* refuerza la convicción de Bruce Wayne de que los individuos pueden superar sus defectos para tener un impacto positivo en las personas y sus comunidades. Gordon, también justifica el enfoque no convencional de Batman para combatir el crimen, sugiriendo que el héroe es consciente de las necesidades de la ciudad más allá de lo que es popular o demandado de manera inmediata. Su famosa frase, "Es el héroe que Gotham se

merece, pero no el que necesita en este momento", es un testimonio de esta percepción.

Finalmente, las claves de Gordon arrojan luz sobre los aspectos psicológicos y emocionales de la filosofía de Batman. Su confianza en Bruce Wayne quien en la segunda película de la trilogía de Nolan conoce la verdad sobre la caída de Harvey Dent, enfatiza la disposición del héroe para sacrificar su propia reputación por el bien mayor. Esto subraya las capas matizadas de su ideología, en términos de lo que significa el sacrificio personal y la entrega de forma desinteresada al bien común, como dispositivo de paz y orden. Esta actuación tiene completo sentido si se interpreta en los dominios de la cultura cristiana, donde el sacrificio de Jesús en la cruz, significa la máxima manifestación de amor y redención por la humanidad, de modo que un personaje incapaz de sacrificarse difícilmente puede ser un verdadero héroe (Estudio general de humanidades, 2023).

### **Batman en Chile**

Batman en su devenir también ha sido representado por autores latinoamericanos, aquí destaca la obra de Enrique Lihn. Al concluir su historia en Chile, la dicotomía entre el bien y el mal en el mundo se ilustra vívidamente. El heroico Batman se erige como un ejemplo de justicia, encarnando un sentido de rectitud y perseverancia inquebrantable. Su resistencia y valentía se convierten además en un símbolo de esperanza para el pueblo chileno, demostrando que se puede prevalecer sobre la adversidad y hacer una contribución significativa a la sociedad. A través de este final definitivo, Batman en Chile no deja dudas sobre su papel como campeón moral en cualquier contexto (Lihn, 1973). Como todo superhéroe, la acción de Batman se desarrolla en paralelo en dos planos diferentes: a) el plano de su realidad concreta y b) el plano de lo simbólico, espacio metafísico donde se perfila como un ser icónico que representa justicia, moral y entrega total por sus ideales, entre otras cosas que dependen de cada narrativa e historia donde protagoniza.

### **Gotham City como un símbolo del Crimen**

En términos semánticos, oscura y amenazante, Gotham City se ha convertido en el símbolo máximo de la actividad delictiva. En todos los niveles, desde los matones más humildes hasta los jefes de la mafia más influyentes, la criminalidad reina supremamente. De alguna manera, esta representación de Gotham resalta las desigualdades marcadas y los problemas

sistémicos que afligen a nuestra sociedad actual, sirviendo además como un recordatorio de las deficiencias del capitalismo y del poder corruptor del privilegio que ostentan las elites políticas y económicas. Para comprender mejor la posición política e ideológica de Batman, es importante examinar el entorno socioeconómico que engendra el crimen y el desorden.

El contraste claro entre la lujosa Mansión Wayne y los lugares desfavorecidos de Gotham City, sirve para enfatizar la magnitud de la brecha de riqueza, un factor primordial en la perpetuación de la injusticia social. Por lo tanto, el estatus simbólico de Gotham City como un centro de criminalidad va más allá de ser simplemente un escenario de fondo; es una crítica a las estructuras existentes que permiten tal desigualdad. A través de un análisis de la lucha contra el crimen de Batman en Gotham City, podemos comprender mejor el papel del personaje en el discurso sobre la justicia social y, más específicamente, el capitalismo como sistema inhumano plagado de contradicciones materiales y simbólicas (Alvares, 2018).

### **'Batman, El Héroe. La Trilogía de Christopher Nolan' y su Disección de la Ideología de Batman**

El libro 'Batman, El Héroe. La Trilogía de Christopher Nolan' (Alvares, 2018) ofrece un examen exhaustivo de las complejidades ideológicas del Caballero Oscuro tal como se retrata en la trilogía de Christopher Nolan. A través de una mirada sociológica, se examinan detenidamente las elecciones narrativas y el desarrollo de los personajes para descubrir los fundamentos ideológicos que motivan la búsqueda de justicia de Batman. Al examinar los temas y mensajes transmitidos a través de las acciones y motivaciones del personaje, este estudio perspicaz profundiza en las implicaciones socio-políticas de su vigilancia.

El simbolismo intrincado de Gotham City, del referido libro de Alvares invita a los lectores a considerar las implicaciones sociales y políticas más amplias de la misión de Batman. Desde su entrenamiento y desarrollo con la Liga de las Sombras en 'Batman Begins' hasta su papel en la lucha contra el crimen en la ciudad, este análisis exhaustivo promueve una reflexión más profunda sobre las motivaciones del personaje y la importancia de sus decisiones. En este sentido, la naturaleza inequívoca de las acciones y motivaciones de Batman a lo largo de la película añade, según Álvarez Gómez (2020) una capa adicional de complejidad. Este enfoque

deliberado de contar la historia intenta desafiar las nociones preconcebidas sobre el heroísmo y resaltar las contradicciones inherentes del mundo. Con su resolución adecuada, la película reafirma en última instancia la importancia de la convicción inquebrantable y la necesidad de defender lo que es correcto. En un tiempo de ambigüedad moral, la postura firme de Batman se convierte en un faro de luz, motivando a los espectadores a luchar por un futuro mejor.

Tal como refiere Alvares (2018), a lo largo de la trilogía de Nolan, las pistas del Comisario Gordon a Batman ofrecen un vistazo al código ético del Caballero Oscuro. El relato de la transformación de Harvey Dent en Dos Caras sirve como una advertencia sobre el poder destructivo de la corrupción, pero también como un recordatorio de las estrategias manipuladoras de la Liga de las Sombras. Su convicción de la oscuridad inmanente de la humanidad, que viene a confirmar la máxima "*Homo homini lupus*" de la posible autoría de Plauto (254-184 a. C.), resuena con el descenso a la locura de Dent, ilustrando el frágil equilibrio entre el orden y la anarquía. Al observar las interacciones entre la Liga, Harvey Dent y Batman, podemos apreciar mejor la intrincada red de filosofías antagónicas y motivaciones en juego en Gotham City, que viene a simbolizar una suerte de Roma oscura y decadente.

### **Conclusión**

En conclusión, las lecturas de la posición política e ideológica de Batman ofrecen una perspectiva fascinante sobre el icónico superhéroe más allá del simple entretenimiento. Al analizar diversos aspectos como la Liga de las Sombras y Gotham City como un reflejo de los sistemas de justicia sesgados y las claves de Gordon sobre los fundamentos ideológicos de Batman, ganamos una comprensión más profunda del personaje. Además, el final de Batman en Chile y su falta de ambigüedad, así como la representación simbólica de Gotham City como un centro del crimen, contribuyen aún más a explorar la identidad misteriosa de Batman.

La Trilogía de Christopher Nolan' agrega otra capa de análisis, resaltando la influencia del cineasta Christopher Nolan en la forma en que el personaje es retratado. En última instancia, la creación de Batman por Bob Kane y Bill Finger sirve como punto de partida para las ricas discusiones sociológicas que rodean a este amado héroe. A través de estas lecturas sociológicas, se nos recuerda que el impacto de Batman se extiende mucho más allá del ámbito

de los cómics y las películas, provocando reflexiones y conversaciones sobre la sociedad, la justicia y las complejidades de la naturaleza humana en el mundo moderno.

Todo permite concluir que, en su ser y hacer, el llamado “hombre murciélago” es un anarquista, en la forma predominante del anarcocapitalismo de tipo anglosajón, que desconfía de la capacidad de las instituciones de justicia de su mundo ficcional para vencer el crimen y crear, además, espacios verdaderos de justicia en las relaciones intersubjetivas de la comunidad. No debe confundirse el anarquismo como propensión por el desorden o gusto por el caos, pensar así sería hacer una interpretación vulgar de este concepto. El verdadero anarquismo significa una ideología que ve en el Estado y, por lo tanto, en el conjunto de su entramado institucional un conjunto de mecanismos de opresión que están diseñado para beneficiar --en todo momento-- a las elites en el ejercicio del poder.

Tal como explica Bobbio (1989), existen dos grandes tradiciones anarquistas: el llamado socialismo libertario que se inscribe en una tradición colectivista en el manejo de los medios de producción y; el anarco capitalismo, que aboga por la autonomía de la persona humana y por la necesidad de superar las formas históricas del estado como condición necesaria para el logro del reino de la libertad. Dentro de esta variante están ubicados a su vez los llamados minarquistas quienes, de manera similar que los neoliberales, prefieren un estado mínimo que no interfiera con el normal desarrollo de sus proyectos de vida.

Cuando se afirma que Batman es un anarquista o más específicamente anarcocapitalista los hacemos con arreglo a tres razones particulares, que en todo caso tienen que ver con su praxis concreta de superhéroe mas que con su parca narrativa, bajo el supuesto fenomenológico que asigna a las acciones y practicas un rango superior que, a los discursos, tal como también lo dispone el texto bíblico: “*Por sus frutos los conoceréis. ¿Acaso se recogen uvas de los espinos, o higos de los abrojos?*” (Mateo 7: 15-20). En este sentido, la acción de Batman no solo va a contravía del derecho penal de mayor divulgación, sino, que, además, demuestra una

profunda desconfianza en el aparato de administración de justicia del Estado, hasta el punto que su acción heroica en su cruzada contra el crimen, no es más que la expresión de un ciudadano esclarecido por su conciencia histórica y política, es decir, por el destino de los espacios de convivencia en Gotham City.

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## Constitutional principles of economic, administrative, and criminal responsibility in the field of insurance

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#### Abstract

The constitutional principles of legal liability are an important prerequisite for the introduction of economic, administrative and criminal liability in the insurance sector. The Constitution enshrines the guiding provisions on legal responsibility in general, which later find their consolidation in separate special acts, in particular, those regulating relations in the insurance sphere. The purpose of the work is to clarify the peculiarities of the constitutional regulation of economic, administrative and criminal responsibility in the field of insurance. The research methodology consists of such methods as: dialectical, analysis, synthesis, formal-logical, historical, systemic. The article analyzes the peculiarities of bringing business entities to account in the insurance sector. It was noted that the Constitution of Ukraine establishes the general principles of bringing to legal responsibility, while special legislation establishes direct requirements for bringing to responsibility in certain spheres of

#### Анотація

Конституційні засади притягнення до юридичної відповідальності є важливою передумовою запровадження господарської, адміністративної та кримінальної відповідальності у сфері страхування. Конституція закріплює керівні положення щодо юридичної відповідальності загалом, що в подальшому знаходять своє закріплення в окремих спеціальних актах, зокрема, - тих, що регулюють відносини у сфері страхування. Метою роботи є з'ясування особливостей конституційного регулювання господарської, адміністративної та кримінальної відповідальності у сфері страхування. Методологію дослідження складають такі методи як: діалектичний, аналіз, синтез, формально-логічний, історичний, системний. У статті проаналізовано особливості притягнення до відповідальності суб'єктів господарювання у сфері страхування. Відзначено, що Конституція України

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socio-economic life. Problematic issues of prosecution in the field of insurance and international experience on this issue have been studied in order to formulate scientifically based conclusions.

**Keywords:** constitutional principles, insurance, administrative responsibility, economic responsibility, criminal responsibility, financial services.

## Introduction

The Constitution of Ukraine (1996) marked the beginning of a profound transformation in the legal framework regarding human and citizen rights and freedoms. Constitutional principles in the context of insurance usually refer to the fundamental concepts and rules that govern the economic, administrative and criminal aspects of the industry: economic responsibility, administrative responsibility and criminal liability. (Law 254k/96-VR, 1996).

As a result, ensuring the actualization of the rights and freedoms enshrined for individuals and citizens has evolved into an inseparable component of the state's overarching responsibilities. This imperative underscores the fundamental commitment of the state to actively facilitate and protect these rights, thus underscoring the pivotal role of government in upholding and promoting the well-being and liberties of its people. Undoubtedly, this also applies to the field of insurance. For example, from Article 46 of the Constitution, it can be concluded that mandatory state social insurance is an important guarantee of the defined right. Therefore, the place and role of mandatory state social insurance in the modern system of social protection of the population of Ukraine is determined at the highest legislative level.

At the same time, when declaring the main values of the state and human rights, offenses in the field of insurance do not come first. At the beginning of the independence of the Ukrainian state, the public danger of offenses in the field of insurance was not defined. Today, crime in this industry has become a large-scale phenomenon that negatively affects all participants in the insurance market. The problematic issues of legal regulation and the legislative vacuum regarding the definition of liability in the field of insurance

встановлює загальні засади притягнення до юридичної відповідальності, водночас спеціальне законодавство встановлює безпосередні вимоги щодо притягнення до відповідальності в окремих сферах суспільно-економічного життя. Досліджено проблемні питання притягнення до відповідальності у сфері страхування та міжнародний досвід з даного питання для формулювання науково-обґрунтованих висновків.

**Ключові слова:** конституційні засади, страхування, адміністративна відповідальність, господарська відповідальність, кримінальна відповідальність, фінансові послуги.

do not help in understanding the situation and bringing responsibility in the event of damage.

Considering the points raised earlier, it is evident that the constitutional principles governing economic, administrative, and criminal accountability within the insurance sector represent a pertinent and pressing subject that merits thorough investigation. This area of study is of current significance, demanding comprehensive exploration and analysis, as it sits at the intersection of constitutional law and the intricate landscape of insurance regulation. Research in this domain is essential to shed light on the complex dynamics and implications of these principles within the insurance industry.

The tasks of the research are:

1. Clarification of the guidelines that determine the grounds of liability in the field of insurance.
2. Disclosure of the content of administrative, economic, and criminal liability in the field of insurance.
3. Clarification of the constitutional principles of responsibility (economic, administrative, and criminal) in the field of insurance.

The focal point of this investigation revolves around the constitutional underpinnings of economic, administrative, and criminal accountability as they pertain to the realm of insurance. The subject matter of this research encompasses the spectrum of social interactions and relationships that emerge, evolve, and terminate within the sphere of insurance in the context of economic, administrative, and criminal responsibility. This study seeks to delve into the complex web of legal, economic, and societal dynamics that come into play when

examining these specific areas of accountability within the insurance sector, and how they impact the broader social fabric.

### Theoretical Framework or Literature Review

During the study of the constitutional principles of economic, administrative, and criminal responsibility in the field of insurance, the works of the following authors were studied: Antoniv, Gavrilova, Hovorushko, Stetsyuk, Lasko, Zayets, Ivasyuk, Kotlyar, Chichkan, Malynys, Patsuriya, Rudyk, Uralova, Uschapovskyi, Balina, and Baikov.

The issue of insurance during the war was analyzed by Antoniv (2022). The research findings have established that insurance contracts in Ukraine remain legally binding, even in the event of martial law, and typically incorporate standard force majeure clauses akin to those found in other contract types. Nevertheless, it's a common industry practice for insurers to explicitly exclude coverage for "war" risks, and they often delineate war zones and territories not under government control as ineligible for insurance coverage. The ambiguity surrounding the definition and status of these zones and territories can potentially lead to disputes between policyholders and insurers. Consequently, it is now imperative for both parties to initiate early and transparent communication when addressing these specific terms within insurance contracts to prevent potential conflicts and ensure clarity.

The study of Gavrilova (2019) considered the international experience of social insurance against accidents at work and occupational diseases. The study specifically delves into an examination of how other nations, including Bulgaria, Germany, France, the Netherlands, Spain, and more, have structured their social insurance systems to address industrial accidents and occupational diseases. The author underscores that adopting the best practices from abroad in the realm of social insurance for workplace accidents and occupational health requires a fundamental shift away from the prevalent state-paternalistic approach currently ingrained in Ukrainian society. This approach traditionally places the entire burden of social security on state institutions. To successfully integrate foreign expertise, it necessitates a reconsideration of this dominant mindset and an embrace of a more balanced and collaborative approach to social security, where the state collaborates with other stakeholders to provide

comprehensive coverage and support for the population.

Moreover, Hovorushko and Stetsyuk (2014) analyzed the general theoretical issues of insurance, the constitutional prerequisites for the functioning of the insurance institute, and the liability arising from the violation of obligations and requirements of legislation in this area.

Additionally, Lasko (2016) investigated the constitutional foundations of Ukrainian legislation on social security. Thus, Zayets (2014) noted the problematic issues of combating offenses in the field of insurance. It is concluded that the first and most obvious step to effectively counter offenses in the field of insurance is the formation of a unified approach to the concept of fraud in the field of insurance and its consolidation at the legislative level. Another important step will be the introduction of the international experience of the system of collective security in insurance, that is, the unification of the efforts of all insurance companies in the fight against fraud, the creation of special state bodies and a central data bank on cases of fraud in the field of insurance, the legislative empowerment of employees of the security services of insurance companies and specially created investigative bodies with the authority to carry out operational and investigative measures regarding cases of offenses in the insurance sector.

The peculiarities of committing fraud in the field of property insurance are considered in the work of Ivasyuk (2018). The author comes to the conclusion that fraud in the field of insurance is possible only in cases of insurance legal relations between the insurer and the insured. In view of the study of fraud in the field of property insurance, the author refers to the composition of the crime "fraud" provided for by the Criminal Code of Ukraine. However, in the context of insurance fraud, these fundamental ways of committing fraud acquire a special meaning, given the specifics of the insurance sector. Thus, the author emphasizes that the criminal must independently or with the help of other persons artificially create an insurance case. The article also explores the issue of the specificity of the method of committing fraud in the field of property insurance, depending on the subject of the relevant crime. So, if the subject is directly the insurance company itself, then the main way of committing fraud in the field of property insurance in such a case will be the issuance of an invalid policy and its falsification. Moreover, a case is possible when a fraudster pretends to be

a representative of an insurance company, but in fact, he is not. In this case, the corresponding crime is committed by forging a seal or issuing a forged form to a specific insurance company.

Separate issues of the obligation to pay a single social contribution are investigated in the work of Kotlyar (2017).

What is more, Malynys (2009) investigated methodological approaches to the analysis of the financial reliability of insurance companies and their advantages and disadvantages. As a result of the study, it was concluded that the reliability of the insurance company plays an important role.

Problematic issues of theory and practice regarding insurance relations in the field of business are investigated in the work of Patsuriya (2013). The goal of the research that was achieved was a comprehensive analysis of theoretical problems of insurance legal relations in the field of business and, the development of theoretical and practical recommendations for improving their legal regulation.

Peculiarities of the constitutional guarantee of human rights to insurance were studied by Rudyk (2005). Uralova (2015) analyzes the issue of contractual regulation of mediation in the field of insurance. Thus, the article examines the issue of legal regulation of contractual relations with the participation of intermediaries in the field of insurance, and reveals the regulatory properties of the contract as an act of autonomous regulation, aimed at creating a holistic model of relations between insurance intermediaries, insurers and policyholders. The interaction of the system of legal means is defined, with the help of which the legal regulation of mediation relations in the field of insurance is carried out, which is covered by the concept of the mechanism of legal regulation. Such characteristics of the contractual regulation of mediation in the field of insurance as the subject and subjects have been specified.

Finally, Uschapovsky, Balina, and Baikov (2003) analyzed the issue of prevention and exposure of abuses in institutions operating in the field of insurance and in other organizations related to compensation for damage in the event of an insurance event. Also, Chichkan (2021) investigated mandatory state social insurance as the basis of the modern system of social protection in Ukraine.

## Methodology

The dialectical method was used during the study of the constitutional foundations of economic, administrative, and criminal liability in the insurance sector. Thus, the method of dialectics helps in determining the main directions and approaches to the study of state-legal phenomena. Dialectic makes it possible to analyze the development of responsibility in the field of insurance, to determine its relationship with other phenomena of a legal nature. This method helped to explore the question of responsibility through the prism of determinism and the unity of the processes of its formation, as well as its constitutional foundations. Therefore, the dialectical method of learning responsibility in the field of insurance provides an opportunity to distinguish its features, investigate functions and principles, to determine relationships with other phenomena of a legal nature. The article uses the dialectical method to analyse the development of liability and its relationship with other legal phenomena. The contribution of the method is that it is proposed to consider liability through the prism of determinism and unity of processes, and to study it through the constitutional principles.

Applying the formal-logical method, which posits that law as a social phenomenon is characterized by a formally substantiated, logically organized, and precisely delineated set of rules structured upon the principles of hierarchy and non-conflicting norms, we have ascertained the fundamental content and nature of responsibility within the sphere of insurance. This method allows us to establish a clear, structured framework for understanding how responsibility is defined and governed in the realm of insurance, ensuring that norms are coherent and do not contradict one another. This systematic approach provides a robust foundation for comprehending the intricacies of insurance-related accountability. The main purpose of using the formal logical method is to determine the fundamental content and nature of liability in the insurance sector. The contribution of this method is to create a structured system that ensures consistency and non-contradictory rules in the understanding of liability.

Given that responsibility is a complex, complex and systemic phenomenon, its study involves a detailed analysis of its components. Thus, the use of the analysis method helped to divide the responsibility into parts and examine each such part separately. The analysis method helps to break down responsibility into parts for detailed

study. It allows for a thorough examination of individual components, but may not be sufficient to provide a holistic understanding.

However, the initial analysis falls short of providing a holistic understanding of the subject as a whole. Therefore, a synthesis approach was employed, aiding in the identification of relationships and interactions among the structural elements of responsibility within the insurance domain. Consequently, through the combined use of analysis and synthesis, we are better equipped to conduct a comprehensive exploration of legal responsibility as a systemic and legal phenomenon, with a specific focus on scrutinizing the interplay among its constituent elements. The main purpose of the synthetic approach is to identify the interrelationships and interactions between the structural elements of liability. Its contribution is to fill the gap left by the analysis by providing a comprehensive study of legal liability as a systemic phenomenon.

The application of the abstraction method, a critical formal-logical technique, assumes a central role in the examination of legal responsibility. It involves the separation of general features and attributes from a particular subject, disentangling them from all other characteristics. This method proves instrumental in defining the legal significance of a concept and its legal foundation, isolated from other aspects associated with specific scenarios. In the context of insurance, abstraction assists in distinguishing various types of liability from one another and enhancing their conceptual clarity. The purpose of the abstraction method is to separate general features and attributes from a particular subject, enhancing conceptual clarity. Contribution is assistance in distinguishing various types of liability within insurance and clarifying their legal significance.

The study of the evolution of constitutional underpinnings for various forms of responsibility within the insurance sector necessitates the use of the historical method. Examining legal phenomena should occur in conjunction with an exploration of the historical context of the nation or humanity as a whole, as the current state of legal phenomena is intrinsically linked to their legal history. The historical method of inquiry unveils the essence of phenomena under scrutiny by relying on available facts and analogies, enabling the formation of extensive generalizations and the drawing of historical parallels. In essence, the historical method contributes to delineating the historical dimensions of the development of legal

phenomena, including those encompassed within the realm of insurance responsibility. The purpose of historical method is to study the evolution of constitutional underpinnings by exploring the historical context. The contribution was the unveils the essence of legal phenomena by drawing on historical facts and analogies, providing a broader understanding of the development of insurance responsibility.

A vital method employed in the examination of responsibility within the insurance sector is the systematic approach, which facilitates a thorough investigation of responsibility within the context of its existence as part of a state-legal framework. Utilizing the systematic method allows for the exploration of responsibility in relation to other legal institutions, fostering a holistic approach to their study. This method provides the means to uncover the intricate connections and interactions between responsibility and various legal elements, enabling a comprehensive and interconnected analysis of this critical aspect of the legal system.

## Results and Discussion

Before analyzing the issue of the constitutional basis of responsibility in the field of insurance, let's consider what should be considered an offense in the field of insurance.

Thus, illegal behavior is considered to be behavior that is characterized by violation of legal norms. One the types of such behavior is a crime. A crime is a socially dangerous, culpable, illegal act (action or inaction) of a subject capable of delict, for which the current legislation provides for legal responsibility. Each offense is specific because it is committed by a specific individual or collective subject at a specific time and place. In order to recognize this or that action as an offense, it is necessary to establish whether it has signs of an offense.

The main features of the offense include:

- 1) public danger (harm), i.e. causing harmful consequences or the threat of causing such consequences to the legitimate interests of a person, society, or state, which are protected by law;
- 2) only an act can be a crime - i.e. in the form of an active action (for example, committing theft) or in the form of inaction - when the rules of law oblige a person to perform certain actions, and the person does not perform them (for example, not providing assistance);

- 3) the illegality of the act, that is, this act must directly violate the requirements of a specific rule of law. Actions not regulated by current legislation are not considered an offense;
- 4) culpability of the act, i.e. the internal attitude of the person towards the committed socially dangerous act and its consequences in the form of intent or carelessness. We are talking about guilt when a person should have chosen a course of action, but acted contrary to legal norms;
- 5) delictual capacity of the subject who committed the offense, i.e. the person, due to age and mental health, is aware of the nature of his actions, manages them and foresees their consequences, and can also bear legal responsibility for their implementation;
- 6) a legal criminal act, i.e. a certain type and degree of legal liability is assumed for its commission in the form of losses of a personal, property, organizational, or material nature;
- 7) a causal connection between the action and the socially dangerous consequences that occurred, i.e. such consequences are determined by this action, and not by other causes.

Therefore, the absence of at least one of the mentioned signs does not allow us to consider the act as an offense. Signs of an offense must be analyzed in aggregate, systematically. In order for certain specific actions to be recognized as a crime, it is necessary that they meet certain characteristics that allow distinguishing the crime from the violation of other social norms and form the concept of "composition of the crime" (Zavets, 2014).

Let's consider the issue of economic, administrative, and criminal liability as an example of the legal regulation of this issue (Table 1).

**Table 1.**

*Types and content of responsibility in the field of insurance.*

Type of responsibility	Regulatory and legal regulation
Economic responsibility	<p>Unregistered entrepreneurial activity or activity subject to licensing is carried out without compliance with the relevant licence or in violation of the requirements established for licensing shall be punishable by a fine of 1000 to 2000 tax-free minimum incomes with or without confiscation of manufactured products, tools, raw materials and money obtained as a result of the administrative offence.</p> <p>If the said offence is committed by a person who has been subjected to an administrative penalty for the same offence repeatedly within a year, or is associated with obtaining large amounts of income, a fine of 2000 to 5000 tax-free minimum incomes with confiscation of manufactured products, tools, raw materials and money obtained as a result of the administrative offence.</p> <p>If an entrepreneur/enterprise provides inaccurate information about the material and technical base, liability is provided in the form of a fine of 1000 to 2000 tax-free minimum incomes (Law 436-IV, 2003).</p>
Administrative responsibility	<p>Banking or other financial services activities without obtaining the status of a financial institution or without a special permit/licence or in violation of the licensing conditions result in fines ranging from 100 to 250 non-taxable minimum incomes. In case of committing the above actions related to the receipt of income in large amounts, a fine of 2000 to 3000 tax-free minimum incomes is provided for (Law 8073-X, 1984).</p>
Penal liability	<p>Upon the occurrence of an insured event, the insurance company is obligated to fulfill its responsibilities, which include making the stipulated insurance payment or indemnity payment within the agreed-upon timeframe, as specified in the insurance contract. In cases where the insurer fails to meet this obligation promptly, they are liable for financial compensation in the form of a penalty or fine, the specific amount of which is determined by the terms of the insurance contract or in accordance with legal provisions.</p> <p>Additionally, the insurer is also responsible for reimbursing any expenses incurred by the insured party in connection with taking measures to prevent or mitigate losses stemming from the insured event, provided that such reimbursement is outlined within the terms and conditions of the insurance contract. These provisions, as outlined in Law 1909-IX in 2021, serve to ensure that the insurer upholds their commitment to policyholders and meets their</p>



financial obligations in a timely and transparent manner, thus preserving the trust and effectiveness of the insurance system (Law 1909-IX, 2021). The governing body is vested with the authority to enforce mandatory rehabilitation measures for a domestic insurance company under specific circumstances, including the failure to meet obligations to policyholders for a duration of three months, non-compliance with the prescribed authorized capital requirements as outlined by Ukrainian law, or other conditions specified in the existing legislative framework of Ukraine.

Mandatory rehabilitation encompasses several key actions:

Conducting a comprehensive audit of the financial and economic activities of the domestic insurer, including a mandatory audit.

Appointing a managing person, who holds the exclusive authority for overseeing the financial, economic, and personnel management of the domestic insurer, without whose consent such operations cannot be conducted.

Imposing restrictions on the unrestricted use of the assets owned by the domestic insurer, and prohibiting the acceptance of new insurance commitments without prior consent from the governing body.

Establishing a mandatory schedule for settling outstanding claims with policyholders.

Making a determination on whether to either dissolve or restructure the domestic insurer.

The process of winding up a domestic insurer adheres to the regulations specified in the current legislation of Ukraine. It is a set of legal actions employed to handle the dissolution of the insurer in accordance with the statutory provisions of Ukrainian law. This entire framework is designed to ensure the accountability, financial stability, and proper functioning of domestic insurers and protect the interests of policyholders. (Law 1909-IX, 2021).

The National Commission, which carries out state regulation in the field of financial services markets, can apply the following influence measures: demand the convening of extraordinary meetings of financial institution participants (Law 2664-III, 2001).

The National Commission, which carries out state regulation in the field of financial services markets, can apply the following measures of influence: approve a plan for restoring the financial stability of a financial institution. (Law 2664-III, 2001).

Article 220-2. Manipulating financial documents and financial reports belonging to a financial institution, withholding information regarding the institution's insolvency or factors that warrant the revocation of its license are serious offenses. Such actions encompass making alterations to accounting records or registers, providing knowingly incomplete or false details about agreements, liabilities, the institution's assets (including those under trust management), or its financial status. These actions further encompass confirming such misleading information and subsequently conveying it to the National Bank of Ukraine, publishing it, or disclosing it in accordance with Ukrainian legislation.

#### Criminal liability

These acts are considered a deliberate effort to obscure indications of bankruptcy, prolonged financial instability, or reasons necessitating the compulsory withdrawal of a financial institution's license or declaring it insolvent. The legal consequences for individuals engaged in such actions involve penalties, including a fine ranging from eight hundred to one thousand non-taxable minimum incomes of citizens. In more severe cases, punishment may extend to a maximum of four years of restricted liberty, coupled with the deprivation of the right to hold specific positions or engage in particular activities for a period of up to ten years. This stern legal framework aims to deter fraudulent practices, safeguard the integrity of financial institutions, and protect the interests of stakeholders and the financial system as a whole. (Law 2341-III, 2001)

So, as can be seen from the above-mentioned legal norms, liability is provided for in the field of insurance, both economic, related to certain issues of economic activity, and administrative and criminal. At the same time, separate legislation in the field of insurance establishes

criminal liability in the field of insurance (Law 222-VIII, 2015).

From the analytical materials, it can be seen that the most common schemes of offenses in the field of insurance are related to insurance of the

liability of motor vehicle owners, to the staging or falsification of road accidents, to the insurance of people traveling abroad by falsifying medical bills and overcharging for medical services, in medical insurance by staging accidents and injuries. Also, offenses are committed in connection with the conclusion, execution, and execution of contracts on mandatory or voluntary insurance.

The peculiarity of these offenses is that the offender is fraud or breach of trust:

- 1) Infringes upon the arrangements designed to safeguard the property interests of both individuals and legal entities in cases of insurance events, funded through the resources accumulated from the insurance premiums they have contributed. This infringement concerns the established mechanisms intended to protect the financial well-being and assets of both individuals and organizations when insurance events occur, which should be sustained by the funds generated from their premium payments. The violation in question pertains to the disruption of the fundamental assurance that individuals and legal entities should receive the intended compensation or coverage for their insured assets when needed. This aspect underscores the importance of upholding the trust and integrity of the insurance system, ensuring that it remains reliable and effective in providing protection for policyholders.;
- 2) receives an illegal material benefit from it, while causing property damage to the legal owners.

In general, the most common criminal offense in the insurance industry is insurance fraud. In Ukrainian criminal legislation, "fraud in the field of insurance" does not have an independent component of the crime, therefore even actions in this field are qualified as ordinary fraud (Article 190 of the Criminal Code of Ukraine). At the same time, in foreign countries, fraud in the field of insurance is considered an intentional crime aimed at deceiving an insurance company and committed by the insured with the aim of unjustified enrichment at the expense of the insured by distorting information about the insured object, taking actions aimed at the occurrence of an insured event or increasing the amount of insurance compensation (Zayets, 2014).

At the same time, in Ukraine, fraud is one of the most common crimes, but the current version of

the article does not take into account the peculiarities of modern economic relations, and the introduction of new clauses will allow for more clearly separate criminal acts from civil legal relations.

Regarding the constitutional principles of economic, administrative, and criminal liability in the field of insurance, the following should be noted.

- 1) In accordance with Art. 8 of the Constitution of Ukraine, the principle of the rule of law is recognized and applied in Ukraine. Adherence to the principle of the rule of law requires the state to implement it in law-making and law-enforcement activities, in particular in laws whose content should be imbued primarily with the ideas of social justice, freedom, and equality. The components of the rule of law should include, in particular, legality, legal (legal) certainty, prohibition of arbitrariness, equality of all before the law, and respect for human rights. At the same time, a violation of the principle of the rule of law will occur in case of non-compliance with at least one of its components.
- 2) According to Article 46 of the Ukrainian Constitution, citizens are endowed with the right to social protection, encompassing various forms of assistance in cases of complete, partial, or temporary disability, the loss of a breadwinner, involuntary unemployment, as well as support in old age and under circumstances stipulated by law. This entitlement is safeguarded through compulsory state social insurance, funded by contributions from citizens, enterprises, institutions, organizations, as well as as budgetary allocations and other resources designated for social security. Additionally, it involves the establishment of a network of state, communal, and private institutions dedicated to caring for individuals with disabilities. Article 46 of the Ukrainian Constitution serves as the cornerstone for ensuring that citizens receive the necessary social protections and support in diverse life situations.
- 3) Article 42 of the Constitution of Ukraine, which guarantees everyone the right to freedom of entrepreneurial activity, not prohibited by law, and emphasizes that the State ensures the protection of competition in entrepreneurial activity.
- 4) According to Art. 24 of the Constitution of Ukraine, which declares the equality of all before the law. At the same time, the

specified principle does not prevent establishing differences in the legal regulation of labor for persons who belong to different categories by nature and conditions of activity.

- 5) When adopting new laws or making changes to existing laws, it is not allowed to narrow the content or scope of existing rights and freedoms.
- 6) Laws and other normative legal acts do not have retroactive effects in time, except when they mitigate or cancel the responsibility of a person.
- 7) No one can be brought twice to the same type of legal responsibility for the same offense. The legal responsibility of a person has an individual character.
- 8) Everyone is obliged to strictly adhere to the Constitution of Ukraine and the laws of Ukraine, not to encroach on the rights and freedoms, honor, and dignity of other people. Ignorance of laws does not exempt from legal responsibility.

In view of the above, the Constitution of Ukraine provides for key provisions on prosecution and on carrying out activities in the field of insurance, which must be taken into account both when prosecuting a person and regarding reforming and amending the legislation.

## Conclusions

The analysis of the principles governing economic, administrative and criminal liability in the insurance sector has led to the following conclusions and generalisations:

1. Offences committed in the insurance sector have a number of peculiarities related to both the subject matter and legal regulation, related to the conclusion, operation and performance of compulsory insurance contracts, and the performance of compulsory or voluntary insurance contracts and the manner of their commission (e.g., by fraud or breach of trust). These conclusions are based on the methods of analysis, which helped to consider in detail the individual issues of liability. Offenses committed in the field of insurance have a number of features related to both the composition of the subject and the legal regulation of this related to the conclusion, operation, and performance of contracts on mandatory or voluntary insurance and the method of commission (to for example, by deception or breach of trust).

2. The formal logical method contributed to the qualitative analysis of the legal framework and legal regulation of economic, administrative and criminal liability and to formulate specific features of each type of liability. For example, the criminal offence of insurance fraud is not enshrined in law in the insurance sector, although in other countries this offence is regulated by the provisions of the criminal code. Some violations in the insurance sector are punishable by Some violations in the insurance sector are punishable by fines. Separate provisions are devoted to administrative liability in the insurance sector. In the same context, the historical method and the synthesis method were used, which by their nature contribute to a detailed understanding of both the environment and the whole picture from individual parts.
3. As for the constitutional principles of economic, administrative and criminal liability in the insurance sector The main principles are the principle of the rule of law; the principle of individual legal liability; the principle of the principle of individual nature of legal liability; the principle of freedom of entrepreneurial activity not prohibited by law; the principle of equality of all before principle of freedom of entrepreneurial activity not prohibited by law; principle of equality of all before the law. These conclusions are based on the analysis of developmental data, the use of the dialectical method and the method of abstraction.

Therefore, it is fair to conclude that the goal and objectives of the research have been fully achieved.

As for further scientific research, we consider it necessary to consider the international legal experience of establishing responsibility in the field of insurance, as well as the effective national guarantee of bringing guilty persons to such responsibility.

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## Study on the development of health-saving competence of future border guard officers

### Дослідження розвитку здоров'язбережувальної компетентності майбутніх офіцерів-прикордонників

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
#### Abstract

The paper presents a methodological system for the formation of health-saving competence of future border guard officers at higher military educational institution. The system is focused on the educational component of training and familiarizing cadets with the specifics and ways of forming this professionally important quality using the potential of interactive and research training methods. The article aims at justification, implementation and verification of the effectiveness of the methodological system during an experimental study in which 132 cadets aged 17-22 years took part, including 118 boys and 14 girls. The research methods used were: retrospective and comparative analysis, generalization, pedagogical observation, questionnaires and surveys, testing, expert assessments, experiment and methods of statistical assessment. At the end of the formative stage of the experiment, cadets of the


#### Анотація


У роботі розглянуто методичну систему формування здоров'язбережувальної компетентності майбутніх офіцерів-прикордонників в умовах закладу вищої військової освіти України. Аналіз системи сфокусовано на її фізичній та психічній складових, що передбачає увагу до освітнього компонента процесу професійної підготовки та ознайомлення курсантів із специфікою і напрямками формування зазначеної професійно важливої властивості, а також задіяння потенціалу інтерактивних і дослідницьких методів навчання. Метою дослідження було обґрунтування, впровадження та перевірка ефективності методичної системи під час експериментального дослідження, в якому взяли участь 132 курсанти Національної академії Державної прикордонної служби України імені Богдана Хмельницького, віком 17–22 роки, зокрема 118 хлопців і 14 дівчат.

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experimental group have a predominantly high (23,88 %) and average (55.22%) levels of health-saving competence. In the control group the indicators were 12.31% and 46.15%, respectively. It has been proved that the proposed methodological system allows to increase the motivation of cadets to preserve their health, its physical, social and mental (spiritual) components, improve their level of awareness of the importance of health in personal and professional life, improve the skills of health-saving activities.

**Key words:** health-saving competence, physical health, formation, border guard officer, motivation, research methods.

## Introduction

The profession of a border guard officer is often considered an extreme one. The defenders of the Ukrainian border perform tasks that involve risk to life and often require maximum of their mental and physical strength. Today, border guards risk their health and even lives, protecting the freedom and independence of Ukraine from the russian invaders, many of them need to restore mental strength and undergo rehabilitation. The urgent task of pedagogical research today is to outline the ways of forming the health-saving competence of future border guards, identifying the features of its physical and mental components, specifics of the educational process in the conditions of a higher military education institution.

Thus, the ways to preserve the servicemen's health, focusing on the importance of its physical, social and mental (spiritual) components, as well as finding pedagogical resources to improve future border guards' awareness of the importance of health in personal and professional life is an important pedagogical task. That is why we decided to perform the research of the problem of its formation among future officers of the State Border Guard Service

Важливими методами зазначеного дослідження стали ретроспективний та порівняльний педагогічний аналіз, узагальнення, педагогічне спостереження, анкетування та опитування, тестування, метод експертних оцінок, педагогічний експеримент та методи статистичної оцінки. Після закінчення формувального етапу експерименту курсанти експериментальної групи виявили переважно високий (23,88 %) і середній (55,22 %) рівні цієї компетентності. У контрольній групі ці дані були 12,31 % і 46,15 %. Таким чином, у результаті проведеного дослідження було виявлено, що запропонована методична система формування здобов'язбережувальної компетентності майбутніх офіцерів-прикордонників Національної академії Державної прикордонної служби України імені Богдана Хмельницького дозволяє підвищити мотивацію курсантів до збереження свого здоров'я, його фізичної, соціальної та психічної (духовної) складових, покращити рівень їхньої обізнаності про значення здоров'я.

**Ключові слова:** здоров'язбережувальна компетентність, фізичне здоров'я, формування, офіцер-прикордонник, мотивація, дослідницькі методи.

of Ukraine. Modern border guards have to be not only properly trained, to be in excellent physical shape, but also to have an appropriate level of formation of all components of health-saving competence.

The practice shows that even if the cadets take matters of physical fitness more or less seriously, they certainly do not pay due attention to developing of other components of their health, in particular, they do not understand the importance of taking care of their social and mental health. In view of this, formation of health-saving competence of future border guard officers is relevant and requires conducting a scientific research.

## Literature Review

The first researchers who paid attention to the importance of teaching young people to take care of their health were J.-A. Komensky and I. Pestalozzi. They put forward the idea of the need to build an educational process based on natural conformity, taking into account the peculiarities of human nature and the laws of its development.

J.-A. Komensky noted that children's health is a treasure more expensive than gold, that it is necessary to pay close attention to the health of children, because without it they will have no future (Comenius, 2012).

In Ukraine, A. Butovsky was one of the first to define such an educational task (Butovsky, 2009). The subject of G. Vashchenko's interest was the relationship between the human soul and body, the importance of physical activities for maintaining the strength of the spirit and forming character. He wrote that the physical activity of every Ukrainian is necessary for better service to good, God and Ukraine: "a Ukrainian should really relate to life, giving himself a business from its dark and light features. But as a Christian, he must believe in the victory of good over evil, truth over falsehood. Understanding the power of evil should stimulate its energy in the struggle for the victory of good." (Vashchenko, 1956).

Today, the problems of health preservation are studied by representatives of various sciences, in particular philosophy, theology, medicine, valeology, sociology, pedagogy, etc. Philosophers explore health as a value phenomenon, as a prerequisite for human self-realization, sociologists pay attention to social conditionality of human health, doctors – on obstacles to health, that is, diseases and their treatment.

Certain ways to increase motivation for physical activity among young people were studied by I. Mehmeti, V. Halila (Mehmeti & Halila, 2018; Komarnytska et al., 2019), young people's attitude to sports education – by C. Bessa, P. Hastie, A. Rosado, I. Mesquita (Bessa et al., 2022; Balendr, 2018). O. Mozolev et al. studied formation of physical readiness of cadets for professional activity under the conditions of quarantine (Mozolev et al., 2021). Griban et al., researched formation of health and fitness competencies of students in the process of physical education (Griban et al., 2021). K. Bargiel-Matusiewicz, R. Dziurla designed an anti-smoking educational program entitled "run for health" (Bargiel-Matusiewicz, et al., 2019). Also, L. Slyvka, H. Sivkovych, O. Budnyk, O. Tytun, A. Boichuk investigated the possibilities of forming a healthy lifestyle of students in English language classes, ways of systematic and purposeful inclusion of health preservation issues in the context of education (Slyvka et al., 2022).

The scientists I. Burlakova, O. Sheviakov, T. Kondes studied the health care competence in the context of physical, spiritual and intellectual self-development, emotional self-regulation and self-support. In their opinion, this competence also covers personal hygiene, caring for one's own health, sexual literacy, internal ecological culture, and ways of safe living. The authors focus on the importance of quality of life in society, harmony with other people and oneself, which, in their opinion, requires such psychological predictors as empathy, tolerance, communication culture, adaptability, adequate behavior in various life situations. For the proper formation of health care competence, the researchers suggest using modern approaches to determining the content of education, as well as the latest educational technologies, in the educational process (Burlakova et al., 2021).

The scientific community attaches increasing importance to such an aspect of health care competence as mental health. Educators and psychologists focus their efforts on finding ways to provide psychological support to people who are going through life crises. In particular, S. Bilozerska, I. Leshchenko, H. Cherusheva, V. Roksoliana, I. Ushakova study the psychological health of the personnel of educational and scientific organizations in war conditions, ways to improve the psychological state and mechanisms of protection against stressful situations, which are available for use even during hostilities (Bilozerska et al., 2022). N. Korylchuk, I. Vlasenko, I. Livandovska, S. Bokova & N. Demikhova defined theoretical and methodological principles of providing medical and psychological assistance in the conditions of armed conflicts: experience for Ukraine (Korylchuk et al., 2022). V. Overchuk, M. Smulson, O. Vdovichenko, O. Maliar, K. Vasuk considered the features of psychological assistance to the individual in situations of life crises using narrative practices (Overchuk et al., 2023). Researchers suggest using narrative techniques to provide psychological support to people facing life obstacles or crises, proving that such techniques can be an important tool for restoring psychological balance and psychological support in crisis situations.

Scientists suggest paying careful attention to the motivation of young people, to their physical education in order to find out the most important ways of proper physical fitness, to increase the effectiveness of forming a set of knowledge and skills related to maintaining health (Soroka et al., 2019; Balendr et al., 2019). Scientists are

unanimous that health is an important factor in the effectiveness of the professional activity of a border guard officer, the basis of his professional productivity, and a prerequisite for public well-being. Their research shows the relevance of forming the health-saving competence of future specialists in the process of their professional training. In contrast to the medical field of knowledge, which places more responsibility for the fight against diseases on the doctor, teachers are focused on preventing and minimizing diseases, exploring options for using the resources of the person himself to restore health, ways to improve the effectiveness of physical education, formation of responsibility for their health among young people.

However, the ways of increasing the motivation of future border guard officers to preserve health, the importance of its social and mental (spiritual) components, as well as pedagogical resources for improving the cadets' awareness about the importance of health in personal and professional life have not yet been sufficiently studied.

*Hypothesis.* The authors suggest that the experimental study will determine the factors that contribute to improving the quality of health-saving competence formation of future border guard officers in the process of professional training. *The aim* of the experimental study is to determine the factors of improving health-saving competence of future border guard officers in the process of professional training.

## Material and methods

To determine the specifics of formation of health-saving competence of future border guard officers, the following theoretical methods were used: the analysis of literature on the problem and clarification of the scientific apparatus, retrospective and comparative analysis of the practice of health-saving. Based on the results of the analysis of scientific sources, its essence, content and structure are characterized, criteria, indicators and levels of formation are determined, and pedagogical ways of formation are justified. The health-saving competence of a border guard officer is understood as a specific personal property, covering the awareness of the importance of health for personal life and professional activity, the ability and skills of organizing a healthy lifestyle in the physical, social and mental (spiritual) spheres. To test the proposed conditions for the formation of health-saving competence of cadets, such a method of empirical research as a pedagogical experiment was chosen, covering the ascertaining and

forming stages. In particular, it included finding out the influence of the content of education, expansion of the experience of cognitive activity (in the form of knowledge and skills to act accordingly and solve specific problems of maintaining health) on the formation of the personally and professionally important quality.

*Participants.* The experimental study was attended by cadets who studied in the specialty "State Border Security", "Law enforcement", "Philology". A total of 132 2nd-year cadets (including 118 boys and 14 girls aged 17 to 22) took part in the formative stage of the experiment. Control group (65 cadets) and experimental (67 cadets) groups were created. The qualitative and quantitative characteristics of cadets (boys) and cadets (girls) do not have reliable differences, so these groups were chosen by the participants of the formative stage of the pedagogical experiment. Cadets boys and girls of these groups had a similar average score of academic performance, in groups according to the programs, the same number of classes was provided. The variable conditions that were tested during the formative stage of the experiment were the organization of training and, accordingly, pedagogical influences on cadets, both boys and girls.

The organizers of the experiment previously informed the participants about the working procedure. The cadets agreed to participate in the experiment, and their answers were properly evaluated and processed.

*Organization of research.* The formative stage of the pedagogical experiment lasted from September 2020 to April 2021. It was held at the National Academy of the State Border Service of Ukraine named after Bohdan Khmelnytskyi (City of Khmelnytskyi, Ukraine). During this time, empirical data were also collected and a large number of observations were made. The researchers recorded all the characteristics of the health-saving competence of cadets in accordance with the data of its structure, observing ethical principles and requirements for the confidentiality of working with private information. The management of the educational institution allowed us to record empirical data.

*Procedures and tools.* Various diagnostic methods were used to determine the state of formation of the components of health-saving competence. So, specially designed questionnaires, observation and expert assessment were used to study the state of formation of the motivational component of

health-saving competence among cadets. The questions of the author's questionnaire contained questions about the importance of health-saving competence for border guard officers, the interest of cadets in maintaining health, how cadets work on the formation of health-saving competence, etc. The method of expert assessment included studying the attitude of cadets to their health, taking care of proper physical condition (physical health), relationships with classmates, teachers, ability to resolve conflicts, skills of joint activity and cooperation (social health), as well as satisfaction with the choice of their profession, vision of life prospects, self-control skills (mental health).

In turn, the level of formation of the cognitive component of health-saving competence was determined using the method of unfinished sentences, the performance of test tasks by cadets and based on the results of conversations. In particular, according to the method of unfinished sentences cadets added sentences regarding the essence of health-saving competence, its components, and the specifics of its manifestation. Also, taking into account the requirements of modality and minimization of root-mean-square deviations, testing was conducted, covering three series of 20 tasks each. Each episode dealt with one component of health: physical, social, or mental (spiritual). The author's methods involved finding out how cadets know the conditions of saving health, that is the importance of physical culture and sports, the essence of social health, what are their life goals and programs, how they take care of their spiritual health, first of all, how they exercise self-control or experience failures. The tests provided for the same number of simple tasks and tasks of increased complexity, which were used to test cadets' knowledge about the specifics of maintaining health. Conversations with cadets on various aspects of health-saving activities, primarily on the peculiarities of a healthy lifestyle, were also important. Cadets explained the importance of health in the life of a person and society, the essence of methods for determining the level of physical, social and mental health, the importance of health training. We paid considerable attention to the cadets' knowledge of the factors of positive influence of a healthy lifestyle on the general state of the body, general characteristics of individual and public health, the essence of the concept of "healthy lifestyle", the basics of social and mental health, positive thinking and an optimistic outlook.

To determine the level of formation of the activity component of health-saving competence cadets were offered three special tasks. In this case, the approaches of O. Sergienkova, O. Stolyarchuk, O. Kokhanova and O. Paseka about the fact that objective indicators of the formation of skills and abilities are the correctness and quality of the action (absence of errors), the speed of operations or their sequence (external criteria) (Sergienkova et al., 2012). In particular cadets had to assess the state of their health using various methods, draw up a program of physical self-improvement, determine promising goals for self-development, develop educational actions in the form of lectures, conversations, round tables, games, trainings on the importance of physical culture classes and on issues of physical and mental self-improvement.

For the development of the pilot program, we used materials by S. Strashko (Strashko et al., 2006) regarding the specifics of human health, O. Vinda et al. (Vinda et al., 2003), I. Matiikiv (Matiikiv, 2012) on the formation of a life position and ideological self-regulation, A. Obukhovska and I. Tsushko (Obukhovska & Tsushko, 2015) on the formation of skills to overcome negative emotions and mental stress.

*Statistical analysis.* Special software "SPSS" version 21 was used for empirical calculations of data. The use of the Pearson criterion was important, in particular, it was used to determine the differences in the formation of health-saving competence of cadets of the control and experimental groups at the beginning and end of the formative stage of the pedagogical experiment.

## Results

During the formative stage of the experiment, it was planned to expand the cadets' (boys and girls) understanding about the essence of health-saving competence and the importance of its physical, social and mental components in personal and professional life. In this case, it was taken into account that competence is formed on the basis of mastering the content of education, knowledge about the requirements of a healthy lifestyle, that is, the specifics of health-saving activities, through the formation of desire and motivation for a healthy lifestyle, a conscious attitude to one's health. Given this, we organized an optional course "Health-saving competence: significance for a border guard officer", which covered lectures, seminars and practical classes. During the elective course, cadets studied the history of formation and theoretical foundations



of health preservation, certain aspects of a healthy lifestyle of a border guard. They examined the history of perceptions of health as the highest value, as a social, economic and personal category, as well as the interpretation of health in alternative medicine. One of the modules of the elective course dealt with socio-biological health problems, features and rules of a healthy lifestyle, the culture of motor activity and human health promotion, and the specifics of health psychology. Another issue was the importance of physical exercise for maintaining the fullness of human life and achieving high-quality longevity.

We attached great importance to interactive teaching methods. In particular, during the classes it was organized discussion with cadets of the statements of famous philosophers and writers who helped to find out the essence of a healthy lifestyle. For example, the words of M. Amosov are still quite relevant today: "people go from health to diseases. I am campaigning for a regime of restrictions and loads"; "The optimal life is to live long and with a high level of spiritual comfort; "Health – an opportunity to live and work fully" (Amosov, 1990) and others. Methods of discussion and analysis of situations provided great opportunities for developing social health skills. Speaking about forms of teaching, we used work in small groups, organized individual work with subsequent discussion, and work using the "brainstorming" method. Cadets boys and girls talked about the difference in attitude to health and physical education classes at different ages, the importance of emotional health, a positive worldview and attitude towards themselves and people, the importance of overcoming life's difficulties, banal human laziness. For example, cadets commented on such words of the famous doctor, philosopher, pharmacist Avicenna about the importance of knowledge and work for a healthy life: "idleness and laziness not only give rise to ignorance, they at the same time are the cause of illness." Important for us were also the words of M. Amosov that "most diseases are not the fault of nature, but only of the person himself. Most often, a person gets sick because of laziness and lust, and often because of a lack of understanding." (Amosov, 1990). The cadets also explained the words of a well-known doctor that one should not rely only on medicine, because "it perfectly treats many diseases, but it cannot make a person healthy" (Amosov, 1990).

Thus, cadets learned to identify life values, priorities in work and personal life, have a positive attitude to changes, and learn about the

elements of psychological literacy, positive thinking technologies, they also acquired the ability to have an optimistic perception of life and a focus on success. Cadets also got acquainted with the rules of a healthy lifestyle, determined health priorities among other values, and learned to take an active life position. Teachers also drew attention to the motivation to preserve their own health, the danger of alcohol consumption, and the inappropriateness of psychotropic substances. The subjects of discussion were the essence of addiction and the causes of dependent behavior, mechanisms of manipulation, the role of advertising in the acquisition of addictions.

According to the recommendations of O. Vinda et al., (2003) cadets learned to know themselves and other people more adequately, to determine the place of feelings, values, and addictions in a person's life. Important questions were about role struggle, managing feelings, internal stimuli of control, ways of constructive and destructive responsibility for one's life. Among the recommendations on how to quit smoking, teachers focused on how to express their feelings. To do this, they taught cadets verbal and nonverbal techniques for expressing negative emotions, improving their physical and mental state.

Of great importance for the formation of health-saving competence was the performance of research tasks by cadets. In this way, cadets acquired skills in solving complex health problems. To perform tasks of theoretical and practical research teachers offered cadets tasks that included observing and studying facts, analyzing and systematizing the results. Cadets, performing research tasks, learned more about history of the formation of views on health, features, for example, Tibetan philosophy of human health improvement, the contribution of Ayurveda to modern health science, philosophical views on health in ancient China, valeophilosophy of Ancient Greece and Rome, medical and biological sciences and philosophical concepts of the modern period, as well as about the physical, social, mental, spiritual components of health. Performing research work helped future officers learn how to solve complex problems of professional activity and health preservation. Of particular importance was the study by cadets of such problems as factors of formation of physical health, features of formation of social health, measures to maintain psychological health. Cadets studied the relationship between character traits, tolerance, intelligence and mental health, service



factors and officer health, studied methods of restoring health, the main ways to maintain physical and psychological health. Using a research approach, cadets learned new material about a healthy lifestyle not through memorization, but through research and solving complex health problems. The advantage of the research approach was also an increase in the intensity of cadets' assimilation of information about a healthy lifestyle, their relatively greater independence. Such work made it possible to significantly activate the cognitive activity of cadets, better understand the theory, learn how to apply the acquired knowledge in practice, and effectively solve complex health problems.

In general, the experimental work was complex in nature and provided for systematic measures of pedagogical influence for the formation of health-saving competence in future officers. For this purpose, a special elective course was organized to familiarize cadets with the essence of health-saving competence and the basic requirements of a healthy life. It was important to use interactive and research teaching methods to gain cadets' experience in health preservation and expand their understanding of a healthy lifestyle. Comparative results of the formation of all

components of health-saving competence of cadets at the end of experimental training are presented in Tables 1–4.

The results of the survey, observation and survey showed that the cadets of the experimental group significantly increased the indicators of formation of the motivational component of health-saving competence compared to the control group. Among them, there were 18.97% more people who support the need for an appropriate level of its formation. These cadets believe that they need knowledge about health-saving competence for a more productive organization of their lives, "a sense of fullness of life." They understand that "you need to worry about your health not when you are already ill or when you are already retired, " but in advance. Cadets of the experimental group became more interested in the problems of a healthy lifestyle and health preservation, and viewed related information on the Internet and in the press. They are ready to make efforts to preserve their health, do not want to neglect their health. In the control group, only 13.84% of those who have a high level of motivational component of health-saving competence were identified (in the experimental group – 25.37% of cadets).

**Table 1.**

*Comparative analysis of the levels of formation of the motivational component of health-saving competence of cadets before and after the experiment (in %), n = 132 (CG – 65, EG – 67)*

Levels	Criteria	Control groups				Experimental groups			
		At the beginning of the experiment		At the end of the experiment		At the beginning of the experiment		At the end of the experiment	
		Q-ty	%	Q-ty	%	Q-ty	%	Q-ty	%
High	Motivational	4	6.15	9	13.84	4	5.97	17	25.37
Average		25	38.46	33	50.77	27	40.30	39	58.21
Low		36	55.39	23	35.39	36	53.73	11	16.42

*Significant changes of cadets of experimental group were revealed regarding the formation of the cognitive component, which are determined using the method of unfinished sentences, test tasks, and were based on the results of conversations. In particular, 23.88 % of cadets of experimental group who demonstrated a high level of formation of this component, provided a thorough answer to questions related to the essence and components of the officer's health-saving competence. They also more thoroughly revealed the question of the need for health-saving competence, the relationship between the health-saving competence of an officer and the success of his professional activity (in the control group, 12.31 % revealed these questions at a high level). The results also showed that the*

*cadets of experimental group compared to the control group, are more thoroughly guided in various aspects of health-saving competence, in particular regarding the features of a healthy lifestyle. They were able to more comprehensively reveal questions about individual concepts of health and its role in the life and development of society and people; the history of the development of health teachings, methods for determining the level of physical and mental health, the importance of health training and nutrition, as well as the harmful effects of alcoholism, tobacco smoking and narcotic substances on human health. Cadets of experimental group also noted the importance of regulating the psychoemotional state, constant physical and spiritual self-improvement.*

**Table 2.**

*Comparative analysis of the levels of formation of the cognitive component of health-saving competence of cadets before and after the experiment (in %), n = 132 (CG – 65, EG – 67)*

Levels	Criteria	Control groups				Experimental groups			
		At the beginning of the experiment		At the end of the experiment		At the beginning of the experiment		At the end of the experiment	
		Q-ty	%	Q-ty	%	Q-ty	%	Q-ty	%
High	Cognitive	3	4.62	8	12.31	3	4.48	16	23.88
Average		23	35.38	30	46.15	25	37.31	37	55.22
Low		39	60.0	27	41.54	39	58.21	14	20.90

Regarding the activity component it was found out that cadets of experimental group were able to perform tasks at the highest level that characterized their health-saving skills. They were able, firstly, to more thoroughly assess the state of their health using various research methods, secondly, to characterize the methods of regulating their own emotional state and overcoming stressful situations, and, thirdly, to create a program of psychoprophylactic and educational actions in the form of lectures, conversations, round tables, games, trainings. Among the cadets of experimental group there were 13.06% more people than the control group who have a high level of knowledge

of the main methods for diagnosing the level of health and can characterize ways to maintain a healthy lifestyle. According to the results of completion the tasks by cadets, it was found out that 22.39 % of cadets of experimental group were able to characterize at a high level the features of emotional and volitional regulation of behavior, regulation of their own emotional states and overcoming stressful situations, showed the ability to select individual means and methods for developing their physical and personal qualities (only 17.77% of them were identified in the control group).

**Table 3.**

*Comparative analysis of the levels of formation of the activity-based component of health-saving competence of cadets before and after the experiment (in %), n = 132 (CG – 65, EG – 67)*

Levels	Criteria	Control groups				Experimental groups			
		At the beginning of the experiment		At the end of the experiment		At the beginning of the experiment		At the end of the experiment	
		Q-ty	%	Q-ty	%	Q-ty	%	Q-ty	%
High	Activity-based	5	7.69	7	10.77	2	2.98	15	22.39
Average		21	32.31	27	41.54	23	34.33	35	52.24
Low		39	60.0	31	47.69	42	62.69	17	25.37

In turn, the data in Table 4 confirm that at the end of the formative stage of the experiment, cadets of the experimental group have a predominantly high (23,88 %) and average (55.22%) level of health-saving competence. In the control group

the indicators were 12.31% and 46.15%, respectively. In this group, the percentage cadets with a low level of Education health-saving competence, it is 41.54% (20.64% more than in the experimental one).

**Table 4.**

*Comparative analysis of the levels of formation of health-saving competence of cadets before and after the experiment (in %), n = 132 (CG – 65, EG – 67)*

Levels	Criteria	Control groups				Experimental groups			
		At the beginning of the experiment		At the end of the experiment		At the beginning of the experiment		At the end of the experiment	
		Q-ty	%	Q-ty	%	Q-ty	%	Q-ty	%
High	Average value	4	6.15	8	12.31	3	4.48	16	23.88
Average		23	35.39	30	46.15	25	37.31	37	55.22
Low		38	58.46	27	41.54	39	58.21	14	20.90

Further, to check the effectiveness of work on the formation of health-saving competence of future border guard officers, we conducted a statistical

analysis of the results obtained using the Pearson criterion (table. 5).

**Table 5.**

*The level of formation of health-saving competence of cadets of the control and experimental groups according to the average values of criteria (at the end of the experiment),  $n = 132$*

Levels	$i$	$n^e_i$	$n^t_i$	$n^e_i - n^t_i$	$(n^e_i - n^t_i)^2$	$(n^e_i - n^t_i)^2 / n^t_i$	$(n^e_i)^2$	$(n^e_i)^2 / n^t_i$
High	1	8	6	14	196	32.67	64	10.67
High	1	16	10	6	36	3.60	256	25.60
Average	2	30	-22	8	64	2.91	900	40.91
Average	2	37	-22	15	225	10.23	1369	62.23
Low	3	27	-22	5	25	1.14	729	33.14
Low	3	14	-6	8	64	10.67	196	32.67
	$\Sigma$	<b>132</b>		<b>X</b>	<b>X</b>			<b>205.22</b>

So,  $X^2_{EMF} = 205,22$ .

Let's define the number of degrees of freedom:  $v = 2$ . Using the tables of critical values of the corresponding criterion, we will determine the critical point  $X^2_{kr}$  by significance level  $\alpha=0.05$ :

$$X^2_{kr} = 6,00$$

Considering that  $X^2_{EMF} = 205,22 \geq 6,00 = X^2_{kr}$ , we can consider the results of the formation of health-saving competence of future border guard officers according to the average values of criteria, in the control and experimental groups at the end of the experiment as statistically reliable. The differences between the two distributions can be considered significant if  $\chi^2_{EMF}$  reaches or exceeds  $\chi^2_{0.05}$ , and especially reliable if  $\chi^2_{EMF}$  reaches or exceeds  $\chi^2_{0.01}$ . In general, such data confirm the effectiveness of implementing the author's method of forming health-saving competence of future officers. Comparison of the results obtained indicates the expediency of using methods, tools and organizational forms of training for the formation of this personal property.

## Discussion

The results of the study indicate the importance of pedagogical efforts to expand young people's ideas about the role of health in personal and professional life. The influence of the content of education and expanding the experience of cognitive activity (through the elective course "Health-preserving competence: importance for a border guard officer", the use of interactive methods and research tasks to solve specific health-preserving problems) on the formation of the specified property has been confirmed. So, the appropriate selection of the education content allowed to enhance the knowledge about the

requirements of a healthy lifestyle, specifics of health-preserving activities, formation of desire and motivation for a healthy lifestyle, a conscious attitude to one's health, and the whole idea of cadets about the essence of a healthy lifestyle, as well as the importance of physical, social and mental components of health. The results of the pedagogical experiment confirmed the expediency of the proposed ways, content and means of learning, which is evidenced by the discrepancy in the results of the formation of health-saving competence obtained in the experimental and control groups before and after the experiment.

The research conducted by I. Burlakova, O. Sheviakov, T. Kondes (Burlakova et al., 2021) helped reveal health-preserving competence in the context of physical, spiritual and intellectual self-development of a person, considered the health-preserving competence as a holistic unity of physical, spiritual and intelligent components. It is about the importance of young people's attention not only to the physical component, but also to what can be covered by the concept of the quality of human life: the importance of a harmonious life with oneself, with other people and society. There is also a common vision regarding the need to find new approaches to determining the content of education, in particular, raising the awareness of young people about the essence of a healthy lifestyle and ways to achieve harmony in professional and personal life.

The research of the authors L. Slyvka, H. Sivkovych, O. Budnyk, O. Tytun, A. Boichuk unites the idea of the possibilities of the educational process for the formation of a healthy lifestyle of students, of the pedagogical potential

of the content of education for expanding the awareness of young people about the importance of preserving all components of health (Slyvka et al., 2022). The results of this study proved the importance of informational and persuasive methods to familiarize young people with the requirements of a healthy lifestyle. As a rule, it is almost impossible to force people to smoke less, give up alcohol and other destructive practices by violent methods. In this case, methods of persuasion are more appropriate and effective. It is with the help of interactive teaching methods, during contact learning sessions, conversations and discussions, that young people can be introduced to positive examples of health care, inclined to make important decisions about taking care of their health. In this, the study also agrees with the one conducted by V. Overchuk, M. Smulson, O. Vdovichenko, O. Maliar, K. Vasuk (Overchuk et al., 2023). In our case, narrative practices were invaluable as a tool for restoring psychological balance and psychological support. In this way, cadets could decide on life values, priorities in work and personal life, acquire necessary basics of psychological literacy, learn the importance of an optimistic perception of life and readiness for life's difficulties.

Since the research was carried out in one educational institution, in further scientific papers it is advisable to increase the sample, which can give more reliable results. It is recommended to organize the experiment on a relatively larger scale, among other educational institutions. It is also necessary to track the results of the experiment in the future, a few years after the cadets have graduated from the educational institution, to find out their views on various aspects of health care activities. This would allow, among other things, to develop more precise recommendations on pedagogical ways of increasing the readiness of young people to use health-preserving practices.

The study was limited by several factors. First of all, by the fact that the participants of the experiment were representatives of one educational institution and that could affect the level of generalization. Secondly, the methodology of the research encompassed questionnaires, the method of incomplete sentences, testing, expert evaluation, conversations, performance of tasks, although it did not provide detailed written answers of young people regarding various aspects of health care. Analysis of such answers could strengthen the credibility of the findings.

## Conclusions

The relevance of the study is determined by the need to outline the ways of forming the health-saving competence of future border guards, primarily its physical and mental components. At this age, young people do not always understand the meaning of health as the highest value, the specifics of health psychology, do not pay attention to the importance of maintaining the completeness and quality of human life. In the pedagogical aspect, it is necessary already during the training of cadets in a higher educational institution to increase their motivation to preserve health, as well as to identify pedagogical resources ensuring familiarization of future border guards with the importance of social and mental (spiritual) components of health.

Based on the analysis of the results of the formation stage, it was found that cadets of experimental groups began to take a more responsible attitude to their health and the health of other people, paying more attention to working with information about a healthy lifestyle, improve, maintain and promote health, apply a set of technologies to relieve psychoemotional tension, master the skills of introspection, self-assessment and elements of physical and emotional self-improvement. The cognitive component of their health-saving competence has significantly increased. They found out the features of a healthy lifestyle, that is, the specifics of health-saving activities, the need for a responsible attitude to their health, constant health care. Cadets (boys and girls) also paid attention to the need for physical and spiritual development, they learned how to create an algorithm for the formation, preservation and development of health, individual health programs, and apply a set of technologies to relieve psychoemotional tension. Such differences can be explained by the fact that during the experimental training, they had the opportunity to become more thoroughly acquainted with the problems of a healthy lifestyle and health preservation, mastered the necessary techniques and methods for improving their industriousness, restoring mental and psychological balance.

Cadets of experimental group also learned to identify long-term plans for their professional development, to see the positive aspects of various life situations. Organization of research work of cadets of experimental group it allowed to teach them how to process large amounts of necessary information, find the necessary solutions to health problems. In contrast no significant changes in levels of the formation of

health-saving competence were found in the control group. In this group positive changes in the formation of health-saving competencies do not reach the level of statistical significance, they are the result of the entire educational process in an educational institution. In general, the results of the formative stage of the pedagogical experiment confirmed the expediency of the proposed ways of forming health-saving competence, the content and means of training, which is evidenced by the discrepancy in the results of the formation of health-saving competence obtained in the experimental and control groups before and after the experiment.

Taking into account the fact that cadets (boys and girls) during the training period do not fully realize the importance of health saving and health-saving competence. It is important to familiarize them with the importance of maintaining health, motivate them to health-saving activities. In the pedagogical aspect the primary subject of consideration should be health-saving and health-saving technologies for personal development in the educational process. Even at the stage of initial professional development, cadets (boys and girls) should understand the importance of health preservation to ensure harmonious spiritual and physical development. The purpose of health-saving education (training and upbringing) should be to prepare cadets for a full and harmonious active life.

In order to form the health-saving competence of future specialists and their motivation for health-saving activities, it is necessary to expand the understanding of the essence of health-saving competence and the importance of its physical, social and mental components in personal and professional life by means of elective courses. In this case, it is important to take into account that competence is formed on the basis of mastering the content of education, knowledge about the requirements of a healthy lifestyle, that is, the specifics of health-saving activities. In turn, with the help of interactive teaching methods, it is advisable to teach cadets to determine their life values, priorities in work and personal life, and to form the ability to have an optimistic perception of life. To develop cadets' (boys and girls) health-saving skills, it is also necessary to use the potential of research tasks. By studying, systematizing and analyzing the facts, cadets (boys and girls) will be able to learn more about history of the formation of views on health, features of various health improvement systems, that is learn new material about a healthy lifestyle

not through memorization, but through research and solving complex health problems.

### Prospects for further development

Further research can specify the pedagogical possibilities of influencing young people and increase their level of responsibility for their health. The study of this problem can be carried out in the following directions: 1. Increasing the scope of the study: it is important to cover a larger number of educational institutions, to compare the health care awareness of a larger number of students. 2. Study of health-saving practices of representatives of civilian youth and cadets: it is important to find out the daily components of young people's concerns about their physical, social and mental health. 3. Analysis of the impact of psycho-traumatic factors: it is advisable to reveal the awareness/readiness of young people to protect their health in wartime conditions. These studies can expand the pedagogical possibilities of forming health-preserving practices of young people.

### Conflicts of Interest

The authors declare no conflict of interest.

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## Pedagogical conditions for developing the creativity of future teachers in the process of their professional training

### Педагогічні умови розвитку творчості майбутніх учителів у процесі професійної підготовки

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#### Abstract


Today, institutions of higher pedagogical education require the constant development of creativity of students of higher education, the implementation of a system of purposeful development of it to ensure the training of future specialists capable of professional activity in the conditions of the New Ukrainian school, the development of key competencies of students, and the implementation of state policy on comprehensive personality development. Therefore, the purpose of the article is to identify and substantiate the pedagogical conditions under which the process of developing the creativity of future teachers would be as effective as possible and ensure the successful solution of the specified tasks. In the process of research, we used the following methods: theoretical; empirical; statistical. The article describes the stages of selection and ranking of pedagogical


#### Анотація


Сьогодення вимагає від закладів вищої педагогічної освіти постійного розвитку творчості здобувачів вищої освіти, реалізації системи цілеспрямованого її розвитку для забезпечення підготовки майбутніх фахівців, здатних до професійної діяльності в умовах Нової української школи, розвитку ключових компетентностей учнів, утілення державної політики щодо всебічного розвитку особистості. Тому метою статті є виявлення та обґрунтування педагогічних умов, за яких процес розвитку творчості майбутніх педагогів був би максимально ефективним та забезпечував успішне розв'язання зазначених завдань. У статті описано етапи відбору й ранжування педагогічних умов розвитку творчості майбутніх педагогів у процесі фахової підготовки в закладах вищої освіти, а також схарактеризовано роль і місце

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conditions for the development of creativity of future teachers in the process of professional training in institutions of higher education of education, as well as the role and place of these conditions in the system of purposeful development of creativity of future teachers are characterized.

**Keywords:** higher education students, future teachers, pedagogical conditions, pedagogical university, ranking, developing creativity.

## Introduction

The beginning of the new century is characterized by the search for ways of improving the quality of higher professional education which is important for the sustainable development of the society and the economic well-being of the country. The current socio-economic situation in Ukraine sets new demands on the process of training future specialists in the institutions of higher education since the acquisition of only subject knowledge in modern society does not make graduates competitive at the labour market.

The demand for the competitive professionals updated by the market economy gives rise to the primary task of developing such abilities of an individual that reveal their individual qualities, intellectual capabilities and creative potential, because the social development of a nation is always closely connected with creativity. New orientations of professional education, modern achievements of science determine the choice of technologies, which are increasingly preferred by teachers.

At the same time developing the creativity of future specialists in the educational process of pedagogical higher education institutions due to the lack of flexible plans, programmes, textbooks, the insufficient use of innovative technologies occurs spontaneously, does not encourage the students of education to professional creativity and extremely slowly reorients the components of the current educational system on the basis of modern concepts.

Based on the above mentioned provisions, the purpose of our publication is to identify and substantiate the pedagogical conditions under which the process of developing the creativity of future teachers in the process of studying at the pedagogical institutions of higher education would be as effective as possible and ensure the successful solution of the specified problem.

зазначених умов у системі цілеспрямованого розвитку творчості майбутніх педагогів.

**Ключові слова:** здобувачі вищої освіти, майбутні педагоги, педагогічні умови, педагогічний університет, ранжування, розвиток творчості.

## Literature Review

In the current stage of the Ukrainian education system institutions of higher pedagogical education, future teachers should possess not only a high level of pedagogical skills in order to successfully fulfill their professional duties, but also demonstrate constant developing their own creativity, implementing the system of its purposeful developing in order to ensure training future specialists capable of professional activity in the conditions of the New Ukrainian School, the formation of students key competencies, the implementation of state policy regarding the comprehensive development of the personality (Wu et al., 2014; Edens et al., 2015; Wen et al., 2017; Kurok et al., 2022; Marieiev et al., 2023).

The effectiveness of the implementation of the system of developing the creativity of future teachers in the process of their professional training is possible provided that the pedagogical conditions are observed, which will contribute to the organization of the effective activities of all the participants in the educational process of the pedagogical institutions of higher education, aimed at solving the outlined problem. The philosophical dictionary contains the concept of 'condition' defined as 'a category that reflects the universal relations of a thing to the factors due to which it arises and exists' (Wu et al., 2014). Sometimes creativity is interpreted as a vector of positive ways out of social instability, conflicts and dissatisfaction (Nerubasska & Maksymchuk, 2020).

In the pedagogical literature, the concept of 'pedagogical conditions' is more often used, which is interpreted differently by scientists. Thus, O. Antonova states that pedagogical conditions can be defined as "a set of objective possibilities of forms, methods and techniques, the content of increasing the efficiency of the educational process, which ensure the solution of the tasks of the scientific research" (Antonova, 2012). I. Onyshchenko names pedagogical conditions as a set of content, possibilities,

methods, techniques and forms (Onyshchenko, 2016).

General issues on developing the creative abilities of higher education institutions students were considered in the article (Vaganova et al., 2019). It was pointed to the increase in the professional requirements for university graduates. The focus was on the need to create the conditions for the realization of students' creative potential.

Crucial is the keynote due to which "bringing creativity to the rank of major productive force eliminates the characteristics of alienation of human from work" (Glazkova et al., 2020, 152).

So, we understand the concept of 'pedagogical conditions' as a set of certain circumstances aimed at increasing the effectiveness of the pedagogical processes and phenomena, in particular, the development of creativity of future teachers. We will talk about the complex of pedagogical conditions, since they are all interdependent and interconnected. Therefore, we set the task of their scientific substantiation, based on the analysis of the separate components, features and properties of the object (the creativity of future teachers), which will ensure the effectiveness of the development of this phenomenon.

The essence and significance of the pedagogical conditions selected by the expert group should be analysed here. The experts singled out *«applying innovative teaching/learning technologies in the professional training of future teachers»* as a pedagogical condition for developing creativity of future teachers of rank No. 1. This condition is, in our opinion, very important, since the analysis of the isolated factors of developing creativity of future teachers showed that the vast majority of them are interrelated and require the use of innovative technologies in the process of professional training (combining them with yjr traditional ones).

Agreeing with the opinion of I. Dychkivs'ka, by innovative pedagogical technologies in our research we understand the process of purposeful, systematic and consistent introducing the original, innovative techniques, methods, pedagogical actions and means covering a holistic educational process, from the definition of its goals to the expected result of the activity, into the practice of the institution of higher education (Dychkivs'ka, 2011).

According to T. Batyuta, an important feature of the European education system is applying modern innovative technologies alongside with the traditional teaching/learning technologies, the main characteristics of which are the following: technologicalization of all types of research (in natural science, mathematics, chemistry, humanities and social sciences, political science and culture, etc.); implementation by the state of redistribution of funding from fundamental research to technological research; introduction of the most modern network and computer technologies; constant integration and modernization of scientific, research and educational systems, increasing the prestige of the Ukrainian education, science and technology, solving the problems of sustainable development, preventing destabilization on the global and local scale; active use of the latest information and communication, educational technologies (Batyuta & Dychkivs'ka, 2001).

We can agree with the authors, who single out the following among the main directions of the outlined process: the organization of the educational and informational and subject-oriented environment that will allow applying multimedia tools, hypermedia systems, electronic textbooks, etc.; mastering means of communication (computer networks, television, telephone, satellite communication for the purpose of exchanging information resources); compliance with the conditions and principles, skills and rules of «being» in the information and educational space; development of distance teaching/learning and the distance education system in general (Batyuta, & Dychkivs'ka, 2001).

It should be noted that the main innovative technologies in education are considered to be: technologies of individualization of the educational process (educational design, adaptive learning system, productive learning, etc.); interactive learning technologies (interaction of participants in the educational process to jointly solve educational problems; training sessions, etc.); multimedia technologies (technologies that combine graphic, text, video and audio information for the purpose of creating presentations, electronic manuals, educational films, etc.); network technologies (organization of distance teaching/learning, telecommunication of students with teachers, library workers, colleagues using teleconferences, e-mail, etc.) (Khymynets', 2009; **Error! No se encuentra el origen de la referencia.**).

The choice of the outlined pedagogical conditions is also confirmed by the fact that electronic learning as a feature of the latest educational technologies, is very important in the field of the European integration which is understood as the educational space where the formation and development of higher education students includes personal qualities that will be needed by a modern person in their life: the ability to think critically and globally; knowledge of the basics of media literacy; the ability for creative development and self-development, for solving creative tasks; development of readiness to work in a team; development of civic consciousness (Jackson, 2013; Novolokova, 2019).

At the same time, the fulfillment of the outlined pedagogical condition encourages higher education students to work in the team, to use productive, dialogical, modern teaching methods in order to more effectively train them for the creative professional activity.

The group of experts singled out «*creating the favourable educational environment focused on developing creativity of higher education students*» as a pedagogical condition for developing the creativity of future teachers of rank No. 2. It is well known that in the modern educational institution, a teacher cannot and should not be a transmitter of certain information (ready-made knowledge). In this regard, they need to direct their own efforts to selecting forms, methods, techniques and technologies that will be interesting to future teachers, take into account their cognitive interests, personal creative potential, that is, encourage creativity, creative thinking. Creative educational environment is not limited only to the educational opportunities of the university, it should provide for the opportunity for modern teachers and students of education to receive the latest information in the world. Such an environment should be personally oriented, benevolent, cohesive and stimulate free expression of thoughts, ideas, free choice of methods and forms of educational activity by the students. In the writings, H. Tokman' convinces that the atmosphere of approval and respect for creativity should be created (Tokman', 2012).

The correct interpretation of the concept of 'creative educational environment' is presented in the works of O. Petrovych, who considers it as 'a set of organically combined systemic conditions for the development of creativity of future specialists, taking into account their individual characteristics, self-improvement and

self-realization, forming their creative and critical thinking on the basis of the dialogic interaction of the teacher and students with the aim of qualitatively training them for the organization of work with gifted students (Petrovych, 2014).

Developing the creative educational environment has a positive effect on the educational motivation of future teachers, encourages them to various types of creative activity, forms a valuable attitude to creativity, the development of one's own creative potential through the realization of the need for self-education, self-improvement, self-development, etc.

The next pedagogical condition (with rank No. 3) is «purposeful developing the personal creative qualities» of education students. The significance of the specified pedagogical condition cannot be underestimated, since it is due to the fact that positive emotions, the psychological aspect of any process, including developing the creativity of future teachers, mobilize all the mental processes of the subject of activity, increase their cognitive activity, will, desire to solve the assigned tasks, reveal abilities, matching them with their own needs and interests (Lubart, 2010; Stojanova, 2010).

The authors see the implementation of this pedagogical condition into the educational institution in the organization of circumstances that would contribute to the development of the creative direction of the educational process, which should be manifested in the emotions, will, desire, awareness, consciousness and feelings of future teachers. After all, it is known that emotions, feelings, desires arise due to real objects, events, people, which allows us to focus on the practical implementation of this condition and ensure the personal activity of future teachers while developing their creativity (enjoying the obtained positive results, sadness due to unfinished work, fear of making a mistake, not proving oneself right, despair due to the loss of the opportunity to bring the case to the end, etc.).

Therefore, all of the above mentioned is generated, as a rule, in the real educational process and prompts the student to perform certain actions, overcome difficulties, develop the ability to restrain emotions, behave correctly, intelligently, since their positive perception and awareness of the development of teacher's and student's creativity during the professional training stimulates emotions, will, which cause the need for the further movement towards



creativity, acquisition of the necessary knowledge, skills, abilities, reflections, etc.

The purposeful development of creativity of future teachers can be seen in applying creative tasks, projects, innovative technologies, interactive, creative methods in the educational process.

The group of experts singled out «*filling the theoretical and practical components of the professional training of future teachers with content aimed at the development of their creativity*» as a pedagogical condition for developing the creativity of future teachers of rank No. 4. This is explained by the fact that increasing the efficiency of the system of developing the creativity of future teachers in the process of their professional training is possible only if changes are made to all the components of the educational process of the pedagogical higher education institution.

To implement this pedagogical condition in practice, the main goals of training future teachers should be determined and oriented to higher productive levels of the educational activity, which, in turn, outlines the task of training future specialists, determines the content, complex of methods, forms, learning technologies, etc. It is important that while implementing the specified pedagogical conditions, the productive means and methods of the educational activity of education students are replaced by reproductive ones, providing opportunities for the implementation of creative learning (work on creative and scientific projects, searching for ways to solve non-standard, non-traditional tasks, active participation in the scientific and research activities, development of models, search for new creative methods, methods, use of different-level means of monitoring the educational achievements of students, etc.). The teacher of the pedagogical institution of higher education should take responsibility for ensuring the transition of students from reproduction to dialogue, searching, productive forms and methods of work, for purposeful, step-by-step actions in the process of developing the creativity of future teachers.

In addition, this pedagogical condition provides for the justification of the technology of selecting and structuring the content of the creative development of future teachers in the process of their professional training, the identification of the principles of its selection, the selection of the content lines and levels of structuring.

The group of experts singled out «*increasing the motivation for creative development and self-development of students*» as a pedagogical condition for developing creativity of future teachers of rank No. 5. The authors see the implementation of the pedagogical conditions in the process of the professional training of future teachers in taking into account motives, interests, inclinations, personality qualities (attention, memory, imagination, activity, initiative, inquisitiveness, diligence, etc.), the need for self-realization, self-development, self-regulation. At the same time, the formation of such qualities as self-confidence, perseverance, awareness of the importance of developing one's own creativity in the professional activity is important. Fulfillment of the specified condition is connected with the achievement of the appropriate level of development of motivation and readiness for innovations in the professional activity, acceptance of one's own creative possibilities, incentives for behavior, personal significance (Tan et al., 2018).

Thus, the implementation of the defined pedagogical conditions for developing creativity of future teachers involves the actualization of the student's awareness of motivation regarding the development of their own creativity in the process of the professional training, the formation of motivation and readiness for innovations in the professional activity, acceptance of their own creative opportunities as a life value, etc.

### Methodology

In the process of research, we used the following methods:

- theoretical: comparative analysis of philosophical, psychological and pedagogical literature, normative documents, familiarization with domestic and foreign experience of developing the creativity of future teachers; theoretical forecasting;
- empirical: survey, testing, expert evaluation method, conversation; pedagogical experiment;
- statistical: Pearson test ( $\chi^2$ ), correlation analysis.

The search for the pedagogical conditions for developing the creativity of the future specialists was carried out in several stages with the focus on mastering by the education students the high level of creative pedagogical activity, based on

the principles and factors of developing this phenomenon.

The first stage of the search for the pedagogical conditions for developing the creativity of future teachers required the solution of the following task: on the basis of the theoretical analysis of the specified problem and considerable own

experience in teaching activities in higher education, to determine the system of the pedagogical conditions to enable the effective process of developing the investigated personality quality. As a result, 15 pedagogical conditions were selected, which, after clarification and refinement, were submitted to Table 1.

**Table 1.**  
*Pedagogical conditions for developing future teachers creativity*

#	Pedagogical condition	Amount of choices
1	Involving students into designing creative projects during the study of each discipline of the educational programme for training future teachers	4
2	Active involving members of the scientific problem groups to university and inter-university research activities	6
3	Creating favorable educational environment focused on the development of creativity of higher education students	13
4	Differentiation of the research and creative activities of future teachers depending on their personal aptitude for creativity	7
5	Increasing the motivation for the creative development and self-development of students	11
6	Providing future teachers with the access to all the available information sources, including the foreign ones	5
7	Filling the theoretical and practical components of the professional training of future teachers with the content aimed at the development of their creativity	11
8	Purposeful use of the creative methods, techniques, technologies, innovative forms of their organization in classes	9
9	Financial support of the creative projects of applicants	4
10	Applying innovative learning technologies in the professional training of future teachers	17
11	Improving the forms and methods of monitoring the educational achievements of higher education students in the aspect of taking into account the creativity component	6
12	Implementing the elements of developing the creativity of future teachers in the system of distance learning in the conditions of quarantine and martial state restrictions	9
13	Directing the activity of higher education students towards productive learning, which is the basis of creativity development	6
14	Purposeful developing the personal creative qualities of education students	13
15	Orientation of the educational process to purposeful developing the creativity of every higher education student	9

Source: created by the author

The second stage of the selection of the pedagogical conditions, the implementation of which in the educational process of a higher school will enable the development of the creativity of future teachers, was aimed at selecting the five most significant ones from the given list. 11 teachers from different regions of Ukraine were involved in the expert group.

While selecting the experts, the following requirements were met: work experience in the system of training future teachers; satisfactory state of physical and mental health (absence of irritability, pessimism, insincerity); confidence in one's own judgments, adherence to moral principles; intellectual productivity; present sense of social responsibility, etc.

As a result, the experts selected the 5 most important pedagogical conditions for developing the creativity of future teachers in the process of their professional training: purposeful developing the personal creative qualities of education students (**P1**); creating the favourable educational environment, focused on the development of creativity of higher education students (**P2**); applying the innovative teaching/learning technologies in the professional training of future teachers (**P3**); increasing the motivation for the creative development and self-development of students (**P4**); filling the theoretical, practical and scientific components of the professional training of future teachers with content aimed at developing their creativity (**P5**).

It should be noted that among the selected pedagogical conditions for developing future teachers' creativity there are the main (dominant) ones that should be given primary attention. To assess the importance of the selected pedagogical conditions the expert assessment sheet was designed and the experts ranking was conducted.

**Table 2.**

*Matrix of the results of ranking the pedagogical conditions for developing creativity of future teachers in the process of their professional training*

NO of expert	P1	P2	P3	P4	P5	Total
1	3	2	1	5	4	15
2	4	2	1	5	3	15
3	4	1	3	2	5	15
4	3	2	1	5	4	15
5	2	3	1	4	5	15
6	3	1	2	4	5	15
7	1	2	3	5	4	15
8	3	4	1	5	2	15
9	3	5	2	1	4	15
10	4	2	1	5	3	15
11	2	3	1	4	5	15
<b>Total</b>	<b>32</b>	<b>28</b>	<b>17</b>	<b>45</b>	<b>43</b>	<b>165</b>
<b>Rank</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>5</b>	<b>4</b>	

Source: created by the author

Data analysis shows that as a result of the work of the expert commission, relatively reliable results were obtained: the difference between the

## Results and Discussion

The results of the expert assessment of the pedagogical conditions for developing creativity of future teachers in the process of their professional training are presented in Table 2.

smallest and largest sums of ranks is 45–17=28. The ranking matrix will look like this (Table 3):

**Table 3.**

*Matrix of ranking*

Pedagogical conditions	Experts											Sum of ranking	d	d <sup>2</sup>
	1	2	3	4	5	6	7	8	9	10	11			
P <sub>1</sub>	3	4	4	3	2	3	1	3	3	4	2	32	-1	1
P <sub>2</sub>	2	2	1	2	3	1	2	4	5	2	3	28	-5	25
P <sub>3</sub>	1	1	3	1	1	2	3	1	2	1	1	17	-16	256
P <sub>4</sub>	5	5	2	5	4	4	5	5	1	5	4	45	12	144
P <sub>5</sub>	4	3	5	4	5	5	4	2	4	3	5	43	10	100
<b>Total</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>15</b>	<b>165</b>	<b>0</b>	<b>526</b>

Source: created by the author

$$\text{where } d = \sum x_{ij} - \frac{\sum \sum x_{ij}}{n} = \sum x_{ij} - 33$$

Checking the correctness of composing the matrix based on calculating the checksum is the following:

$$\sum x_{ij} = \frac{(1+n)n}{2} = \frac{(1+5)5}{2} = 15 \quad . \quad \text{The}$$

sum of the columns of the matrix and the checksum are equal, so no errors were made when compiling the matrix. We will conduct the analysis of the significance of the studied pedagogical conditions for developing creativity of future teachers, for which we will compile the corresponding table. The location of the pedagogical conditions by importance is presented in table 4:

**Table 4.**  
*The location of pedagogical conditions by their importance*

Pedagogical conditions	P <sub>3</sub>	P <sub>2</sub>	P <sub>1</sub>	P <sub>5</sub>	P <sub>4</sub>
Sum of ranking	17	28	32	43	45

Source: created by the author

The consistency of experts' opinions regarding the ranking of the studied pedagogical conditions was determined by calculating the concordance coefficient proposed by M. Kendell and B. Smith (Sydorenko & Dmytrenko, 2000). The coefficient is calculated according to the following formula:

$$W = \frac{12S}{m^2(n^3 - n)},$$

$$S = \sum_{j=1}^n \left( \sum_{i=1}^m x_{ij} - \frac{\sum_{j=1}^n \sum_{i=1}^m x_{ij}}{n} \right)^2,$$

where  $n$  – number of experts,  $m$  – number of pedagogical conditions.

In our case  $S = 526$ ;  $n = 5$ ;  $m = 11$ .

$$\text{Then } W = \frac{12 \cdot 526}{11^2(5^3 - 5)} = 0,434.$$

The coefficient of concordance  $W = 0,434$  means that the agreement of the opinions of experts has an average degree, since the continuum of values of the concordance coefficient is in the range from 0 to 1: with the complete disagreement of the opinions of experts  $W = 0$ ; with the complete

unity of experts' opinions  $W = 1$ . Therefore, based on the value of the concordance coefficient  $W$ , it can be concluded that the experts' opinions are average consistent.

To assess the significance of the concordance coefficient  $W$ , the Pearson consistency criterion was used, according to which:

$$\chi^2 = \frac{12S}{nm(n+1)} = n(m-1)W$$

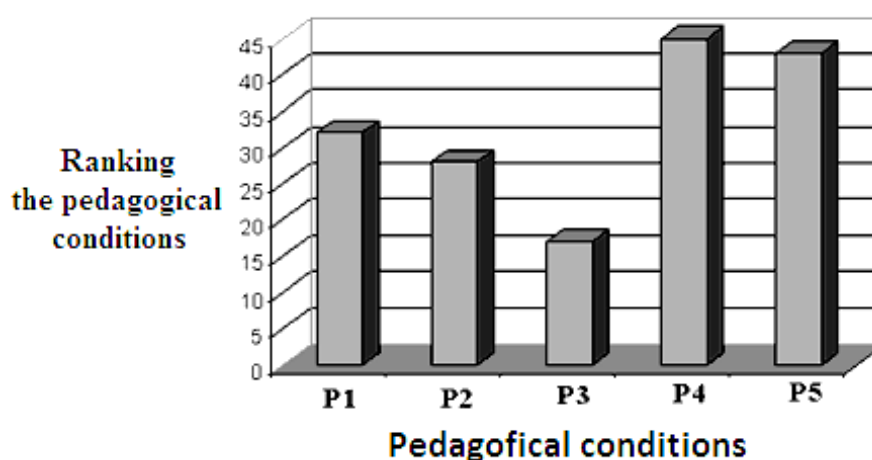
In our case

$$\chi^2 = 11(5-1) \cdot 0,434 = 19,10$$

Comparing the calculated  $\chi^2$  with the table value for the number of degrees of freedom  $k = n-1 = 10-1 = 9$  at the level of significance  $\alpha = 0,05$ , it can be noticed that the received  $\chi^2 = 19,10$ , while the table one is 16,92.

In our case  $\chi^2 > 16,92$ . It means that  $W = 0,434$  is not a random variable, and therefore the obtained results are logical, reliable and can be used in the further researching.

Thus, according to the experts, we have the following results of ranking the pedagogical conditions for developing creativity of future teachers, which are presented in Fig. 1:



**Fig. 1.** Ranking the pedagogical conditions for developing the creativity of future teachers.  
Source: created by the author

**Note:**

- purposeful developing personal creative qualities of students **(P1)**;
- creating the favourable educational environment, focused on developing the creativity of students of higher education **(P2)**;
- applying innovative teaching/learning technologies into professional training of future teachers **(P3)**;

- increasing the motivation for creative development and self-development of students **(P4)**;
- filling the theoretical, practical and scientific components of the professional training of future teachers with the content aimed at developing their creativity **(P5)**.

According to the results of ranking, we have a hierarchy of the pedagogical conditions for developing the creativity of future teachers (Table 5).

**Table 5.**  
*Ranks of pedagogical conditions for developing creativity*

Rank	Pedagogical condition
1	Applying innovative teaching/learning technologies in the professional training of future teachers <b>(P3)</b>
2	Designing favourable educational environment focused on developing creativity of higher education students <b>(P2)</b>
3	Purposeful developing personal creative qualities of students <b>(P1)</b>
4	Filling the theoretical and practical components of the professional training of future teachers with the content aimed at developing their creativity <b>(P5)</b>
5	Increasing the motivation for students' creative development and self-development <b>(P4)</b>

Source: created by the author

It should be noted that the pedagogical conditions selected by the experts effectively influence the process of developing the creativity of future teachers in the process of their professional training in the higher education institution.

### Conclusions

The effectiveness of the implementation of the system of purposeful development of the creativity of future teachers in the process of their professional training is possible provided that certain pedagogical conditions are observed, which will contribute to the organization of purposeful activities of all the participants of the educational process of the pedagogical institutions of higher education, aimed at solving the specified problem.

Selecting such pedagogical conditions was made in several stages. At the first stage, the expert group determined the system of the pedagogical conditions that would enable the effective process of developing the studied personality quality, based on the theoretical analysis of the defined problem and considerable own experience of pedagogical activities in higher education (15 pedagogical conditions were selected).

At the second stage, the 5 most important pedagogical conditions for developing creativity

of future teachers in the process of their professional training were selected: purposeful developing personal creative qualities of education students **(P1)**; creating the favourable educational environment, focused on developing creativity of students in higher education **(P2)**; applying innovative learning technologies in the professional training of future teachers **(P3)**; increasing the motivation for creative development and self-development of higher education students **(P4)**; filling the theoretical, practical and scientific components of the professional training of future teachers with the content aimed at developing their creativity **(P5)**.

At the third stage, ranking the five most important conditions took place, and the consistency of experts' opinions regarding ranking the studied pedagogical conditions was determined by calculating the concordance coefficient suggested by M. Kendell and B. Smith.

The fourth stage of selecting the pedagogical conditions – determining their ranks (application of innovative teaching/learning technologies in the professional training of future teachers **(P3)** – **rank 1**, creating the favourable educational environment focused on developing creativity of higher education students **(P2)** – **rank 2**, purposeful developing education students' personal creative qualities **(P1)** – **rank 3**, filling



the theoretical and practical components of the professional training of future teachers with the content aimed at developing their creativity (P5) – **rank 4**, increasing the motivation for the creative development and self-development of education students (P4) – **rank 5**).

The further insights into the research can be seen in substantiating the factors for developing creativity of future teachers, creating and implementing the system for developing creativity of future teachers in the educational process of the pedagogical university, the search for effective forms, methods and technologies of the specified process, etc.

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## Emotions and the archaic consciousness of man: a diachronic semantic reconstruction of the names of emotions in English

### Емоції та архаїчна свідомість людини: діахронічна семантична реконструкція імен емоцій в англійській мові

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Vakhovska Olha<sup>1</sup> <https://orcid.org/0000-0002-7720-0970>*What's in a name? A rose by any other name would smell as sweet*

William Shakespeare

#### Abstract

This paper works with the diachronic depth of concepts in national worldview, and is a piece of panchronic research that respects the stages in evolution of human consciousness, as it looks at diachronic depth of emotion concepts in English worldview, in the case of diachronic semantic reconstruction of the nouns fear, sadness, happiness, and serenity that in Modern English manifest the FEAR, SADNESS, HAPPINESS, and SERENITY concepts.

Etymons of the nouns were identified in Old English as *fær*, *hæp*, *sæd*, and in Old French as *serenité*. These etymons are words, and also are signs for certain phenomena on the map of archaic world represented in the mind; these signs were reconstructed via etymological analyses from the Proto-Indo-European archetypes *\*pēr-*, *\*kap-*, *\*sá-*, and *\*ksero-*. Next, the archaic images that came to motivate the words *fær*, *hæp*, *sæd*, and *serenité* at the time of creation were reconstructed and shown via etymological interpretations organized into matrices relative to sacred rituals of pagans in whose mind the world was represented with the help of images as symbols for certain phenomena of this world. Interpretations within each matrix unfold into a mythical story narrated with reference to symbolism of pagan rituals in the archaic worldview.

#### Анотація

У статті розмежовано поняття діахронічної глибини й діахронічного варіювання концептів у картині світу, й досліджено у панхронічній перспективі знако-символічні властивості слова з метою обґрунтувати доцільність такого розмежування з опертям на етапи еволюції людської свідомості.

У статті показано діахронічну глибину концептів емоцій в англійській картині світу за даними діахронічної семантичної реконструкції іменників *fear*, *sadness*, *happiness* та *serenity*, які в сучасній англійській мові вербалізують, відповідно, концепти СТРАХ, СУМ, ЩАСТЯ та СПОКІЙ, що є квантами структурованого знання про відповідні емоції, із розумінням того, що це знання має образну основу. Етимони іменників були встановлені як *fær*, *hæp*, *sæd* в давньоанглійській мові й як *serenité* в давньофранцузькій. Ці етимони - слова, а також знаки певних явищ на мапі архаїчного світу, репрезентованого у мисленні людини; ці знаки були реконструйовані шляхом етимологічного аналізу з протоіндоєвропейських архетипів *\*pēr-*, *\*kap-*, *\*sá-* та *\*ksero-*. Далі, архаїчні образи, які мотивували слова *fær*, *hæp*, *sæd* та *serenité* в момент створення, були реконструйовані шляхом множинної етимологічної інтерпретації, організованої у вигляді матриці відносно до священних ритуалів язичників, у чиєму мисленні світ був репрезентований за допомогою образів як символів певних явищ

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**Key words:** diachronic semantic reconstruction, emotion, mental image, sign, symbol.

## Introduction

This paper discusses the sign-symbolic nature of the word as an element of the linguistic worldview, with the understanding that sign-symbolic properties of the word emerge in evolutionary dynamics and are panchronic. The **case** this paper presents is a diachronic semantic reconstruction of emotion names in English: the nouns *fear*, *sadness*, *happiness*, and *serenity* that manifest in the language the FEAR, SADNESS, HAPPINESS, and SERENITY emotion concepts (Vakhovska, 2021) as ‘quanta of structured knowledge’ (Kubryakova, 2004) about the respective emotions. This paper argues for an image-bearing basis in this knowledge, extending its argument to account for the nature of words as signs and as symbols in the linguistic worldview.

The account draws in language, as **emotion names** are part of the linguistic worldview; the mind, as **emotion concepts** are part of the conceptual worldview; and the objective world, as **emotions** are given to humans as qualia in their subjective, phenomenal experiences of this world. Emotion concepts disperse through a four-dimensional emotion space (Scherer, 2005), and this paper singles out the four concepts that come each from one of the four regions within this space, marking up its opposite poles: FEAR is negative-active, SADNESS is negative-passive, HAPPINESS is positive-active, and SERENITY is positive-passive. The four concepts lend their names to a diachronic semantic reconstruction, and in this paper are treated as lexical meanings of these names in modern English.

The research uses (proto-)language data as it **aims** to reconstruct the structures of the archaic consciousness of man, exposing the interrelations that these structures develop diachronically and maintain synchronically, with the understanding that these interrelations trigger panchronic mechanisms of construal for particular linguistic worldviews that become formative for distinct national cultures (q.v. Korolyova, 2014; Vasko, 2019).

цього світу. Інтерпретації у кожній матриці розгортаються у міфічну історію, розказану з відсилкою до символізму язичницьких ритуалів в архаїчній картині світу.

**Ключові слова:** діахронічна семантична реконструкція, емоція, знак, ментальний образ, символ.

The theory of image-driven interpretations of words of language (Vakhovska, 2022a,b) forms the basis for the methodology of diachronic semantic reconstruction suited to analyzing **words as sign-symbols**. Analysis of this kind exposes and explains the various and unique ways of seeing and understanding the world by speakers of different languages, transcending the distinct cultures. Importantly, it shows exactly how different the speakers’ seeing and understanding of the world is across different languages, as long as one works with the speakers’ non-propositional (seeing the world) vs. propositional (understanding the world) thought manifested in words. Properties of the word as a sign are fixed causally by propositional thinking in humans, making up one’s understanding of the world; properties of the word as a symbol are caused by non-propositional thinking, which makes one’s view of the world. Sign-symbolic properties of the word determine its origin and evolution in **the worldview**, the latter acting as a prerequisite for the word to acquire its essential properties, and simultaneously emerging as the product of, and the environment for, this acquisition.

**Word interpretation** is a creative act of giving a meaning to a verbal sign and, vice versa, of manifesting a meaning via a verbal sign, whereby a mental image as a symbol is converted to the meaning of the word as a sign, and back: word interpretation as a meaning-making act is driven by mental images that represent in the human mind the phenomena of the experiential world, and are the symbols for these. This act is enabled by the mind’s representational content (Chalmers, 2004) owing to the peculiar embodiment of the human species. Word-image-word conversion is constitutive for the sign-symbolic nature of the word, and is actuated by a distinct (neuro)physiological mechanism in the human makeup that is panchronic. This mechanism orchestrates the visual and auditory zones in the brain, wiring the organs of perception (Kumar et al., 2022), as well as the deep and shallow layers in the mind (Kaup et al.,

2022), extending back beyond consciousness into the unconscious.

### Theoretical framework

#### The word as a sign-symbol in the linguistic worldview: on the panchronic mechanisms of meaning-making

The word bridges conceptual and linguistic worldviews, binding cognition and communication in humans (Kubryakova, 2004). Linguistic worldview makes up the part of conceptual worldview that is manifested by linguistic signs, a **sign** being a form that stands for something else understood as its meaning (Zhabotynska, 2010). Linguistic worldview is not the world it represents, as language generally interprets the world, construing **the symbolic space** within which speakers live, make sense of the world, and communicate this sense to others (Grace, 1987; cf. Lotman, 1992).

In linguistic semiosis, the mind maps the world, and the language maps the mind (Zhabotynska, 2012). As humans with the help of words take the world into linguistic possession (Kubryakova, 2004), the word as a sign becomes the instrument of this representational occupation, whereas the word as a symbol shows in what particular way this world has been taken hold of (Makovsky, 2012). A **symbol** is an image taken in the aspect of its significance, and also is a sign endowed with all the organicity of myth and with the inexhaustibility of image (Averintsev, 1962); any sign can have an infinite number of meanings, i.e. can be a symbol (Losev, 1982) that in a latent form contains all the possible manifestations of a thing (Losev, 1976), which is the reality for the symbol but only a possibility for the sign.

Word was one of the initial creations manifested to the world by the Deity; the word was created together with the fire, and was its symbol: cf. English *a word* < Proto-Indo-European *\*uer-* 'to burn; the sacred fire' > 'color, paint' > 'word' (Makovsky, 2012). Similarly to the fire, the word lit up the surrounding world, carving images in it: what humans saw in the light the word emitted became their worldview, the one that was unique in the beginning, and remains so now, as there are many peoples who populate the world, each with their peculiar view of this world. The first word was a symbol that had its outer form - graphic and phonic - in a sacred syncretism with its meaning, and in human evolution preceded the emergence of the word as a sign whose form and meaning are connected arbitrarily: this arbitrariness was developing gradually, as the

sacred syncretism was falling apart; the word as a symbol was coming to be the word as a sign, losing the images it first bore (ibid.).

Word as a symbol was a semiotic formula of a certain mythopoetic image (here, *poetic* is 'archaic, culturally salient') (Meletinsky, 1995). This formula was sacred, as it had the ritual function of uniting a tribe or a genus in the face of the Deity; this formula was magical, as in it the word form tabooed the word meaning, and vice versa: this taboo most often utilized a metaphor, whereby the image of an entity formed the basis for this entity's name (Makovsky, 2012), e.g. 'brown, shiny' in the Germanic archetype *\*beran-* 'bear' (Levitsky, 2010). **Pre-writing myth** in a peculiar way marked up the world, producing such a map of this world where each entity had its mark as a distinguishing word; cf. Genesis, 2:19-20.

The mythopoetic image that motivated the emergence of a word in its individual form into language is **the inner form** of this word (Potebnya, 1892), in a unique way showing how a thought presented itself to the man who thought this thought when naming the entity that emerged into his consciousness in cognizing the world (Vakhovska, 2022a). The inner form of a word is a panchronic phenomenon; it can veritably be reconstructed via etymological interpretation as **the etymological meaning** of this word (Korolyova, 2014), in contrast to this word's original meaning reconstructed via etymological analysis. Germanic *\*beran-*, e.g., has 'bear' as its original meaning and 'brown, shiny' as its etymological meaning, or **sense**, in Frege's parlance (Frege, 1892). On that, just as thinking must be distinguished from consciousness, sense (*Sinn*, in German) must be distinguished from reference (*Bedeutung*) as the two ways that a word may have meaning.

To make sense of the world is to cognize and interpret this world, viewing it from a particular perspective, which is invariably subjective and invites intellectual development, guiding acquisition of world knowledge; cf. Russian *разум* 'the mind' as, literally, the mind that happens once, *раз ум*, and *Homo sapiens* is *человек разумный*; and also *смысл* 'sense' as, literally, something that comes together with a thought, *с мыслью*: this something is a mental image, since on the evolutionary view it is from images that human intellectual development begins both phylo- and ontogenetically (Vakhovska, & Jusuk, 2021). In acts of verbal communication, senses are converted into meanings in the speaker's mind, and meanings



are re-converted into senses in the listener's mind (Bondarko, 1978), which in principle is the conversion of a mental image into a (set of) proposition(s), and back (Vakhovska, 2022b).

As one and the same meaning can have several senses that 'show' it differently, multiple etymological interpretations fit into a **matrix** of etymological relativity (Toporov, 1960; Makovsky, 2004, p. 6), whereby the etymologist intuitively chooses to interpret words of language relative to certain cultural phenomena rather than others (Levitsky, 2010, p. 33). The etymologist 'sees' with the mind's eye the mythopoetic images that came to motivate the words at the time of creation. These images steer the diachronic semantic reconstruction, and hold the respective matrix together; they attend to the semantic syncretism of this matrix, effecting a chain of semantic transformations (Levitsky, 2010, p. 23-39) within this single semantic complex that yet stays diffuse (Trubachev, 1980; cf. Zaliznyak, 2006).

### The diachronic depth of concepts in the worldview

This paper looks at the word in its evolutionary dynamics, and argues that from the panchronic perspective a fundamental distinction must be drawn between the terms **diachronic depth** (Vasko, 2019) and **diachronic variation** (Shevchenko, 2000) that have different reference, undergirding the cognitive historical (Korolyova, 2014) and historical cognitive (Winters, Tissari & Allan, 2010) strands of diachronic research in linguistics.

This distinction must respect the stages in **the evolution of human consciousness** (Gebser, 1986), and be drawn in terms of **the archaic image** as a fact of the archaic - first paradisaical, then magical, and later mythical - consciousness, and of **the concept** (and lexical meaning as the concept a word captures (Kubryakova, 2004)) as a fact of modern - mental - consciousness. The archaic image is the diachronic depth of the concept: this image is a structure of non-propositional thought, and, in its different hypostases, is the inner form, the etymological meaning, and the sense of the word that names this concept. The concept is a structure of propositional thought, and as such is given to diachronic variation in the worldview it is part of.

Diachronic depth of a concept is the starting point of the diachronic variation of this concept, and also the program for this variation, as the archaic image becomes the seed from which this

concept as a (set of) mental representation(s) develops in the soil of a particular culture (Vakhovska, & Isaienko, 2021), which sides up with the assumption that even the most apparently nonimage-schematic concepts have, as a rule, image-schemas at their basis (Kövecses, 2002, p. 37-38). Image-schemas find their use in etymological research, too, when one, e.g., seeks to reveal regularities in semantic change over time (Győri, & Hegedűs, 2012), with the understanding that this change is upheld by universal mechanisms of human cognition drawing upon images.

Archaic images at the diachronic depth of emotion concepts in the English worldview are facts of **mythical consciousness** in humans. The two dimensions of this consciousness complete the circle symbolizing man's discovery of cycles of natural phenomena, on the one hand, and his emergent awareness of soul, with his reflections on the experience of those phenomena, on the other, for which see Gebser (1986) who emphasizes that it is mythologies with their inherent polarity that gave a coherence to the consciousness of man. To J. Gebser, mythical consciousness fuses together in **stories** both things as phenomena and humans as experiencers of these phenomena. Mythical stories of human emotions are narrated below (cf. Vakhovska, 2022a, p. 183).

### Methodology

The exploration this paper presents took two stages. First, the etymons of the Modern English nouns *fear*, *happiness*, *sadness*, and *serenity* were respectively identified in Old English as *fær*, *hæp*, *sæd*, and in Old French as *serenité*. These etymons by their nature are words, and also are **signs** for the respective phenomena on the map of the archaic world represented in the human mind; these signs were reconstructed via **etymological analyses** from the Proto-Indo-European roots *\*pēr-*, *\*kap-*, *\*sá-*, and *\*ksero-* that are the archetypes of the words.

Second, the archaic images that came to motivate the words *fær*, *hæp*, *sæd*, and *serenité* at the moment of their creation were reconstructed and then shown, which was achieved via **etymological interpretations** organized into matrices relative to the sacred rituals of pagans in whose mind the world was represented with the help of images as **symbols** for the respective phenomena of this world. Interpretations within each matrix unfold into a story narrated with reference to the symbolism of sacred rituals in the archaic worldview. Each matrix suggests

formal and semantic parallels between Old English and the other genetically (un)related languages, considered both semasiologically and onomasiologically so that a coherence is given to the consciousness of man whose mind's eye was directed at the archaic images of the four emotions.

At each of the stages, etymological works by Miklosich (1886), Brugmann (1892), Berneker (1908-1913), Brückner (1927), Preobrazhensky (1959), Vasmer (1964-1973), Onions (1966), Melnichuk (1982), Makovsky (1992, 1996, 2000), Levitsky (2010), and Sementsov (2017) were used in combination to reconstruct the original and the etymological meanings of the words *fær*, *hæp*, *sæd*, and *serenité*, as well as of the Proto-Indo-European roots *\*pēr-*, *\*kap-*, *\*sá-*, and *\*ksero-* that these words, and their cognates, derive from.

## Results and discussion

### The word *fear* in English, and its matrix of etymological interpretation

**Old English** *fær* 'danger, peril; sudden attack' ascends through Proto-Germanic *\*feraz* 'danger' to the **Proto-Indo-European root** *\*pēr-* meaning 'to beat' > 'to move.' This is one's movement away from the center as the place of their tribe's settlement around the sacred fire to the periphery, into the realm of the unknown.

*Fær* resonates with the fundamental archaic opposition of center to periphery, drawing on the circle of life: everything in the center is divine and benign as it brings happiness and health, while everything on the periphery is harmful and dangerous as it causes calamity and death; cf. English *fear* and *far*, Gothic *fera* 'periphery' and *fairina* 'guilt, fault,' and Old Indo-Aryan *pāra* 'far; foreign, hostile.'

The meaning 'to beat' emerges into the archaic man's fear as the meaning 'to move fast;' cf. Latin *pavor* 'fear' but *pavire* 'to beat,' Old English *bregdan* 'to move' and *broga* 'fear.' This fast movement is in running: cf. Greek *φόβος* 'fear' and *φεβουαι* 'to run,' and also Ukrainian *бізму* 'to run,' *буму* 'to beat,' and German *biegen* 'to bend.' One who is in fear runs, and their fear is a force that drives and chases them; cf. Gothic *agis* 'fear' and *ogjan* 'to scare,' and Indo-European *\*ag-* 'to chase.' Fear attacks and beats one; cf. Lithuanian *baisa* 'fearful' and *bijoti(s)* 'to be afraid' but English *to beat*. The root *\*per-* develops as 'to beat > to have effect on one's mind or heart;' cf. English *depress*. Fear

does have a strong effect, striking one with pangs.

The meaning 'to beat / to cut' generates in Indo-European words their meaning 'to burn; to shine, to sparkle;' cf. Indo-European *\*bhau-* 'to beat' and *\*bha-* 'to shine.' One's eyes sparkle, and there is fear in them. Just as one's running cuts the space, so does one's seeing; cf. Russian *сесть* 'to cut > to see.' One's eyes emit light (cf. Irish *suil* 'an eye' but Latin *sol* 'the sun') and are the sharp stones of the face that cut the space and dissect the darkness; cf. Russian *глаз* 'an eye' but Polish *glaz* 'a stone.' The light that the eye symbolizes is intimately connected with the sound, as miracles of the initial creation. One's sound when in fear is not a song that flows like a fluid, but a scream that cuts and pierces the air; cf. Indo-European *\*bhau-* 'to beat / to cut' and *\*bha-* 'to make sounds.'

One feels fear moving away from the place of their tribe's settlement ('us') to places where other tribes ('them') settle. The people of these other tribes set traps and lie in wait, concealed in the forest; cf. English *ambush* and West Germanic *\*busk* 'bush, thicket.' One is afraid of attack and of being (b)eaten, and also of wild animals. Other tribes are bad and deceitful; one is afraid of getting into their pursuit, so one moves impetuously with speed, and is disturbed and restless; cf. Lithuanian *mesti* 'to throw' and Ukrainian *метатися* 'to rush (about) as if throwing oneself from place to place; to be disturbed and confused;' cf. also Latin *modus*, German *Mut*, and English *mood* 'emotion.' Grazing and herding livestock, feeding and driving cattle were particularly dangerous; cf. Indo-European *\*pā-* 'to feed, to graze,' Gothic *faran* 'to move places,' German *Farre* 'ox' but Russian *опасность* 'danger,' English *graze* but Lithuanian *grasinti* 'to threaten.'

One apprehends the danger but is not able to see its immediate source as of yet; cf. Latin *metus* 'fear' and Lithuanian *matyti* 'to see.' One's eyes sharpen but the vision may apparently mislead them; cf. *Fear has big eyes*. One starts back and recoils from objects; cf. Indo-European *\*elk-* 'to move > to recoil.' This compares to recoiling from searing fire; cf. Anglo-Saxon *fȳr* 'fire' and *fyrstu* 'fright, fear.' One jumps up in fear; cf. German *schrecken* 'to jump up > to frighten.'

### The word *happiness* in English, and its matrix of etymological interpretation

**Old English** *hæp* 'luck, fortune' ascends through Proto-Germanic *\*happq* 'convenience >

happiness' to the **Proto-Indo-European root** *\*kap-* meaning 'to bend' > 'to move.' This is one's movement in a ritual of worship when one bows in veneration of the Deity (cf. Persian *namas* 'worship; prayer' and *namidan* 'to lean over; to bend in a particular direction'), their arms and legs bending in a dance of communication with the Deity. This worship is a reverent conversation with the Deity that determines the bending of one's fate as their path in life.

Bending - a symbol of the masculine (bent outwards) and of the feminine (bent inwards) in their unity - was taken as a magical act that could cause the good as much as the evil; cf. Serbo-Croatian *коб* 'a good sign' but Bulgarian *коба* 'a bad sign.' Bending preceded the initial creation and was prerequisite to all the phenomena of life. A phenomenon is a noumenon, or a thing-in-itself, as this thing appears to a conscious subject and is construed by their mind; cf. Latin *numen* 'a deity.' Noumena *per se* are inaccessible to human experience; phenomena are given in experience but have their immediate basis and cause in noumena (Kipfer, 2022), for which bending apparently was a manifestation.

The thing manifested by the Deity from within the emptiness to the world was a symbol of the supernatural power of the Deity; cf. Old Gaelic *daingen* 'strong.' This manifestation marked the beginning of life followed by death; cf. Lithuanian *tiketi* 'to happen' and Gothic *peihs* 'time; eternity (as timelessness).' The Deity gave human creatures their fates; one's fate compared to a path whose curves bend; cf. English *happen* 'path in the woods.' Fortune-tellers saw one's destined time and order of events in life, and thus seeing was knowing; cf. English *hep* 'knowledgeable' but Russian *внезапно* 'suddenly.' One's fate could then be told by looking at the intestines of sacrificial animals: intestines bent in a particular way, their curves likened to flames.

The archaic man's happiness emerged in sacred acts of awe and veneration in the face of the Deity to Whom a sacrifice was offered. Happiness was in one's communion with the Deity when offering a sacrifice and experiencing the ecstatic religious rapture that followed; cf. Old English *sæl* 'happy' and Gothic *saljan* 'to offer a sacrifice.' The sacrifice, when taken by the Deity, delivered one from woes and mishaps, and also tied up evil spells. One's happiness was in acts performed at the sacred fire; cf. Latin *\*go-* 'to bend' but *\*gau-* 'to rejoice' as in *gaudeo* 'I have joy;' Indo-European *\*per-* 'to beat' but

*\*prai-* 'a merry mood' as in German *freuen* 'to celebrate,' and in one's awareness of deliverance by sacrificing; cf. Latin *vitulus* 'calf' but *vitulor* 'to have joy,' and also *ovis* 'sheep' but *ovare* 'to rejoice.'

All the people of the tribe took part in worship; cf. Old English *hæpic* 'equal.' Worshipers were naked, which was sacral; cf. Indo-European *\*bhel-* 'naked > shining, full of light > saint,' and also Russian *гладкий* 'sleek' but English *glad*. Intentional self-injuries were believed to purify, bringing one closer to the Deity. Worshipers drank intoxicating drinks made of peculiar herbs and mushrooms; cf. Indo-European *\*meu-* 'wet; soaked' but Old Indo-Aryan *mōdate* 'merry.' Rapid movements of the fire as much as those of the people around it caused rupture; cf. Indo-European *\*uei-* 'to move' and Avestan *vōi* 'to make happy,' Ukrainian *pyh* 'movement' and Old Indo-Aryan *ruc* 'to burn.'

One felt happiness knowing that good performance in the worship determined good fate; cf. Indo-European *\*lek-/luk-* 'to bend' and its reflexes in German *Glück* 'happiness,' English *luck*, and Russian *лукать* 'to bend,' *случиться* 'to happen,' *получиться* 'to work out well,' and *случай* 'an occasion;' cf. also Russian *луч* 'a ray of sunlight.'

### The word *sadness* in English, and its matrix of etymological interpretation

Old English *sæd* 'sated, full, having had one's fill (of food, drink, activity, etc.), weary of' ascends through Proto-Germanic *\*sathaz* 'full, sated' to the **Proto-Indo-European root** *\*seto-* < *\*sá-* 'to satisfy; satisfied; to satiate; satiated, full.' Syncretic meanings that emerge into the archaic man's sadness are 'to bend > to tie' > '(not) to move.' This is the movement of the water that comes from the lower world; this water bends as it ties one up, filling them in. One feels heavy and bad, and does not move.

Movement emerges into sadness as one's immovability because of being tied up by water: the water bends before it ties one up; one is filled in with a thick, sticky liquid to one's brim; cf. Old Indo-Aryan *tanakti* 'to clot' and Lithuanian *tankus* 'thick (of liquids);' cf. also Indo-European *\*ker-/kes-* whose meaning (a) 'to bend / to cut' develops via enantiosemia into 'solid, hard' (i.e. 'unbending, difficult to cut'); and (b) 'to beat' develops as 'to break up, to crush, to mill' > 'soil, ground;' cf. typologically English *grind* and *ground*; cf. Latin *mundus* 'the world' but Greek *μυδος* 'humidity;' Latin *humus*

‘soil’ but English *humid*. The meaning ‘earth, soil, ground’ develops a semantic shift as ‘low;’ cf. Latin *humus* ‘earth, soil’ but *humilis* ‘low.’

Indo-European words for perception (*to believe, to hope, to feel*, etc.) in a lot of cases derive from etymons meaning ‘liquid,’ and correlate with words that denote human internal organs; cf. English *to feel* but Indo-European *\*pel-* ‘liquid;’ Latin *sentire* ‘to feel’ but Old English *sead* ‘a sea.’ In the archaic anthropomorphic model of the Universe, the human body is a microcosm: its organs are containers for the world-mind and seats for the Deity; cf. Latvian *just* ‘to feel’ but Old English *eosen* ‘an intestine.’ The meaning ‘liquid, fluid; juice’ develops from the meaning ‘to beat > to smash, to crush > moisture.’ In archaic view, one’s consciousness, with a clear awareness of the surrounding world, depended on the dryness of the air one inhaled: dryness was beneficial for the mind; cf. German *Tropfen* ‘drop’ but *Tropf* ‘fool.’ Humans by virtue of intellect were distinguished from animals that inhale air from the ground and eat wet food.

Pagans believed that when one is asleep or taken by afflictions of the body or soul, one’s vital organs shrink and contract, exuding a liquid; cf. Old English *mætan* ‘to sleep’ but Latin *madeo* ‘to be wet.’ On that, illnesses were connected with bad juices of the organism; cf. French *goutte* ‘a drop’ but English *gout*. One’s sadness apparently was caused by secretions of the spleen; cf. *spleen* ‘melancholy.’

Water generally equalled sound as both flow, and was symbolized by the blue color: blue as the last chakra of the sacred fire meant vanishing and death as when one transitions into a different state. Movement got lost in the blue color, as if drowning and dissolving in it. Blue was the feminine, and symbolized the unconscious; cf. Indo-European *\*kel-* ‘liquid’ but Tocharian A *kuli* ‘a woman;’ German *blau sein* ‘to lose consciousness;’ English *to be in the blues*. The word *water* ascends to Proto-Indo-European *\*aw-* ‘to weave < to bend’ as water was a wickerwork: water was bending and weaving (cf. Indo-European *\*seu-* ‘liquid’ and ‘to bend, to weave’), and formed a net, tying up one’s vitality.

### The word *serenity* in English, and its matrix of etymological interpretation

English *serenity* ascends through Old French *serenité* and Latin *serenitatem* ‘clearness, serenity’ < *serenus* ‘(of weather) peaceful, calm, clear, unclouded; (of people) cheerful, glad,

tranquil’ to **Proto-Indo-European** *\*ksero-* ‘dry.’ Syncretic meanings that emerge into the archaic man’s serenity are **‘to bend > to put together’ > ‘(not) to move.’** This is the movement of the fire that comes from the upper world; this fire bends as its flames curve, putting one together and filling them in. One feels light and good, and does not move.

Serenity comes after the sacred ritual of worship when one has communicated with the Deity; cf. Latin *pax* ‘peace of mind’ < Indo-European *\*pak-* ‘to connect;’ cf. also *\*pek-* ‘to rejoice’ as in Gothic *ga-fehaba* ‘good < clean.’ This is a pleasant state; one feels full of light and clean; cf. ‘a fire’ > ‘to purify’ as was the case with ritual purification of meat; cf. English *flesh* and *flash*. This state is in one’s heart and soul; cf. Indo-European *\*uen-* ‘to relish, to enjoy’ and *\*an-* ‘a soul.’ In pagan beliefs, the human body had three microcosmic centers of vitality: the brain, the heart, and the genitals; cf. English *heart* but Old English *herþan* ‘the scrotum’ and Indo-European *\*ker-* ‘head’ as in Latin *cerebrum* ‘the brain.’ The heart was the knot connecting the human creature and the Deity; cf. Indo-European *\*ker-* ‘to bind.’ The heart was the symbol for the sun (cf. Old Norse *hróðr* ‘the sun’) and divine creation (cf. Avestan *keretis* ‘completion’), and was seat for the world-mind; cf. Tocharian A *kärs* ‘to know.’ It is the heart that the divine movement was in; cf. Ossetian *coeryn* ‘to live.’ The heart contained one’s energy for life and change, and compared to the macrocosmic cup containing the soul; cf. German *Karr* ‘a vessel’ and Indo-European *\*ker-* ‘to grow; to create,’ as in Latin *creare*.

The soul is given by the Deity to all living creatures, or animals, and, to C.G. Jung, is the anima. One felt serenity when eating (meat) in sacred worship, which is enjoyable and pleasant; cf. Old High German *fehôn* ‘to eat, to feast on > to relish;’ Russian *mpeōa* ‘a sacrifice’ but *mpeōyxa* ‘tripe, offal’ and *ympeōa* ‘a maw.’ The meaning ‘food’ developed on the basis of ‘to bend;’ cf. Indo-European *\*ped-* ‘to bend’ but English *food*; Indo-European *\*keb-* ‘to bend’ but Latin *cibus* ‘food.’ Eating and swallowing were phallic, as in eating one was taking in a part of the world created by the Deity, i.e. the Deity was entering the human creature; cf. Russian *ecmь* ‘to eat’ and *emь* ‘to copulate.’ In pagan beliefs, a man in a coitus fed a woman on his semen just as the divine phallus fed the Mother Earth. Eating was one’s unity, i.e. a coitus, with the Deity and with the sacred fire that symbolized Him.

Indo-European words meaning ‘meat’ correlate with the meaning ‘clean;’ cf. Old Norse *horund*



'meat' but Gothic *hrains* 'clean.' Meat encapsulated the soul (cf. English *flesh* but German *Flasche* 'a bottle'; Latin *caro* 'meat' but German *Karr* 'a vessel'), and was the sacrifice to the Deity. Indo-European *\*ed-* 'to eat, to feed on' has its reflexes in Old English *ād* 'fire,' as in archaic beliefs the sacred fire ate the sacrifice; cf. Indo-European *\*gher-* 'to burn' and 'to eat.' Light of the fire, vigorous and erratic motion of its flames made worshipers ecstatic; cf. Indo-European *\*bhel-* 'to burn, to shine' but English *blind*; German *Freude* 'joy' but Czech *prudeti* 'to burn;' cf. also *\*bhel-* 'to burn, to shine' but *\*bher-* 'to move fast.' The color chakras of the sacred fire formed a staircase to heaven; one was going up the stairs: the red chakra of ecstatic joy was followed by the yellow chakra of serenity. One's rough activity at the fire gave way to passion and purification (red), and to the passive state of bliss (yellow) that followed in the religious, and sexual, rupture.

Yellow color was unearthly, ethereal, and marked up the divine world; cf. Indo-European *\*ghel-* 'to burn, to shine' > German *Gold* 'gold' and *gelb* 'yellow.' Serenity is a gold-colored state. Gold was the symbol of the Sun and of the heart (cf. Latin *aurum* 'gold' and *auriculum* 'the ventricle'), and stood for the world-mind. Gold meant ecstasy, union with the Deity, and the unconscious; cf. Icelandic *orar* 'sedated; drugged.' In the state of serenity, one apprehended eternity and the divine Existence, and lost sense of time; cf. Latin *aurum* 'gold' and Indo-European *\*yer-* 'time.' In Indo-European words, the meanings 'gold' and 'bowels; stomach, belly; intestines, guts' correlate, as the abdomen was the microcosmic seat of fire and soul; cf. English *gold* but Ukrainian *жолудок* 'the stomach' < Indo-European *\*gheldh-* 'to be hungry; to desire' < *\*gher-/ghel-* 'to burn.' Fire was the soul.

One is filled with the (light of the) sacred fire, and is put together by its flames, as these tie up the magical knots ('to bend' > 'to make / break a knot') that restore one, and rope up the evil forces, delivering one of woes; cf. Indo-European *\*sneu-* 'to tie up, to bind' and German *neu* 'new < young.' The meaning 'to burn' < 'to bend' in Indo-European often came to generate the meaning 'whole, intact,' which is a frequent motif in archaic fairy-tales, too, when a hero goes through fire to regain life and health (Propp, 2001), as fire was a wickerwork; cf. Latin *totus* 'all' but Tocharian A *tute* 'yellow' (the highest chakra of the sacred fire).

## Conclusion

This paper has exposed via a diachronic semantic reconstruction the image-bearing basis in the knowledge about fear, sadness, happiness, and serenity shared among speakers of English. This basis is the archaic images of movement, and absence of movement, that form the diachronic depths of the respective emotion concepts in the English worldview.

Worldviews are 'real stories, but what matters is how these stories are told, what emerges as the symbolic, cultural realities relevant to speakers' (Grace, 1987, p. 179). In this paper, the stories of the four human emotions were narrated with reference to the archaic symbolism of pagan rituals. The **prospect** of this paper is in narrating the stories of human emotions manifested in the other languages of the world.

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## Personal data protection on the internet under martial law: The case of Ukraine

### Захист персональних даних в Інтернеті в умовах воєнного стану: приклад України

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#### Abstract


The *objective* of this study is to determine the threats to the security of personal data on the Internet as a component of the right to privacy in the conditions of martial law, characteristics and prospects of such legal data protection in the context of Ukraine. *Methodology*: The study used a set of practical methods, namely: formal and legal, comparative forecasting. These methods were used to examine and classify threats to the security of personal data on the Internet under martial law conditions. *Results*: The study identified a number of threats to the security of personal data on the Internet under martial law conditions, including: unauthorized access to personal data, alteration or destruction of personal data, disclosure of personal data to third parties without the consent of the data owner, use of personal data for unlawful purposes. The study also examined factors that complicate data protection during cross-border sharing, including: differences in data protection


#### Анотація


*Метою* дослідження є визначення загроз безпеці персональних даних в мережі Інтернет як складової права на приватність в умовах воєнного стану, особливостей та перспектив такого правового захисту даних в умовах України. *Методологія*: У дослідженні використовувався комплекс практичних методів, а саме: формально-правовий, порівняльно-прогностичний. Ці методи були використані для вивчення та класифікації загроз безпеці персональних даних в Інтернеті в умовах воєнного стану. *Результати*: Дослідження виявило низку загроз безпеці персональних даних в Інтернеті в умовах воєнного стану, серед яких: несанкціонований доступ до персональних даних, зміна або знищення персональних даних, розголошення персональних даних третім особам без згоди власника даних, використання персональних даних у протиправних цілях. Дослідження також вивчало фактори, які ускладнюють

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laws and regulations between countries, lack of cooperation between governments on data protection, the complexity of cross-border data exchange processes. *Conclusions:* The findings of the study suggest that increasing the protection of personal data under martial law conditions requires a comprehensive approach that includes regulatory, organizational and communication measures. In particular, it is necessary to: strengthen data protection legislation under martial law conditions, develop cooperation mechanisms between governments on data protection, promote data protection education and awareness among citizens and organizations.

**Keywords:** right to privacy, personal data, Internet protection, martial law, legal regulation.

## Introduction

Back in the early 80s of the 20th century, the urgency of introducing legal mechanisms for privacy protection became evident when the automated processing of personal data became widespread. The ground for this requirement is considered to be the Convention of the Council of Europe on the protection of individuals in connection with automated processing of personal data (GIP Digital Watch, n.d.). Further, a new stage was the Charter of Fundamental Rights of the EU, Article 8 of which set out the right to the protection of personal data as a right that belongs to every person and the need to create an independent body to comply with the rules of its protection (European Union, 2012). With that in mind, it was recognized that the ECtHR should also play an important role (Eskens, 2020, 1118).

Subsequently, independent rules on data protection and processing were adopted in the EU. Accordingly, the main data protection instruments in the EU are considered to be as follows: the General Data Protection Regulation, the Law Enforcement Directive and the ePrivacy Directive. That being said, the Regulation on data protection of EU institutions, bodies, offices and agencies was adopted for the processing of personal data, which was established as the basis for the work of EU institutions when personal data are processed (Jørgensen, 2019, 270; European Commission, 2022, 3).

Notably, up to date privacy, data protection and security of systems, networks and data are

захист даних під час транскордонного обміну даними, зокрема: відмінності в законах і нормативних актах щодо захисту даних між країнами, відсутність співпраці між урядами щодо захисту даних, складність процесів транскордонного обміну даними. *Висновки.* Результати дослідження свідчать про те, що підвищення захисту персональних даних в умовах воєнного стану потребує комплексного підходу, який включає нормативні, організаційні та комунікаційні заходи. Зокрема, необхідно: посилити законодавство про захист даних в умовах воєнного стану, розробити механізми співпраці між урядами щодо захисту даних, сприяти освіті та обізнаності громадян та організацій з питань захисту даних.

**Ключові слова:** право на приватність, персональні дані, захист в мережі Інтернет, воєнний стан, правове регулювання.

interdependent phenomena. On the other hand, legal framework is not always adapted to modern computer technologies (Clifford, 2014; Hobokena van & Fathaigh, 2021). At the same time, the development of artificial intelligence gives rise to a wide array of issues related to cyber security. Given the above, the adoption of normative acts in the field of cyber security overall should contribute to the reduction of threats (Mendoza, 2017).

However, the regulation of information security, cyber security, and network security basically does not affect national security issues (Azfar et al., 2018). Accordingly, the protection of personal data on the Internet in the conditions of martial law in rare cases becomes the subject of a scholarly inquiry. From this perspective, of certain relevance to the abovementioned context are intelligence on the peculiarities of working with personal data of persons who are cared for by the International Organization for Migration (2010), following their relocation as a result of armed conflicts.

Notably, all professional and normative regulatory materials are considered to be applicable, although they either relate to peacetime or focus on victims of armed conflict. In the conditions of martial law, an array of threats to the security of personal data and the range of vulnerable persons are more extensive. Martial law creates a new reality in which personal data requires increased protection.

One of the vivid examples that emphasize the need for increased attention to the protection of personal data on the Internet in the conditions of martial law is the situation that has developed today in Ukraine. The experience of the war in Ukraine testifies to the active use of the information space to harm the national security and defense capability of the country as a whole, as well as to commit cybercrimes against individuals. Particularly important in this context is the study of the specifics of the legal mechanism for the protection of personal data on the Internet in the conditions of martial law in the country, as well as the formation of a list of directions for improving such a mechanism.

Hence, the argument in favor of conducting an analysis of the status quo and prospects of the legal mechanism for personal data protection on the Internet in the conditions of martial law is of considerable relevance. From this perspective, it is extremely salient both for Ukraine and for the partners of our state.

### **Purpose**

The purpose of this study is to distinguish the features and prospects for enhancing the legal protection of personal data on the Internet under martial law. In order to achieve it, the following tasks have been set: a) to identify the significance of the right to the protection of personal data in the right to privacy; b) to determine the components of legal mechanism of personal data protection; c) to identify the specifics and set out the classification of the principal threats to the security of personal data on the Internet in the conditions of martial law (using the example of Ukraine); d) to outline the peculiarities of legal protection of personal data in the conditions of martial law and the prospects for improving such protection.

### **Literature Review**

Further research on the outlined topic requires clarification of the basic concepts. Given the choice of Ukraine as the main object of the study, it is proposed to define in accordance with the country's current legislation. So, it is worth outlining the essence of the following key terms:

Confidential information is data, access to which is limited to an individual or legal entity, with the exception of subjects of authority, and which can be distributed in the order determined by them at their will in accordance with the conditions stipulated by them (Law No. 2939-VI, 2023a).

The protection and processing of personal data consists, first of all, of the protection of the fundamental rights and freedoms of a person and a citizen (in particular, such as the right to non-interference in personal life) in connection with the processing of personal data (Law of Ukraine No. 2297-VI, 2010).

Martial law consists of the introduction of a special legal regime in Ukraine or in certain areas of the country in case of armed aggression or threat of attack. Such a regime, among other things, provides for a temporary restriction of the constitutional rights and freedoms of a person and a citizen, as well as the rights and legitimate interests of legal entities caused by a threat (Law No. 389-VIII, 2023b).

In addition, for a better understanding of the subject of research, it is important to outline the range of key threats to the security of personal data on the Internet. They include:

- unauthorized access, processing and publication – involves illegal actions aimed at obtaining access to personal data or their processing and publication without the permission of the owner;
- inadequate data protection by organizations processing personal data, as well as inadequate data security during transmission;
- storage of data beyond the stipulated terms (violation of storage terms);
- cross-border exchange that does not meet the requirements of Ukrainian legislation, etc.

In scholarly research into personal data protection, the sequence as follows can be observed: the right to protect personal data on the Internet as a component of the right to privacy - the legal mechanism for protecting such data - the specifics of the principal threats to the security of personal data on the Internet under martial law - the features of enhancing the legal protection of personal data.

1. Research into the relationship between privacy and data protection yielded the findings that these are two interrelated issues of Internet management (GIP Digital Watch, n.d.). Although the definition of personal data was standardized in international documents a long time ago (OECD Legal Instruments, 1980; European Union, 2012), the present-day classification of the data requires a thorough clarification of the personal data concept due to the emphasis laid on the personal interest of the subject



who is affected by their operation (Yuming, 2019, 95).

2. An important aspect of understanding the legal mechanism for the protection of personal data on the Internet is the vision of threats to their security, such as follows: a) threats in the business sphere, owing to the fact that personal data comprises both a new type of resource (Yuming, 2019, 94, 95) as well as an element of interaction with customers (Urquhart et al., 2018, 317), who may be abused by companies (UN General Assembly, 2013); b) threats to freedom of information and expression of opinion (Farinpour, 2021, 368); c) cybercrime (Bentotahewa et al., 2022, 14); d) threats related to artificial intelligence (GIP Digital Watch, n.d.; Pollicino, 2021).

The legal mechanism of personal data protection on the Internet is in itself a complex phenomenon, which encompasses a regulatory framework, a subject, an operator and a data controller with a predefined range of their rights, obligations and liability for violations (OECD Legal Instruments, 1980; Law of Ukraine No. 2297-VI, 2010; Yuming, 2019). That being said, experts underline the utmost relevance of regulatory support (Kaurin, 2019, 2; Bentotahewa et al., 2022, 3). On the other hand, the leading role of the European legal field is recognized (McKay, 2018), attention is drawn to the practice of the ECtHR regarding the protection of personal data (Council of Bars & Law Societies of Europe, 2019, 7; Hörnle, 2019), which contributed to the reform of the legal mechanism of such protection in EU member states (López, 2022).

Despite their rigid character, European standards have become a reference point for the commercial legislation of other countries, such as for instance, Britain and Japan (Bentotahewa et al., 2022, 4). Accordingly, the EU law developed to be a global regulator (Hadjiyianni, 2021), which enabled international transfers of personal data (European Commission, 2022, 9).

The USA elaborated their own approach to personal data protection. On the one hand, it is characterized by certain features such as a greater involvement of the private sector and self-regulation opportunities, and on the other, in the differentiation of confidentiality rules for each sector of the economy. Still, it should be mentioned that this approach allows finding a balance with European economic partners and ensuring the needs of the national security sector (Mendoza, 2017; GIP Digital Watch, n.d.). Using

the said approach would make it possible to operate with the wide bulk of information collected by special services to combat crimes (Zhalimas, 2019, 82).

However, certain problems are inherent in each of the aforementioned approaches, in particular, as follows:

- the inconsistencies of legal regulation. For the EU, these are internal (between member states) and external ones (between the EU and third countries) (Hörnle, 2019);
  - the lack of balance between the state and the private sector (United Nations, 2010, 4; Mendoza, 2017; Hobokena van & Fathaigh, 2021);
  - the choice between economic incentives to protect personal data and the use of considerable fines (McKay, 2018; GDPR.EU, 2018; Singh, 2023).
3. The specifics of the principal threats to personal data security on the Internet in the conditions of martial law emerge from the specifics of such a state. It is a consequence of the most significant threats to national security in the form of an actual or potential armed conflict (Martial Law). What is more, the major problem is the difficulty of finding a balance between private interests and national security, because the situation may justify stricter restrictions on the right to privacy (Council of Europe, 2006; Bentotahewa et al., 2022, 15). The interpretation of this issue can be considered such a threat as the imperfection of normative regulation and the possible abuse of power by state bodies (Christakis & Bouslimani, 2021). Furthermore, Ukraine's experience has shown the relevance of such threats as cyber attacks and hacking by the enemy. In sum, cybercrime during modern armed conflict is currently gaining in its importance (Veselovska et al., 2022, 86).
  4. Although experts do not address the specifics of the legal mechanism for personal data protection on the Internet in the conditions of martial law, certain conclusions can nevertheless be drawn from the existing proposals for enhancing the protection of such data. Notably, they reflect international trends in legal regulation, even those related to technological developments (Kuner & Marelli, 2020, 42). The particular emphasis is placed on the following activities: a) the formation of a common cyber security space at the global and regional levels (Bentotahewa et al., 2022,

15); b) the introduction of a flexible system of personal data security examination; c) the elaboration of a criminological classification in terms of violating such security on the Internet (Veselovska et al., 2022, 89); d) empowering the educational area (e.g., Harvard Online Course, 2023).

Thus, the specifics of the legal mechanism of their protection in the conditions of martial law have not been subjected to a thorough analysis. Accordingly, a research gap has emerged, the elimination of which is of considerable theoretical and practical value.

### Methods

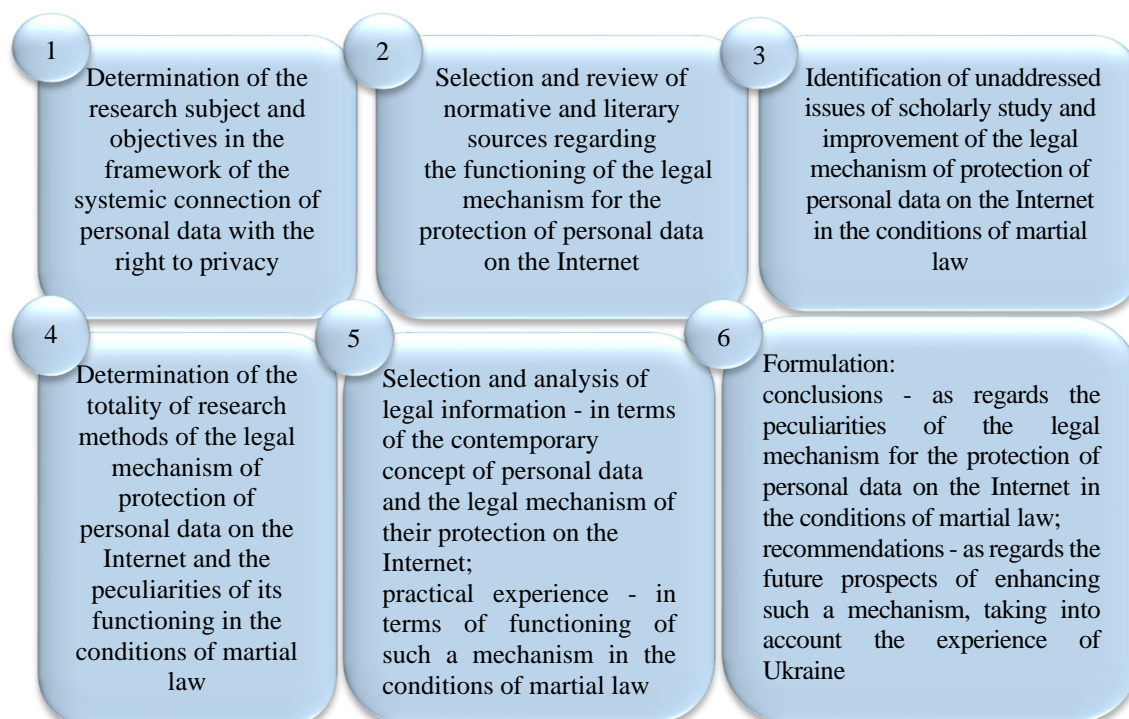
In order to achieve the purpose of the study and address research tasks, the selection and generalization of sources that highlight the legal and organizational issues of the functioning of the personal data protection mechanism on the Internet was accomplished. Accordingly, the sources were used in the study for the following purposes:

- a) global and regional legal acts - in order to determine the context and norms that determine the legal status of personal data protection at the international and regional levels; ECtHR practice – to gain insights into the interpretation and application of

human rights in the context of personal data protection;

- b) analytical reports and recommendations of experts regarding the current state and prospects for the development of the legal mechanism for the protection of personal data on the Internet - for the purpose of objective analysis of the current state and directions of development of the legal mechanism for the protection of personal data on the Internet, as well as the formation of proposals;
- c) regulatory documents and experience of Ukraine regarding the protection of personal data during martial law - to understand specific challenges and approaches to the protection of personal data during martial law (Commissioner of the Verkhovna Rada of Ukraine on human rights, 2022).

Such an approach made it possible to a) generalize state-of-the-art approaches to perceiving personal data on the Internet as a component of the right to privacy; b) identify the specifics of martial law impact upon threats to the security of such data and the factors that determine the specifics of the legal mechanism for the protection of such data under martial law, taking into account the experience of Ukraine; c) to outline the principal prospects for enhancing the efficiency of such a mechanism in the conditions of martial law (Figure 1).



**Figure 1.** Flowchart of the study  
Source: (developed by authors)

The following methods were used in the current study:

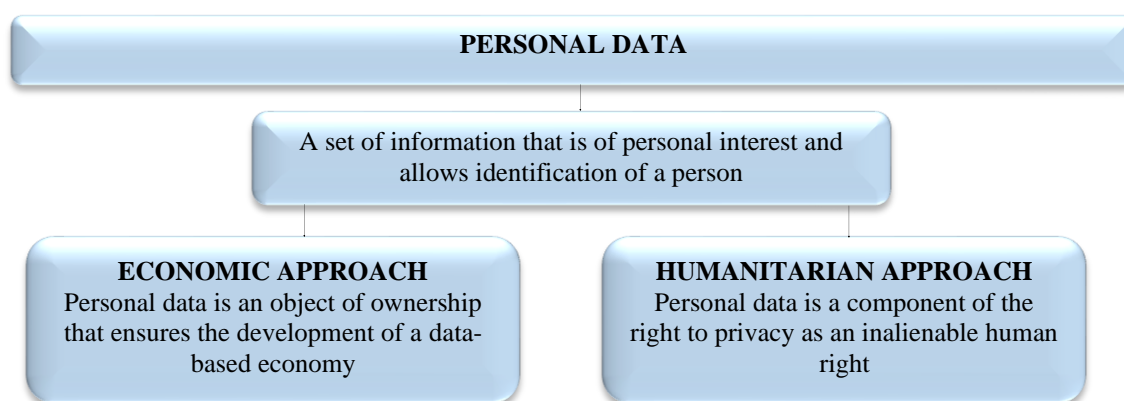
- *the system approach method* was applied in order to: a) systematize the approaches to understanding personal data, which made it possible to identify socially significant rights and values that are in conceptual conflict with the protection of personal data (from the point of view of economic and humanitarian approaches); b) form of an extensive classification of threats to the security of personal data, including in the conditions of martial law, with the aim of deepening their understanding, origin and types;
- *the method of descriptive analysis* was used in the process of identifying factors that determine the specificity of the legal mechanism for the protection of personal data in the conditions of martial law, which made it possible to classify and justify such factors;
- *the formal-legal method* contributed to systematization of the key provisions of

normative legal acts in the field of functioning the legal mechanism for the protection of personal data, including in the conditions of martial law, which made it possible to characterize the current state of the problem and identify opportunities for improvement;

- *the comparative forecasting method* enabled comparing foreign approaches to the protection of personal data on the Internet, expert recommendations and Ukraine's experience, which made it possible to identify useful examples and prospects for improving the legal mechanism for the protection of personal data on the Internet in the conditions of martial law for Ukraine.

## Results

To consider the peculiarities of the legal mechanism for the personal data protection on the Internet in the conditions of martial law, it is expedient to refer to the state-of-the-art perspective on personal data (see Figure 2).



**Figure 2.** Basic approaches to understanding personal data  
Source: (developed by authors)

The presented chart makes it possible to outline those socially significant rights and values that are in conceptual conflict with the personal data protection as follows:

- within the framework of the economic approach, this is the freedom of economic exchange;
- within the humanitarian approach, it is national security as juxtaposed to privacy.

In the context of this study, it is appropriate to rely on a humanitarian approach, emphasizing that martial law justifies strict restrictions on human rights in favor of national security.

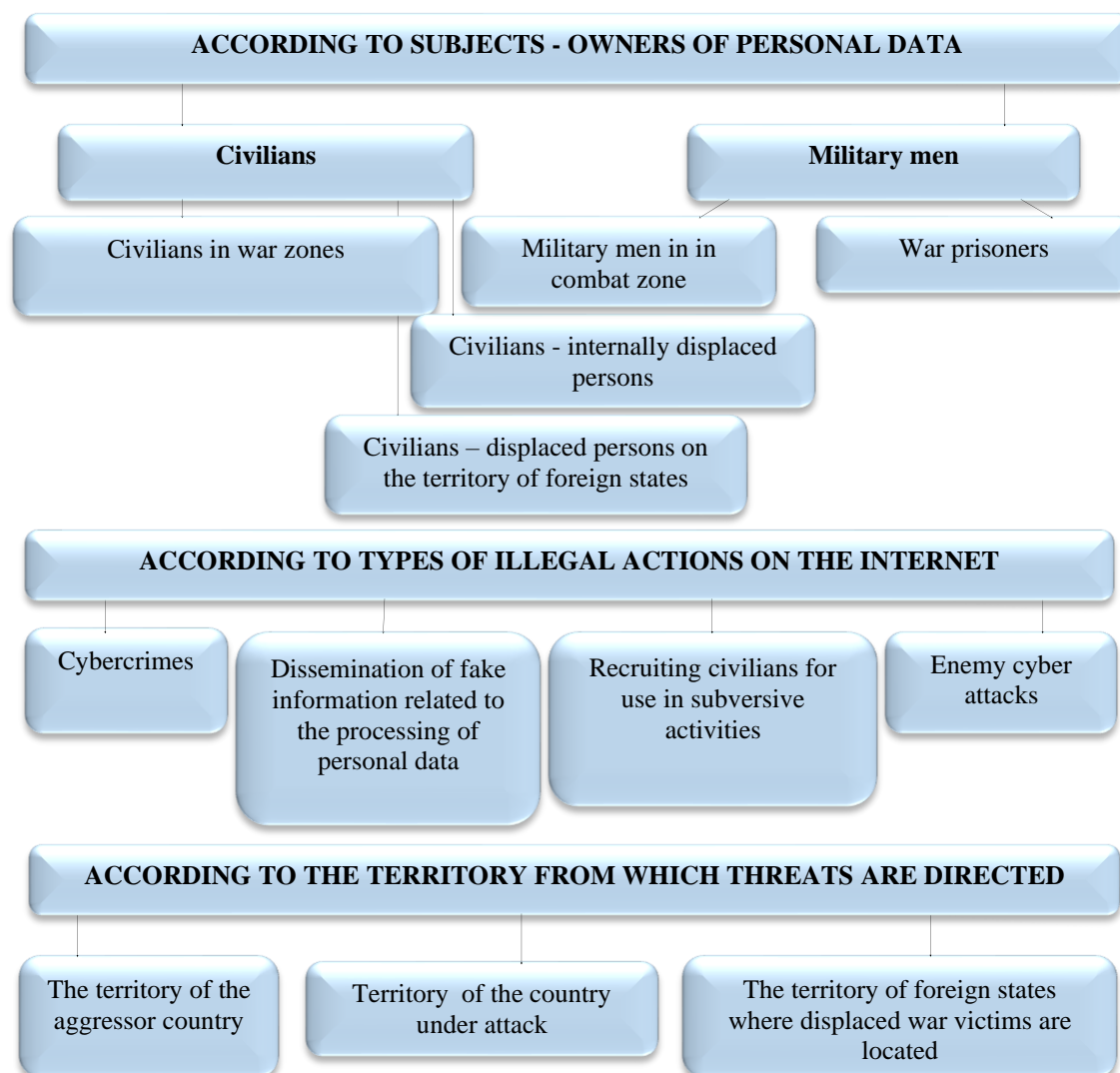
However, this does not negate the requirements of personal data protection.

In the conditions of martial law, specific threats to the security of personal data appear. They are multifaceted; their impact on national security and on the security of individuals' personal data is systemic. Let us present the classification of these threats on different grounds (see Figure 3).

While classifying the threats according to subjects whose personal data are at risk in a state of war, special attention should be paid to the most vulnerable individuals. Among civilians, these include minors, while among military personnel - war prisoners. The specificity of both

abovementioned groups of subjects lies in the fact that their representatives cannot independently make decisions as regards the disposal of their own personal data. Obviously, they are particularly vulnerable to manipulation and intimidation.

Regarding the types of illegal actions on the Internet and the territory from which the threats originate, the experience of the war in Ukraine shows that virtual space is actively used both to harm the country's defense capabilities and to commit self-serving cybercrimes against individuals.

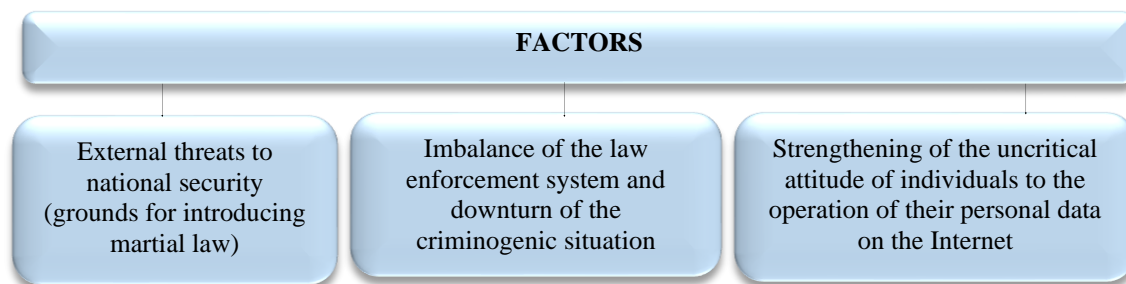


**Figure 3.** Classification of threats according to security of personal data in the conditions of contemporary armed conflict

Source: (developed by authors)

The specificity of the legal mechanism for personal data protection on the Internet in the conditions of martial law is not related to its structure but to the organizational and legal aspects of individual elements and their content.

Taking into account the experience of Ukraine, it is expedient to consider the factors that determine this specificity (see Figure 4).

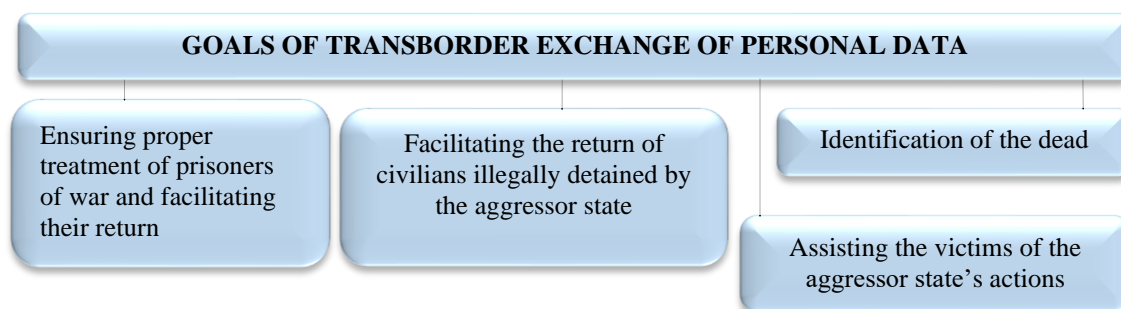


**Figure 4.** Classification of factors that determine the specificity of the legal mechanism for the protection of personal data in the conditions of martial law (on the example of Ukraine)

Source: developed by authors

In the conditions of martial law, the task of personal data cross-border exchange for law enforcement and humanitarian purposes is gaining growing urgency. In fact, the participants of cross-border exchange are not only state institutions, but also international organizations

that provide humanitarian aid and support to victims of war both on the territory of the country that is subject to aggression and on the territory of other states, including the aggressor state. This feature is basically due to the specific goals of such an exchange (see Figure 5).



**Figure 5.** Major goals of cross-border exchange of personal data in martial law conditions

Source: (developed by authors)

The protection of personal data during such cross-border exchange is notably made harder by the factors as follows:

- vulnerability of electronic communication systems of a country under martial law;
- differing operation and protection modes of personal data in foreign states, on the territory of which the displaced persons are located;
- the difficulty of personal data processing and storage monitoring by international organizations involved in humanitarian missions.

Hence, in the conditions of martial law, it is expedient to form such a protection system, in which the state will act as the main controller of handling personal data and the guarantor of their protection. To some extent, it is expedient to extrapolate elements of the US approach in terms of coordinating intelligence and defense actions and involving the relevant data from intelligence agencies to prevent cybercrimes.

Taking into account the aforementioned, in view of the experience of Ukraine, it is possible to set forth the principal areas of enhancing the legal mechanism for the protection of personal data on the Internet in the conditions of martial law (see Table 1).



**Table 1.**

*Promising directions for enhancing the legal mechanism for personal data protection on the Internet in the conditions of martial law (the case of Ukraine)*

Promising directions	Content
Normative and legal	1. Prompt entering of changes to legal documents regarding work with personal data, taking into account European standards and US experience. 2. Strengthening the responsibility of personal data security as regards their protection requirements violation.
Organizational and legal	1. Enhancing the work of relevant law enforcement units and special bodies, taking into account the latency of personal data security violations on the Internet. 2. Intensification of work with public institutions to identify relevant violations.
Communicative	1. Interaction with international and foreign partners regarding compliance with personal data security during cross-border exchanges. 2. Intensification of communication and educational work with individuals possessing the corresponding personal data.

Source: collected and structured by authors

That being said, the implementation of the above measures will contribute to the protection of personal data. There are also opportunities to supplement international and European standards, taking into account the peculiarities of contemporary armed conflicts.

Taking into account the above, it is possible to distinguish the following prospects: a) improvement of the national legal mechanism for the protection of personal data on the Internet in the conditions of martial law, drawing on the European standards and foreign experience; b) elaboration of a unified European policy for the protection of personal data on the Internet, taking into consideration the peculiarities of international armed conflicts.

## Discussion

The analysis of the legal mechanism for the protection of personal data on the Internet involves consideration of a wider context. The current article shares the standpoint that personal data and their protection are part and parcel of the right to privacy (GIP Digital Watch, n.d.; UN Commission on Human Rights, 1998; UN General Assembly, 2013).

The overall perspective regarding the expediency of considering the functioning of the legal mechanism for the protection of personal data on the Internet through the prism of threats to their security has found extensive coverage in scholarly literature (e.g., Urquhart et al., 2018; Farinpour, 2021). On the other hand, the current study proves that such a vision of threats does not correspond to the conditions of martial law. Currently, armed conflicts produce specific

threats in present-day realia. At the same time, the need to take into account the special needs of vulnerable persons is emphasized (in particular, minors and war prisoners).

The vision of the legal mechanism structure for the protection of personal data (OECD Legal Instruments, 1980) with a heavy focus on the relevance of normative and legal support is substantiated (Kaurin, 2019, 2; Bentotahewa et al., 2022, 3). Alongside with the said standpoint, the current study proves that the specificity of this mechanism in the conditions of martial law is related to the organizational and legal aspects of the functioning of individual elements and their content. Taking into account the experience of Ukraine, the classification of factors that determine this specificity is presented.

The position regarding the significance of control functions in legal mechanism for the protection of personal data on the Internet is supported (Bentotahewa et al., 2022). That said, taking into account the conditions of martial law, the expediency of implementing the US approach is emphasized, within which due attention is devoted to observing the national security interests (Killam, 1989; Mendoza, 2017). Accordingly, it is justified that in the conditions of martial law it is the state that should act as the principal controller of handling personal data and the guarantor of their protection.

While sharing the enhancement in cross-border exchange of personal data in the field of law enforcement (European Commission, 2022, 14-15; European Parliament and of the Council, 2016), the present article significantly expands this issue with an indication of the factors that

complicate the protection of personal data during such an exchange, specifically under martial law conditions.

The relevant scholarly research into the issue of enhancing the legal mechanism for personal data protection is presented in literature on the topic (for instance, Bentotahewa et al., 2022). However, the current study emphasizes that the gap of covering the issues of martial law has not been bridged. Therefore, it is relevant to support the positions of authors who study the experience of Ukraine (for instance, Veselovska et al., 2022, 89). The current study emphasizes the expediency of comprehensive regulatory, organizational, as well as communication measures to be taken. It is proposed to scaffold the elaboration of a unified European policy for the protection of personal data on the Internet, taking into account the characteristic features of international armed conflicts.

### Conclusions

It was determined that the legal regulation of personal data protection and professional intelligence do not cover the specifics of a state of war, although certain international organizations, such as IOM for instance, have experience in handling personal data of persons displaced during armed conflicts. As for the practice of foreign countries, the legal framework of the EU is mainly focused on ensuring economic activity, in the USA considerably more attention is devoted to the protection of personal data drawing on the national security interests.

It is shown that the right to personal data and their protection is an indispensable component of the right to privacy. That said, in the conditions of martial law, public interests still have priority. Accordingly, it is concluded that the legal mechanism of their protection in the conditions of martial law relies on the specifics of threats to the security of personal data, related to the organizational and legal aspects in functioning of its individual elements and their content. It is emphasized that the relevance of cross-border personal data exchange for law enforcement and humanitarian purposes is gaining its significance. Moreover, the factors that complicate the protection of personal data during such an exchange are highlighted. It is substantiated that in the conditions of martial law, it is the state that should act as the principal controller of handling personal data and the guarantor of their protection.

Taking into account the experience of Ukraine, promising directions for enhancing the legal mechanism for protecting personal data on the Internet are outlined. Further perspective is aimed at fostering the effectiveness of the national legal mechanism for such protection. It is also expedient to form a unified European policy for the protection of personal data on the Internet, taking into account the specific features of international armed conflicts.

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## Leader's influence on the climate in the team

### Вплив лідера на формування клімату в колективі

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#### Abstract

This article analyses the influence of the leader on the team climate in different fields of activity. The article aims to determine the degree of influence of the leader's personality on forming the socio-psychological climate in teams from various fields of activity. The study was conducted with specialists from the IT sphere, pedagogical sphere, medicine, and law enforcement. Valid and reliable test methods were used to obtain reliable data. The prevalence of average indicators of leadership influence in the studied samples has been empirically proven. The tendencies of distribution of the components of the leader's personality depending on the sphere of professional activity were determined. The study results suggest that leadership skills and organisational skills are the most important factors influencing team climate in teams of medical professionals and law enforcement, while communication skills and emotional intelligence are more important in teams of teachers and IT specialists. The research hypothesis has been confirmed. Prospects for

#### Анотація

У цій статті аналізується вплив лідера на клімат колективу в різних сферах діяльності. Мета статті – визначення міри впливу компонентів особистості лідера на формування показників соціально-психологічного клімату команд різних сфер діяльності. Дослідження проводилося з фахівцями трудових колективів різної спрямованості: IT-сфери, педагогічної сфери, медицини, правоохоронної діяльності. Для отримання достовірних даних використано валідні і надійні тестові методики. Емпірично доведено переважання середніх показників компонентів лідерського впливу у досліджуваних вибірках. Встановлено тенденції розподілу компонентів особистості лідера залежно від сфери професійної діяльності. Виявлено, що у досліджуваних командах домінує середній рівень сприятливості організаційного клімату. Результати дослідження свідчать про те, що лідерські здібності та організаційні здібності є найважливішими факторами, що впливають на командний клімат у командах медичних

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further scientific research include studying the impact of different leadership styles on the organisational climate of the team, as well as expanding the research sample by involving representatives of a broader range of specialities.

**Keywords:** leader, leadership, team, labour collective, organisational climate.

## Introduction

This article analyses the influence of the leader on the team climate in different fields of activity. Optimising the performance of labour collectives is an essential task of modern organisational psychology and management. The search for ways to improve the efficiency of a work team should be based on formal and informal indicators of the success of group activities. However, considering only quantitative, external indicators of the team's success (e.g., profit, share of goods produced, etc.) leads to a simplistic attitude to the labour process. Ignoring the socio-psychological mechanisms of team functioning, it is impossible to find adequate answers to the topical issues of the theory and practice of economic and social processes.

Social climate is an essential characteristic of a work team, as it reflects the level of cooperation and the sustainability of social bonds (Wang et al., 2022). Ignoring the specifics of the psychological climate in an organisation when planning activities can significantly affect overall performance (Rožman & Štrukelj, 2021). At the same time, improving the social atmosphere in the team leads to increased job satisfaction (Ahmad et al., 2018). It has a positive impact on the overall engagement of employees in the work process (Albrecht et al., 2018).

In the context of organisational climate, it is crucial to address the leadership issue. The study of leadership creates the basis for optimising processes of management and self-management, improving team performance, achieving social sustainability, and forming a more responsible attitude to activities (Luedi, 2022). This phenomenon is determined not only by a particular personality but also by the social environment (Bohl, 2019). Scientists explore the relationship between leadership and organisational climate (Amah & Ogah, 2021;

працівників та правоохоронних органів, тоді як комунікативні навички та емоційний інтелект важливіші в командах викладачів та ІТ-фахівців. Можна констатувати підтвердження гіпотези нашого дослідження. Подальшими перспективами наукової розвідки є вивчення впливу різних стилів лідерства на організаційний клімат команди, а також розширення дослідницької вибірки за рахунок залучення представників ширшого кола спеціальностей до участі у дослідженні.

**Ключові слова:** лідер, лідерство, команда, трудовий колектив, організаційний клімат.

Kim & Park, 2020; Pérez-Vallejo & Fernández-Muñoz, 2019; Riyanto & Mangandar, 2020). However, the study of the impact of leadership on the organisational climate within specific socio-cultural conditions remains relevant. The relationship of specific leadership qualities with the manifestations of the organisational climate in a team has been studied insufficiently.

Hence, the study's relevance is determined by the scientific and practical significance of the above problem. The study aims to determine the degree of influence of the leader's personality on the socio-psychological climate in teams from different fields of activity.

Research objectives:

- 1) to find out the conditions for the leader's optimal influence on the organisational climate of the working team;
- 2) to empirically determine the level of leadership development in teams from different fields of activity;
- 3) to analyse the impact of a leader's different qualities on the socio-psychological climate in work teams.

## Theoretical Framework or literature review

The organisational climate (socio-psychological climate) is a consequence of the organisation members' subjective perceptions of the work environment. and the corresponding subjective interpretations of social processes (Mutonyi et al., 2020); collective perceptions of the system, functions, and procedures of the institution (Tan et al., 2021). This phenomenon reflects employees' perceptions of the psychological aspects of the work environment and determines satisfaction or dissatisfaction with the work

process (Puspitawati & Atmaja, 2019). The organisational climate is implemented through a particular institution's work practices and social procedures, which objectify the internal experiences of the members interacting (Imran et al., 2010). A favourable organisational climate is based on a stable group structure and a management system that considers team members' expectations (Ozsoy, 2022). The general atmosphere of an organisation can be formed both based on a generalisation of the subjective perceptions and moods of group members and based on a person's activities (Christian et al., 2009). Organisational climate is a crucial component of an institution's successful functioning, as it directly affects the productivity of departments and individual employees (Obeng et al., 2021). So, in the context of organisational climate research, the focus of scientists' attention on the problems of group structure and the subjective significance of relationships has been revealed. At the same time, the influence of the status distribution of interaction participants on the climate remains insufficiently clarified. Given the above information, leadership is an essential component of organisational climate formation.

Leadership is a process of social influence on other people to achieve a common goal. At the same time, a leader is a person who has the status characteristics that allow him or her to change the behaviour of others (Cartoon, 2022). By (2021) defines the "leadership" concept as focusing on common goals, responsibility, not a privilege, and consistency with sustainable development objectives. The essential qualities of a modern leader are the ability to stimulate others to achieve a goal, adequate assessment of the community members' emotions, self-control, empathy, communication and organisational skills (Andreu et al., 2020).

It is worth studying the leader's personality regarding the Big Five personality traits. In particular, extroverted leaders are considered more effective due to their focus on social change (Gupta & Misangyi, 2018). However, other scientific studies indicate that the performance of an extrovert leader depends on the predominant focus of the group's activity (Arya & Sainy, 2017). Conscientiousness does not directly impact the effectiveness of leadership influence (Badura et al., 2020). There are also no direct correlations between intelligence indicators and the leader's personality. It is suggested that too thorough analysis of the problem may interfere with the decisiveness of action (Antonakis et al., 2014). A leader's overconfidence can lead to

selfish group interaction strategies, which can negatively affect social sustainability (Liu et al. 2017). The relationship between leadership effectiveness and psychopathic personality traits (lack of empathy, inability to feel guilt, etc.) is also ambiguous. In particular, it is argued that they do not have a clear negative impact on the leader's performance (Landay et al., 2019).

Therefore, the results of a number of studies do not provide a reason to single out an unambiguous psychological portrait of the leader. Thus, it makes it difficult to develop clear, methodologically sound research plans. To eliminate these limitations, it is advisable to more clearly examine the role of the leader in the context of intragroup relations. The results of research on the relationship between leadership and organisational climate deserve special attention.

There are direct links between ethically oriented leadership and a positive organisational climate that minimises bullying and rejection in the group (Christensen-Salem et al., 2021). Amah and Ogah (2021) suggest that leadership is linked to organisational climate through the degree of development of a leader's emotional intelligence. Kim and Park (2020) prove transformational leadership's positive impact on improving the team's psychological climate. Riyanto and Mangandar (2020) claim that leadership has no clear impact on job satisfaction and organisational climate.

Despite much theoretical material on the problem, some aspects remain insufficiently studied. In particular, a comparative analysis of the impact of leadership on the organisational climate in teams from different professional fields requires increased attention.

## Methods and Materials

An empirical study was planned and implemented to achieve the aim and objectives of the scientific research. Let us analyse its components.

### *Stages of the Study*

The study was planned and theoretically substantiated in January- February 2023. This stage involved analysing theoretical sources, developing a general algorithm for research actions, and selecting adequate methodological tools. The research hypothesis was determined as follows: the level of leadership skills and their relationship with the socio-psychological climate

depends on the area of the team's professional orientation. At this stage, the following components of leadership influence were identified: leadership abilities, communication and organisational skills, personality orientation to success, ability to control one's own emotions and understanding other people's emotions (Tyurina et al., 2022).

Empirical material was gathered in February-April 2023 based on agreements with companies, firms, and private and public institutions in Kyiv, Odesa, Kharkiv, Sloviansk, Khmelnytskyi, and Ivano-Frankivsk. Such a territorial distribution of the sample confirms research representativeness.

Quantitative and qualitative data processing was conducted in May-June 2023. We used statistical methods and computer data processing to confirm the research hypothesis.

The conclusions (July 2023) were drawn based on a thorough study of the statistical analysis results. To avoid subjectivity in interpreting the results, an independent expert summarised the authors' assessments.

### Tools

To analyse the components of leadership influence, several diagnostic tools were used: the methodology of studying leadership abilities by E. Zharikov and E. Krushelnytsky; V. Sinyavsky and B. Fedoryshyn's methodology for studying communication and organisational skills; T. Ehlers research methodology for motivation to succeed; the questionnaire, aimed at studying indicators of volitional self-control; N. Hall's methodology, which determines the level of emotional intelligence; Fiedler's methodology for finding out the social and psychological climate in the team (Kokun et al., 2012). The validity and reliability of the selected test methods are confirmed by their use in previous studies of the leadership phenomenon (Kokun et al., 2012).

*The sample* consisted of specialists from various work teams. We interviewed six IT teams (83 people); four teams of teachers working in

general secondary education (88 people); three teams of doctors (78 people); and three teams of the national police (84 people). The distribution of samples was carried out with a focus on verifying the research hypothesis. In the context of the research objective, the respondents needed to work in the same labour team.

*The data was collected* online (through the Internet) and offline (live interaction) in a friendly atmosphere. The diagnostic methods involved announcing the aim of the study, explaining the instructions in detail, and motivating the participants to perform the test tasks well.

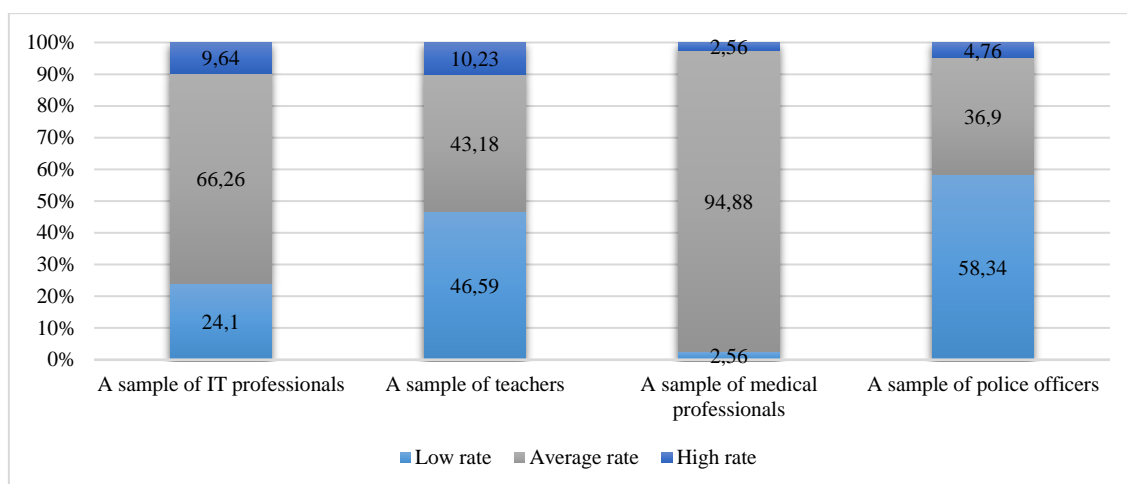
*Data analysis* included percentage analysis, graphical presentation of data, and Pearson correlation analysis. The data were processed using the SPSS.22 computer program.

*The ethical criteria* were met through the consent to participate in the study, which included the aim, conditions, and research progress. Particular attention was paid to data privacy. The authors' relatives and friends did not participate in the study, which helped to avoid a conflict of interest. The test tasks did not degrade the dignity of the participants.

### Results

The summary data of the empirical study were presented in graphical form. Let's analyse each of the leadership components in the studied samples.

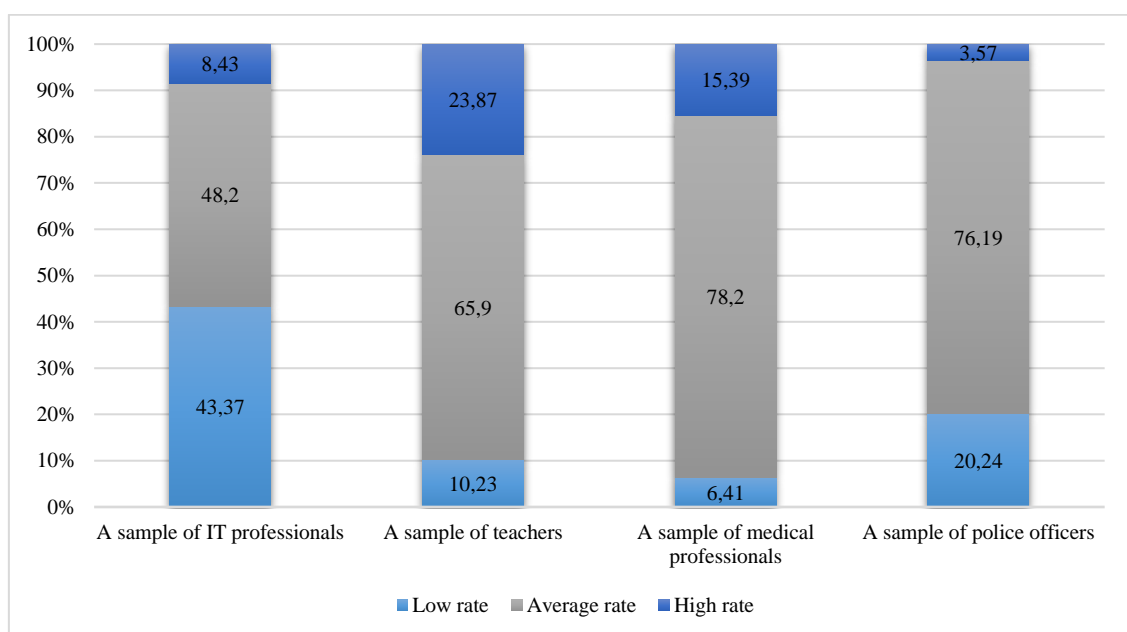
The results of the study of leadership skills are shown in Figure 1. In the sample of IT specialists, the average rates prevail, a quarter of the respondents showed low rates, and 10 % have high leadership skills. In the sample of teachers, about 10 % of respondents have high leadership skills, while the percentages of the average and low rates were distributed approximately equally – about 45 % each. Medical professionals showed the greatest dominance of average rates of leadership skills (94.88 %). Almost 60 % of law enforcement officers showed a low rate, and 36.9 % of police officers showed an average rate.



**Figure 1.** Levels of leadership skills in the studied samples (%)

The results of the study of communication skills are shown in Figure 2. In the sample of IT professionals, the low and average rates were distributed approximately equally with almost no high rate. Teachers showed the highest rate among the respondents, with 65.9 % of the average rate, and almost absent low indicators. The results of the sample of medical

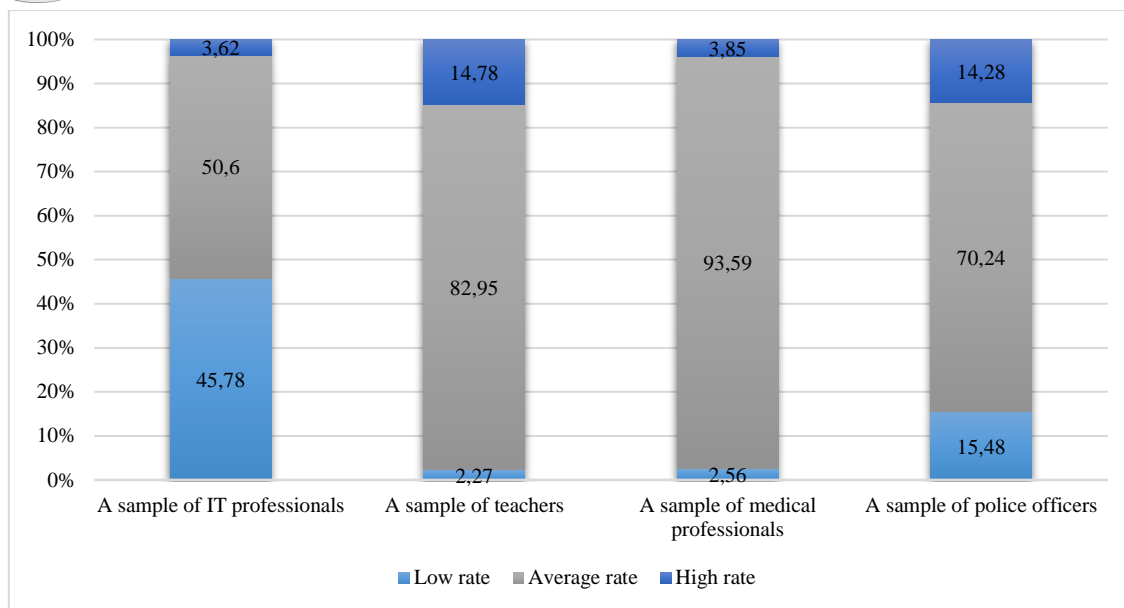
professionals are similar to teachers', but with a larger share of average indicators of communication skills. The majority of police officers have an average rate, while a fifth of the respondents showed a low rate. Only three law enforcement officers showed high rates of communication skills.



**Figure 2.** Levels of communication skills in the studied samples (%)

Trends in organisational skills are shown in Figure 3. IT professionals showed almost equal low and average rates, while only a few individuals have high organisational skills. The average rate of organisational skills significantly prevails in the samples of teachers and healthcare

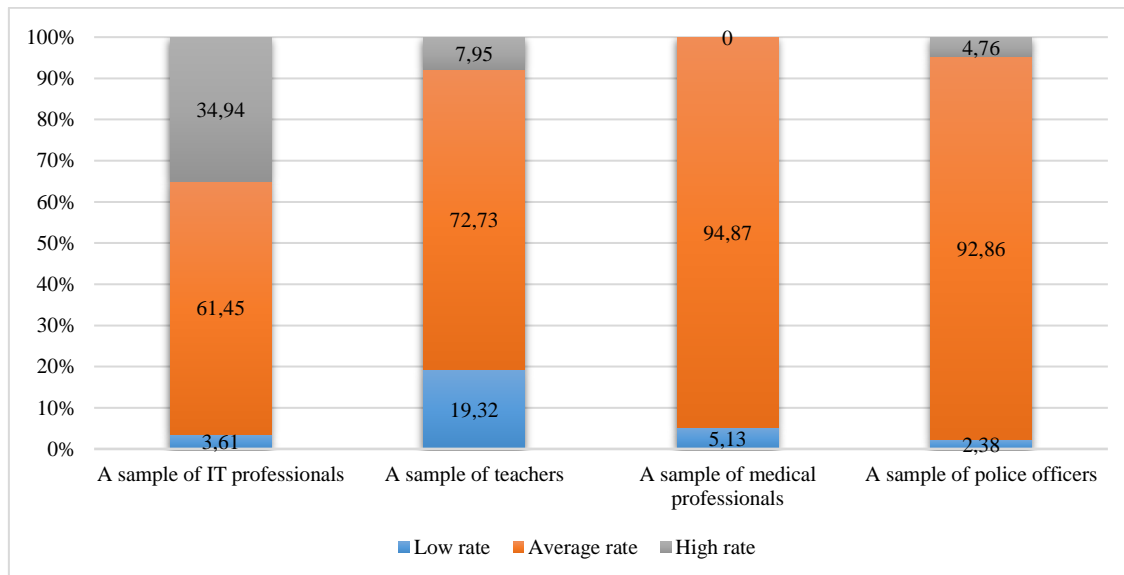
professionals. However, teachers have higher organisational skills. Police officers have similarly equal high and low rates (approximately 15 %), while 70.24 % of respondents showed average organisational skills.



**Figure 3.** Levels of organisational skills in the studied samples (%)

Success orientation is an essential component of a leader's personality, as it creates the basis for the compelling motivation of group members to achieve the goal (Figure 4). Most respondents have high (34.94 %) and medium (61.45 %) rates of this motivational component. Only a few people have low rates. In the sample of teachers, 7.95 % have high rates, 20 % showed a low rate,

while the average level of success orientation significantly prevails. Healthcare professionals and police officers showed mostly average rates (over 90 %). At the same time, there are few respondents with high and low rates. The group of healthcare professionals does not include individuals with a high level of orientation to success.

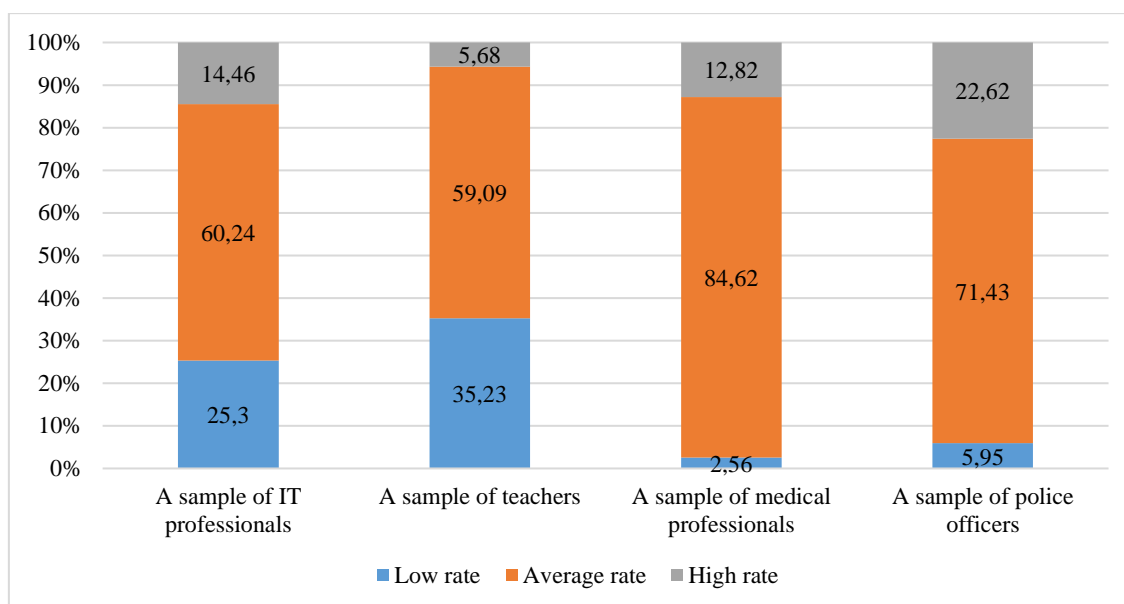


**Figure 4.** Levels of orientation to success in the studied samples (%)

Volitional self-control is an important aspect of leadership that involves the regulation of one's own emotions in interpersonal interaction (Figure 5). In the sample of IT professionals, about 60 % of respondents are characterised by average rates, about 25 % have low rates of self-control, 14.46 % of IT-specialists showed high level. Teachers have mostly average rates, but the

percentage of people with a low rate is 35.23 %. Medical professionals and police officers (84.62 % and 71.43 %) showed the highest average rates of volitional self-control. However, medical professionals have the highest rates of volitional self-control. Few medical professionals (2,56 %) and police officers (5, 95 %) showed low rates.

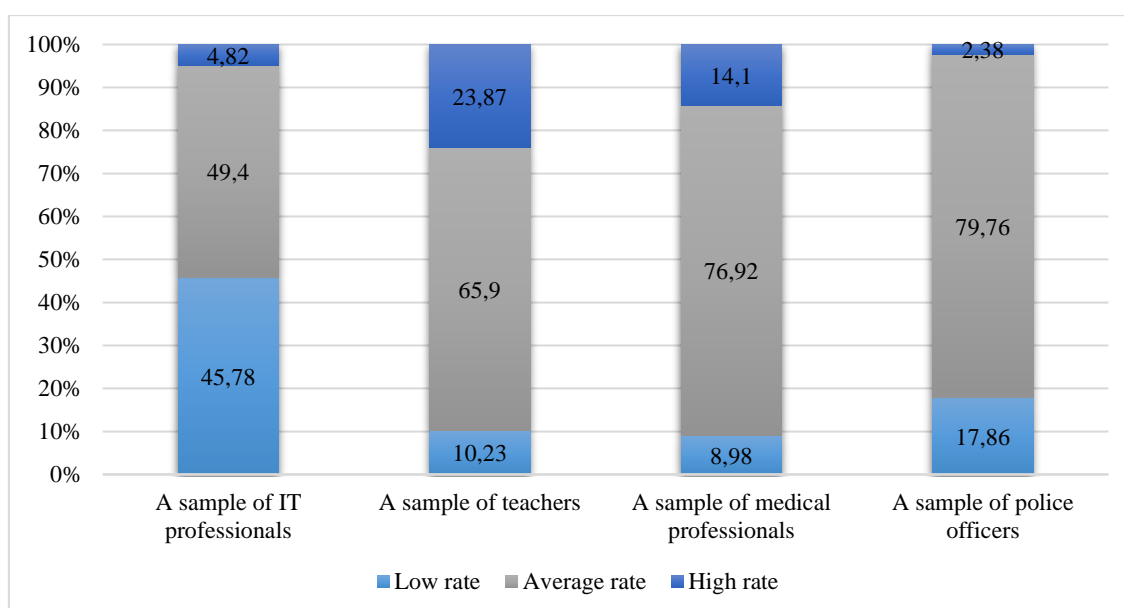




**Figure 5.** Levels of volitional self-control in the studied samples (%)

Emotional intelligence is the basis for understanding other people and the effectiveness of leadership influence (Figure 6). IT professionals have an even distribution of people with medium and low rates. In contrast, teachers have the highest emotional intelligence rates. Representatives of the medical sector and law

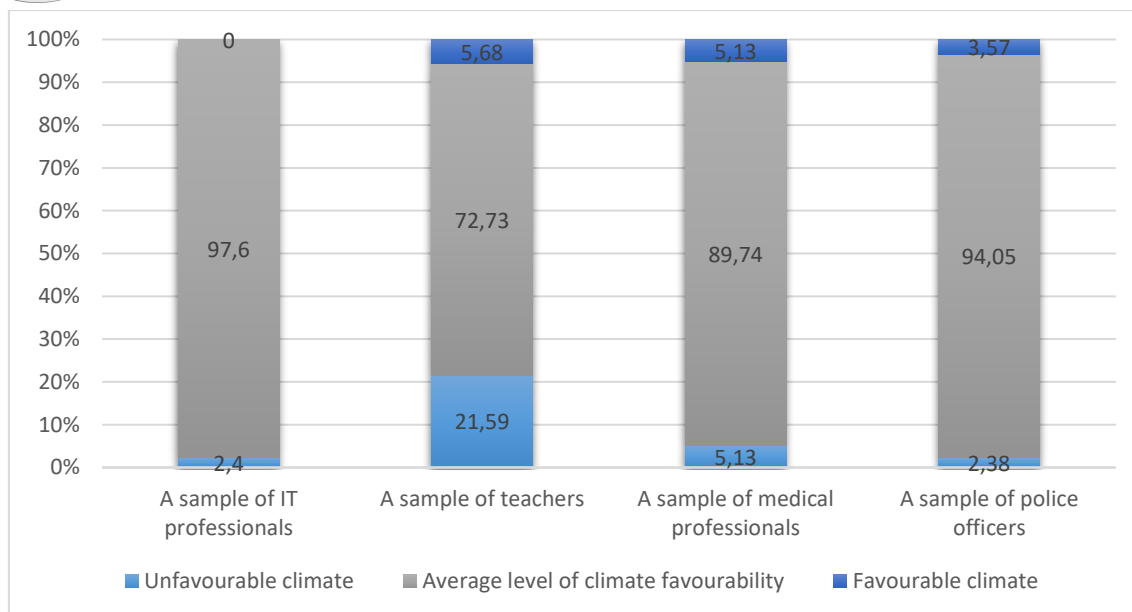
enforcement agencies have average rates of emotional intelligence. At the same time, police officers showed low rates of emotional intelligence. In general, the study of emotional intelligence is quite similar to research results on communicative skills.



**Figure 6.** Levels of emotional intelligence in the studied samples (%)

Individual perceptions of the organisation's psychological climate in the surveyed samples are shown in Figure 7. In all the surveyed samples, there is a predominance of perceptions of an average rate of climate favourability. The percentage of people who consider the organisational climate of their teams to be favourable is minimal. Most teachers perceive

the psychological climate as an unfavourable climate. All the teams of IT professionals, healthcare professionals and police officers studied showed an average rate of climate favourability. One team of teachers indicated organisational climate as unfavourable; the other three teams showed average rates of favourable organisational climate (Table 1).



**Figure 7.** Perception of social and psychological climate in the studied samples (%)

**Table 1.**

*Matrix of correlation of manifestations of the team's socio-psychological climate with components of leadership influence*

Parameters of the leader's personality	Team climate			
	A sample of IT professionals	A sample of teachers	A sample of medical professionals	A sample of police officers
Leadership skills	0,113	0,126	0,459**	0,411**
Communicative skills	0,398**	0,349*	0,122	0,056
Organisational skills	0,012	0,187	0,296*	0,512**
Success orientation	0,003	0,123	0,196	0,049
Volitional self-control	0,043	0,098	0,199	0,182
Emotional intelligence	0,423**	0,486**	0,032	0,106

Pearson's correlation analysis was used to confirm the research hypothesis. Let's consider the identified relationships for each of the studied parameters. Significant relationships between leadership skills and indicators of the team's social and psychological climate were found in the groups of medical professionals and police officers. Similar trends are evident in the correlation coefficients between organisational skills and organisational climate. Communicative skills and emotional intelligence are significantly related to organisational climate in IT professionals and teachers. Orientation to success and volitional self-control do not significantly correlate with team climate indicators in any of the samples studied.

## Discussion

The average indicators of leadership influence components dominate in the studied samples. The sample of IT professionals is characterised by the prevalence of average and low rates of

leadership skills, underdeveloped communication skills, organisational skills, and emotional intelligence, combined with a strong focus on success. Unformed leadership skills and volitional self-control characterise the sample of teachers, with a predominance of average indicators of organisational, communicative skills and emotional intelligence. The sample of healthcare professionals is dominated by average indicators of all the studied parameters, which may potentially indicate a lack of leadership competence. The sample of police officers is characterised by unformed leadership skills, average and low communication and organisational skills and emotional intelligence. The differences between the leadership structure are explained by the specifics of professional activity, dominant social expectations and social roles in a particular profession. The absence of a clearly defined favourable climate in all the groups studied can be explained by the general instability of Ukrainian society and the uncertainty of living conditions associated with

the Russian-Ukrainian war. Leadership and organisational skills determine the organisational climate in teams of medical professionals and law enforcement officials due to stricter regulation of these spheres and their relatively higher stress levels. Communicative skills and emotional intelligence significantly impact the organisational climate in the samples of teachers and IT professionals due to the greater importance of team communication for these professions.

We agree with the conclusions about the importance of the organisational climate for employees' practical professional activities (Rožman & Štrukelj, 2021). We also support the idea of practical possibilities for optimising group activities, which are revealed by scientific research on the leadership phenomenon (Luedi, 2022). The leadership influence is determined by the characteristics of the social environment, both globally and in the context of the functioning of specific social groups (Bohl, 2019). The correlation between job satisfaction and organisational climate (Puspitawati & Atmaja, 2019), explains the lack of a favourable climate in the studied samples. It is also reasonable that the climate of a particular organisation depends on the specifics of the institution's social procedures (Imran et al., 2010). At the same time, the findings may partially contradict the conclusions about the leader's qualities (Andreu et al., 2020), as communication and organisational skills and the ability to understand emotions had correlation coefficients of different significance in different samples, and no significant relationships were found at all in terms of success orientation and self-control. The contradictions are explained by the fact that the conclusions about the leader's qualities were made for a sample of students while we studied professional teams. The data on the relevance of emotional intelligence for the team's organisational climate (Amah & Ogah, 2021) were partially confirmed. At the same time, it is worth mentioning that leadership has no apparent influence on organisational climate (Riyanto & Mangandar, 2020). Democratic, ethically oriented leadership is indeed linked to a favourable organisational climate (Christensen-Salem et al., 2021; Gryshchenko et al., 2022), but it requires further empirical clarification. The same applies to the findings on the positive impact of transformational leadership on team climate (Kim & Park, 2020).

## Limitations

Obtaining more accurate data would require covering a more comprehensive range of specialists in various fields, including the military.

## Conclusions

The relevance of studying the leader's influence on the organisational climate is determined by the need to clarify the existing results of empirical research and find ways to optimise the effectiveness of professional activity. Based on the analysis of theoretical sources, it was found that the main conditions for a leader's positive influence on the organisational climate are the ethical justification of leadership influence, the leader's developed emotional intelligence, and the focus on structural changes. The predominance of average indicators of leadership influence in the studied samples has been established. The prevalence of an average rate of leadership skills, underdeveloped communication skills, organisational skills, emotional intelligence, and a solid orientation to success characterises the sample of IT professionals. Unformed leadership skills, volitional self-control, prevalence of average indicators of organisational, communicative skills and emotional intelligence characterise teachers. The sample of healthcare professionals is dominated by average indicators of all the studied parameters. Unformed leadership skills, prevalence of average and low communication indicators, organisational skills and emotional intelligence characterise the sample of police officers. The average level of favourable organisational climate dominates in the studied teams. Leadership skills and organisational skills determine the organisational climate in the teams of medical professionals and law enforcement officers. Communication skills and emotional intelligence significantly impact the organisational climate in the samples of teachers and IT specialists. The hypothesis of our study has been confirmed. The study results open up opportunities for optimising professional performance in work teams. In particular, the empirical data obtained can serve as a basis for developing leadership training depending on the field of activity. Prospects for further research are to study the impact of different leadership styles on the organisational climate, as well as to expand the research sample by involving representatives of a broader range of specialities in the study.

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## Effectiveness of administrative and legal mechanisms for the implementation of community police in EU countries: the case of Ukraine

### Ефективність адміністративно-правових механізмів впровадження Community Police в країнах ЄС: приклад України

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#### Abstract


The Community Policing model is an approach to public safety that focuses on collaboration between police and the community. This model has been implemented in many EU countries, and the objective of this study is to analyze their experience. The study used the formal-legal method, the comparative-legal method, the content analysis method and statistical observation. As a result of the research carried out, the main tools to introduce the concept of Community Policing in the United Kingdom, Netherlands, Denmark and France were characterized. It was established that these tools aim to engage the public in collaboration, education and instruction of law enforcement personnel, providing guidance and consultation to citizens, as well as analysis and deterrence of criminal activities. Various forms of police interaction with the public in the United


#### Анотація


Модель Community Policing — це підхід до громадської безпеки, який зосереджується на співпраці між поліцією та громадою. Ця модель була впроваджена в багатьох країнах ЄС, і метою цього дослідження є аналіз їх досвіду. У дослідженні використано формально-юридичний метод, порівняльно-правовий метод, метод контент-аналізу та статистичне спостереження. У результаті проведеного дослідження охарактеризовано основні інструменти впровадження концепції Community Policing у Великобританії, Нідерландах, Данії та Франції. Встановлено, що ці інструменти спрямовані на залучення громадськості до співпраці, навчання та навчання працівників правоохоронних органів, надання рекомендацій та консультацій громадянам, а також аналіз та стримування злочинної діяльності. Розглянуто різні форми

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Kingdom are examined and the official website of the country's police service is characterized as a good example of an electronic platform for interaction with citizens. The results of the study can be applied by law enforcement agencies to optimize the implementation of the Community Policing concept, taking into account international experience. Future research may highlight the specific forms of, in particular, the Neighborhood Watch Network and the Home Watch Network.

**Keywords:** Community Policing, police-community interaction, administrative and legal tools, "Neighbourhood Watch", public safety, crime rate.

## Introduction

Community policing can be defined as a law enforcement model focused on building strong partnerships and collaboration between police officers and the communities they serve. The main goal of the strategy is to create a more inclusive environment for cooperation, where law enforcement agencies and the community work together to prevent and solve security problems, strengthening mutual trust and understanding.

The primary goal of any country's police service is to ensure public safety and reduce crime. Nevertheless, contemporary socio-economic processes necessitate an evaluation of the current protocols implemented by law enforcement entities (Charalambous et al., 2019). One of the innovative methodologies currently gaining traction in developed nations, including the European Union (EU), is the concept of Community Policing (Skogan, 2019; Kutnjak Ivković et al., 2020; Oosthuizen, 2021). This approach involves proactive measures aimed at predicting and preventing crimes through close cooperation with the community (Medvedenko, 2019; Malone & Dammert, 2021). Community Policing models are based on mutual trust between the community and the police and are implemented by establishing effective communication between these parties (Mills et al., 2021). This communication encompasses both counselling and raising awareness of the community as well as proactive engagement of volunteers in cooperation with the police.

Successful examples of Community Policing implementation in developed economies

взаємодії поліції з громадськістю Великобританії та охарактеризовано офіційний сайт поліцейської служби країни як гарний приклад електронної платформи для взаємодії з громадянами. Результати дослідження можуть бути використані правоохоронними органами для оптимізації впровадження концепції Community Policing з урахуванням міжнародного досвіду. Майбутні дослідження можуть висвітлити конкретні форми реалізації концепції, зокрема, мережі сусідського спостереження та мережі домашнього спостереження.

**Ключові слова:** Community Policing, взаємодія поліції та громади, адміністративні та правові інструменти, "Сусідська варта", громадська безпека, рівень злочинності.

function alongside the unsuccessful experiences of individual states (Davis et al., 2003; Connell et al., 2008; Blair et al., 2021). The challenges of implementing Community Policing in such nations are linked to various distinct factors, encompassing cultural, political, socioeconomic and additional features (Schlosser et al., 2021). Not the final factor contributing to Community Policing success is the level of public trust in law enforcement agencies, which is considerably influenced by the history of police corruption and aggressive actions of police officers against citizens (Elphick et al., 2021; Kammersgaard et al., 2023). Accordingly, the implementation of the underlying concept should be preceded by an applicable evaluation of social dynamics, cultural features of the community, views of separate individuals and other socio-political features.

The current study examines the administrative and legal instruments used in the EU countries during the implementation of the Community Policing concept. The experience of the UK, the Netherlands, Denmark and France was explored and a particular emphasis was placed on specific tools that could be considered for adaptation in other countries and the future change in terms of the policing landscape thereof. Ukraine is taken as an example of an emerging economy but nevertheless having prospects for the Community Policing to be successfully implemented.

The purpose of the article is to examine the experience of the EU countries in terms of utilizing administrative and legal instruments to

implement the Community Policing model and adapt it in other countries following the example of Ukraine. To that end, the following research tasks were addressed in the article:

- to highlight the key administrative and legal instruments for implementing the Community Policing model in individual EU countries;
- to reveal the experience of the UK regarding the implementation of various forms of police-community interaction;
- to evaluate Ukraine's readiness for further elaboration of the Community Policing model within the framework of legislative support and the level of citizens' trust in police authorities.

It is assumed that as a result of the research, the following results will be obtained: firstly, the main approaches and strategies to the introduction of Community Policing in individual countries, in particular, Great Britain, the Netherlands, Denmark and France, will be revealed. Secondly, the most successful practices for the implementation of the Community Policing model will be revealed as an example for Ukraine. Thirdly, Ukraine's readiness to introduce Community Policing will be assessed in terms of the presence of favorable legal and social conditions.

## Literature Review

The scrutiny of scientific literature pertaining to the application of Community Policing reveals the pivotal function this approach plays in crime reduction via preventive measures. Prokopenko et al. (2021), while addressing the preventive activities of the police in Sweden, emphasised the effectiveness of the implementing the Community Policing approach to strengthen the proactive component of police activity. This entails that the police activities should involve not only responding to offences and crimes, but also carrying out preventive measures to counter these phenomena. In Sweden, this strategy is executed through guidance directed towards mitigating specific classes of criminal activity.

The primacy of "anticipatory" actions by police authorities over reactive actions is also noted in the article by Tsurkalenko (2021). Taking into account the experience of Ukraine with regard to the stage of reorganising the militia from a purely repressive body into the police - as a body of "round-the-clock service", the researcher underscores that the vector of activity of the new body has changed to crime prevention rather than only responding to them. In his work, relevant approaches and tools are revealed that take place

while implementing the Community Policing concept.

On the other hand, Koper et al. (2020) demonstrated through empirical research that the scope of proactivity in policing is substantially constrained in practice. Furthermore, there exist significant obstacles to accurately evaluate proactive measures, thus hindering the ability to accurately assess the efficacy of Community Policing.

Didyk and Kostovska (2020) center their attention on the administrative and legal facets of police-community interaction. Scholars identified that society's adequate perception of the police is a significant predicament. That being said, the well-established communication between the populace and law enforcement is pivotal to Community Policing success and achieving its main objective of impeding and curbing crime magnitude. Currently, researchers consider several factors as being relevant in police interaction with communities, in particular: prompt responsiveness to citizens' reports, maintaining sustained communication, tolerance for marginalised groups requiring special attention, constant monitoring of societal issues, adherence to the rule of law, protection of human rights. The level of trust bestowed by citizens upon the police serves as a vital criterion for evaluating the activities of police entities.

Aston et al. (2023) identify specific factors that contribute to the strengthening of public trust and facilitate the information exchange with the public. Such factors include as follows: demonstrating aspects of fair interaction, consisting of appropriate attitudes and behaviour, personal contact and relationships, as well as accessibility and relevant communication; procedural justice, which includes security, including protection of personal data, as well as indicators of efficiency and effectiveness; distributive justice, the essence of which is the justice of distributing police services.

Schaap (2021), underscores the indispensability of public trust in ensuring optimal police operations and elucidates on strategies for cultivating such trust. The scholar delineates the intricacies inherent in this matter, associated with a large number of factors, process participants, uncertainty, communication errors, false assumptions, selective blindness, culture and a number of other factors. The research is based on case studies of developing trust-building strategies in countries such as England and Wales, Denmark and the Netherlands.

Akarsu (2020) explored the Community Policing strategy in Turkey. Scholars note that this form of policing, occurring primarily at the local level, demonstrates the growing interaction of citizens and the police. Community functions as auxiliary police forces, contributing to the consolidation of state power and enhanced state repression, especially against "suspicious Others".

In a study carried out by Blair et al., (2021) with the use of field experiments in the Global South region, it was established that the introduction of Community Policing practices does not have a significant impact either on increasing citizens' trust in the police or on reducing crime. In this context, researchers underscore the crucial significance of collecting empirical data on the efficacy of Community Policing as most nations are currently undergoing police reform, especially in developing countries, countries with high crime rate.

The multifaceted ways and results from implementing the concept of Community Policing, in particular in developed and transition economies, were underscored in the study of de Maillard and Terpstra (2021). Such diversity is revealed by comparing the implementation of the Community Policing model in various national configurations: the Netherlands, open to Anglo-American influences; Scandinavian countries with a high level of trust in the police; centralised France with her own administrative traditions, as well as post-conflict societies such as Northern Ireland and South Africa.

Madsen and Kammersgaard (2022) conducted field research on resistance and perceptions of Community Policing using the example of a district in Denmark defined as a "ghetto". Academics underscore the significance of delving into citizens' perception of Community Policing, and notably not only from the perspective of personnel and the impact on the policing practice. The scholars determined that, notwithstanding the benevolence inherent in specific law enforcement initiatives, the responses of civilians to said efforts can vary greatly.

## Methodology

### *Research procedure*

The research procedure consists of three interrelated and mutually coordinated stages. At the first stage, an analysis of administrative and legal instruments for the implementation of the Community Policing model in individual EU

countries was carried out. The major directions of police operations, which are implemented with the help of defined tools, were identified. The following countries were considered: the UK, the Netherlands, Denmark and France. These countries were taken as interesting scientific examples in connection with the following: the UK has a long history of Community Policing where trust in the police is somewhat taken for granted. However, given the challenges and changes in modern society, it is necessary to constantly adapt strategies. In the Netherlands, trust is seen as a valuable resource to be earned. Here, the Community Policing approach meets the needs of a demanding community and creates a platform for active engagement. Denmark is a clear positive example of police-community relations. Trust among the population is built into the perception of a prosperous state and a disciplined community, which contributes to the effective implementation of the concept of Community Policing. In France, there are challenges in police-community relations, but the application of community policing principles indicates some improvements.

The second stage is devoted to the characteristics of various forms of police-community interaction with citizens on the example of the UK. The official website of the country's police service was also shown to be a successful example of introducing an electronic platform for interaction between citizens and the police.

At the third stage, Ukraine's readiness for further elaboration of the Community Policing concept was evaluated. On the one hand, the legislative consolidation of the foundations of police-community interaction was noted, on the other hand, the level of public trust in the National Police and its dynamics over time were analysed. Finally, drawing on the study findings, some recommendations were proposed regarding the introduction of the Community Policing concept in Ukraine.

### *Sample*

The sample for the current study comprises the EU countries (namely, the UK, the Netherlands, Denmark, France), the experience of introducing Community Policing in which can be considered the most successful. It is worth noting that the list of countries with positive experience in the researched issue is not limited to the specified countries. However, these countries are bright representatives of different approaches to introducing the Community Policing concept. In light of the above, the Netherlands tends to

follow Anglo-American traditions, Denmark exhibits a remarkable degree of confidence in its law enforcement agencies, and France has a more centralised approach. As a matter of fact, the UK is the country from which the concept of Community Policing originates, and in which to date this concept has reached a high level of development due to the variety of forms of interaction and ground-breaking expertise. Ukraine was chosen as an example of an emerging economy that has the potential to successfully implement Community Policing. Importantly, this choice is due to Ukraine's European integration intentions as well as recent considerable growth of the population's trust in the police authorities. It is also worth noting Ukraine's special need to ensure the safety of her citizens in the context of the Russian Federation's full-scale territorial invasion.

### *Methods*

During the examination of administrative and legal measures for implementing the Community Policing model in EU member states, both formal legal methodology and comparative legal methodology were applied. The combination of the said methods made it possible, on the one hand, to briefly characterise the available administrative and legal tools for the implementation of the Community Policing model in the studied country, and on the other - by comparing them with each other, to identify common directions that are implemented while utilizing these tools.

To characterise the variety of forms that exist in the UK for community-police interaction, the method of content analysis was employed to expound on the roles and capacities of volunteers engaged in police activities. The study also appraised the efficacy of the official website of British law enforcement as a commendable exemplar for its innovative application of electronic communication channels with citizens.

The formal legal method in combination with the method of statistical observation enabled assessing Ukraine's readiness for further development of the Community Policing concept from a legal standpoint, as well as from the citizens' perspective. The method of statistical

observation contains an assessment of the fluctuations in the degree of community's confidence in the National Police for the period from 2016 to 2023.

### **Results and discussion**

#### *Administrative and legal tools for implementing the Community Policing model in individual EU countries*

The administrative and legal tools for implementing the Community Policing model differ in different countries depending on a number of features. Those comprise cultural, historical features, police history of engaging in corrupt and aggressive behaviour, relations between the state and the police, the police and citizens, the level of crime and so on. It is common knowledge that Community Policing models work much more efficiently in developed countries than in countries with emerging economies. Therefore, despite the cultural, economic, political and other features of each specific country, it is expedient to pay attention to the expertise of the EU countries, because it is here that the concept of Community Policing originated and underwent substantial evolution. Figure 1 compares specific community policing tools in some of the above countries.

The implementation of the Community Policing model is subject to a range of administrative and legal tools that vary across different countries. These differences are influenced by a variety of factors, including cultural and historical features, the police force's history of corruption and aggression, as well as the nature of relationships between state authorities, law enforcement agencies, citizens, and levels of crime within each jurisdiction. It is generally accepted that Community Policing models are more effective in developed nations than in emerging economies. Thus, despite variations in culture, economics or politics among different countries implementing this model; it is advisable to draw on the expertise gained from EU countries where Community Policing first originated and has undergone significant evolution over time. The figure below presents a comparison of specific community policing tools utilized within several relevant jurisdictions for reference purposes.



The UK	The Netherlands	Denmark	France
<ul style="list-style-type: none"> <li>•Community police services</li> <li>•Community Safety Partnerships</li> <li>•Community Policing Teams</li> <li>•Training and Instruction Programs for Police Officers</li> <li>•Consultations and Cooperation with the Community</li> </ul>	<ul style="list-style-type: none"> <li>•Municipal Security Councils (Veiligheidshuizen)</li> <li>•Community Policing Teams</li> <li>•Interactive Programs and Web Platforms</li> <li>•Instruction and Training for Police Officers</li> <li>•Crime Analysis and Prevention</li> </ul>	<ul style="list-style-type: none"> <li>•Community Safety Partnerships (Sikkerhedsfora)</li> <li>•Community Policing Teams (Lokalpolitienheder)</li> <li>•Instruction and Training for Police Officers</li> <li>•Consultations and Dialogue with Community</li> <li>•Crime Prevention Programs</li> </ul>	<ul style="list-style-type: none"> <li>•Municipal Security Councils (Conseils Locaux de Sécurité et de Prévention de la Délinquance)</li> <li>•Community Policing Teams (Brigades de proximité)</li> <li>•Community Police Prefects</li> <li>•Crime Monitoring and Analysis</li> <li>•Information Campaigns and Public Control</li> </ul>

**Figure 1.** Community Policing tools in individual European countries.

(elaborated by the author based on (Police.uk, 2023; CCV, 2023; European Commission, 2019; OSCE, 2023))

Having examined Figure 1, it becomes apparent that the Community Policing models presented in the above countries demonstrate both divergent and convergent parameters. This knowledge can be utilised to customise and implement the model in other nations. Notably, these instruments can be primarily categorised into groups with shared vectors of action, including: public participation in Community Policing; instruction and preparation of law enforcement personnel; provision of guidance and consultations; crime analysis and deterrence:

- public engagement in Community Policing;
- instructing and training of police officers;
- provision of advice and consultations;
- crime analysis and prevention.

Public involvement in Community Policing is implemented through such measures as, for example, the creation of Community Safety Partnerships that take care of safety at the municipal level and involve local residents, as well as through the formation of Community Policing Teams that actively interact with the community. Among other things, training and instruction of police officers is aimed at

improving their communication skills for effective cooperation with the community, educating them on the necessity and tactics of Community Policing. The provision of advice and consultations is aimed at increasing citizens' awareness of how to safeguard oneself from criminal offences, what to do in the event of a crime, and providing other informational support. Crime monitoring and analysis is aimed at crime prevention, including in areas where crimes occur most frequently.

#### *Experience of the UK*

For a more profound understanding of all possibilities and forms of police interaction with citizens within the framework of the concept of Community Policing, it is suggested to take into account the example of the UK. Following Brexit, the United Kingdom does not belong to the EU, while during its stay in the union the concept of Community Policing has undergone significant development, representing one of the most successful examples of police interaction with the public. The official website of the UK Police (Police.uk, 2023) offers a wide range of forms of interaction with the police for citizens wishing to become volunteers (Table 1).

**Table 1.**

*Forms of interaction with the police for citizens wishing to become volunteers in the UK (elaborated by the author drawing on Police.uk, 2023)*

Form of interaction	Content
Special constabulary	Special Constables are volunteers who were trained to work with and support local police. A special constable can be a person from any profession who is willing to volunteer at least four hours a week to the local police. An important function of special constabulary is to establish a connection between the state police force and the local community. Special constables have the same powers as full-time officers and also wear a regular uniform, after completing the training phase.
Police Support Volunteers – PSVs	Police Support Volunteers are recruited from citizens who are willing to volunteer their time to perform tasks, helping to free up officers and police personnel for core operational duties. Such volunteers can perform various tasks: provide medical services, deal with administration, follow up on crime reports and incidents with members of the public.
Neighbourhood Watch and Home Watch Network (NHWN)	Neighbourhood Watch and Home Watch Network are neighbourhood associations formed with the aim of strengthening communities, improving friendly relations within such associations, potentially contributing to the reduction of crime and anti-social behaviour. This network provides participants with resources needed for meetings, schemes initiation, know-how exchange, etc. Currently, there are more than 170,000 NHWN schemes in England and Wales.
Crimestoppers	Crimestoppers is an independent charity whose main aim is to find and solve criminals. The organization provides an anonymous telephone number that citizens can call 24 hours a day to report crimes. Also, it is possible to inform the organization anonymously through the Crimestoppers website. The organization has more than 500 volunteers.
Street Pastors	A street pastor is a leader/minister or member of the Church. Such individuals are ready to communicate with people on the streets, encouraging them to listen and dialogue. These figures broadcast the Church's interdenominational response to problems existing in a certain community. They pay special attention to work with young people who feel marginalised.
Street Angels	Street Angels operate in different cities across the UK and work on specific issues relating to the night time economy in city centres on Friday and Saturday nights and are linked through the Christian Nightlife Initiatives Network.
National Association of Chaplains to the Police	Police chaplains care for individuals in all departments and can provide critical input to the organization in decision-making. Chaplains are recruited from all denominations; they can volunteer for at least two hours a week.
Victim Support	Victim Support is a national charity that offers confidential and complimentary assistance to individuals impacted by criminal activity, including victims, witnesses, their family, and other affected parties. Most of the participants are volunteers, whose number is almost four times greater than the number of employees.
Community Speedwatch	Community Speedwatch is a scheme aimed at reducing road speed through awareness and control of the problem at local level, implemented through the cooperation of volunteers and the police.
Independent Custody Visitors	Independent Custody Visitors include members of the public whose task is to review the custody standards. The task is implemented through regular unannounced visits to check the conditions of custody.
Independent Advisory Groups	Independent Advisory Groups are groups of community representatives who meet regularly with the police, providing community feedback and community views to the police.
Police Consultation Efforts	It is mandated that all law enforcement facilities must implement measures to obtain the views of the local community regarding the activities of the local police, which enables community participation in the development of police policy.
Citizens in Policing	Citizens in Policing is a general term applied to the thousands of people across the UK who volunteer their time to support the police.

Actually, the Police.uk website deserves special attention due to its wide functionality, which provides visitors with the following opportunities:

- provides information regarding the available avenues for contacting law enforcement in

relation to the degree of urgency, whether immediate or non-emergent, via telephone, both online and anonymously;

- informs about options for contacting the police in terms of urgency or if the situation is not urgent by phone

- provides information about support services for children and youth, offenders and their families, victims and witnesses, businesses;
- discloses information about existing types of offences and crimes and provides applicable counselling;
- defines the policing mechanism of the nation and specific localities;
- provides statistics of committed crimes for recent periods and a cartographic representation denoting the frequency of criminal activity within specified regions, etc.

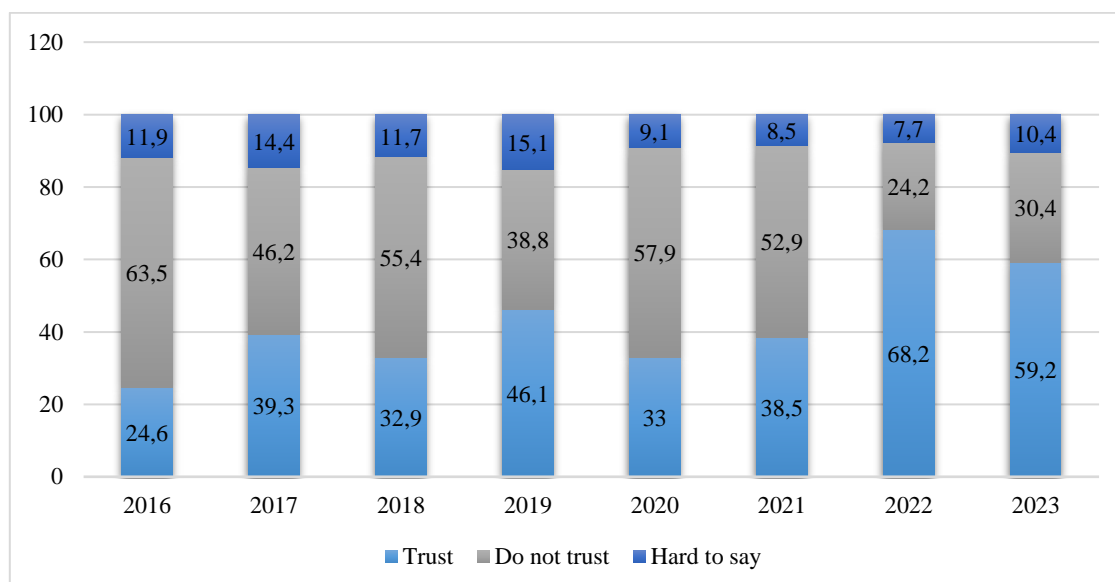
The provided description of the administrative and legal tools of Community Policing provides ample opportunities for analysis, selection and adaptation of the most appropriate tools to the practice of other countries. It is important to bear in mind that the efficacy of enacting the overall concept hinges less on the selection of tools and techniques, but on establishing communication with the community, taking into account the differences between regions, as well as particular individuals and groups.

#### *Evaluation of Ukraine's preparedness*

Ukraine belongs to emerging economies, hence the introduction of the Community Policing concept may face more significant obstacles than in developed countries. However, Ukraine's European integration intentions, as well as

significant threats to the security situation in the country, related to the full-scale invasion of the Russian Federation on its territory, necessitate more decisive steps in the direction of ensuring the safety of citizens, including through their communication and cooperation with the police. Therefore, an important scholarly enquiry is the study of Ukraine's preparedness for more active development of Community Policing in current conditions.

The need for interaction and cooperation between the police and citizens on the basis of partnership is defined in the Law of Ukraine "On the National Police" (hereinafter - the Law) (Safety in the community, 2023; Law of Ukraine No. 580-VIII, 2023). Article 11 of the Law states that police activities must be carried out in close interaction and cooperation with the population, territorial communities and public associations on the basis of partnership and aimed at meeting their needs. Further, the Law specifies that the particular region and the problems of territorial communities should be taken into account when planning police activities, thus enabling to identify the reasons or conditions for committing crimes. The key criterion for evaluating the effectiveness of police bodies and units is defined in the Law as the level of public trust, which is evaluated by autonomous sociological agencies in a corresponding method (Law of Ukraine No. 580-VIII, 2023). Figure 2 shows the dynamics of the level of public trust in the police in Ukraine.



**Figure 2.** Dynamics of the level of trust of Ukrainians in the National Police (elaborated by the author based on (Slovo i dilo, 2023))

As can be seen from Figure 2, for the six consecutive years preceding the large-scale

invasion, the level of Ukrainians' trust in the National Police was not too high and did not

exceed 46.1%. However, after the onset of the invasion, this rate increased significantly, reaching a record high of 68.2% in 2022, and declining slightly in 2023 to 59.2%. Thus, at the current stage in Ukraine, favourable conditions have been created for the development of Community Policing both at the legislative level and from the point of view of citizens' readiness. Based on the analysis of foreign experience, the following are the possible directions of the government's further actions in this area:

- developing websites and platforms in each locality, which, following the UK example, will allow the public to report crime, raise awareness and consider volunteering initiatives;
- providing round-the-clock avenues for citizen expression, including anonymous channels, while also guaranteeing comprehensive review of all appeals;
- developing initiatives that facilitate communication with disenfranchised youth;
- further elaborating the NHWN concept taking into account national characteristics, etc.

### Discussion

In view of the conducted investigation, the best practices regarding the introduction of Community Policing administrative and legal instruments in different countries were described and Ukraine's preparedness and need for the development of the concept were assessed. This is due to a number of advantages that Community Policing provides to ensure citizens' safety. Prokopenko et al. (2021) conclude that the concept of Community Policing provides such advantages as predicting the mitigating the decline of criminogenic conditions in specific areas by preventing deviant conduct from its inception, and more effective collection of testimony and evidence in the event of a crime. According to the example of Sweden, scientists call one of the tools for implementing the concept an official web resource that contains advice on preventing certain types of crimes (counselling tourists, travelers, visitors on protecting credit cards, office, production, etc. rules of conduct on a construction site, burglary, etc.). The need to introduce electronic resources as a Community Policing tool is also emphasised in the author's work, however, in the context of Community Policing, it is crucial that such a resource not only imparts knowledge but also affords the populace with amplified prospects for communication and engagement (Kappeler et al., 2020).

Didyk and Kostovska (2020) study the administrative and legal component of police interaction with the community. According to scientists, this component entails fostering a favourable perception of law enforcement, bolstering community trust and enhancing their perceived legitimacy, ensuring communication, taking the views of the community into account by the police, etc. Therefore, the said scholars reached unanimous conclusions with the author of the current article regarding the priority of establishing fruitful communication and trusting relations between the police and the community.

Tsurkalenko (2021) provides a list of areas of activity in which the population cooperates with the police using the example of Ukraine. In particular, these are as follows: public health, road safety, work with children and youth, combating gender-based violence, sports and eco-projects, cooperation with foreigners, inclusive direction and informal communication. In particular, the researcher carries out such projects as "Neighbourhood Watch", "School Police Officer", "DrugHunters" and "Community Police Officer". Emphasizing that the transition to a fully functioning Community Policing concept in Ukraine will take decades, the scientist notes the double effect of such a transformation: on the one hand, it is a reduction in tension between the population and the police, on the other hand, a probable increase in crime in the period when the police reorients itself to new realities, and the population will not keep up with it. Considering the results of the research, in modern conditions, according to the author, such a transition can be accelerated, and the negative effects are levelled by adapting foreign practices, including negative experience. For instance, Koper et al. (2020) conclude that assessing police proactivity is a complex process, and individual agencies track only a few forms thereof. Thus, measurement of proactivity is most often limited to the quantitative calculation of traffic issues, inspections of businesses, property, and various forms of preventive patrolling. In fact, there is often no way to realistically estimate the amount of time officers have for proactive work. Therefore, official policies and clear criteria for assessing proactivity are mostly not established (the study was based on data from US agencies). Given the above, reform plans in Ukraine, should take into account the introduction of more effective approaches to assessing proactivity. An example of a negative experience with the introduction of Community Policing can be seen in the work of Blair et al. (2021). Scholars found the lack of a noticeable effect in the application of the Community Policing concept in the

countries of the Global South on reducing crime and increasing public trust in the police. The factors as follows could have potentially contributed to these outcomes: lack of support from police leadership, frequent rotation of police leadership and officers, and insufficient resources to respond to issues noted by citizens.

Aston et al. (2023) note that the primary impediments to optimal police engagement with the general public are rooted in instances of violent law enforcement practices and a lineage of malfeasance. That being said, fairness in the interaction of the police with citizens, as well as procedural and distributive justice contribute to increasing the level of trust in the police. Moreover, drawing on scholarly insight, several useful tools can be cited to improve the effectiveness of Community Policing. Thus, researchers emphasise the significance of fostering personal engagement with the populace, maintaining a continuous state of accessibility, and cultivating meaningful interaction with law enforcement personnel. At the same time, it is expedient to use up-to-date digital communication (programs, social networks), ensuring the preservation of citizens' data. This proves the author's views on the need to develop effective digital platforms for interaction with citizens. An important emphasis in this work is the emphasis on the need to save user data, which was not taken into account in the above research.

According to Akarsu (2020), the development and funding of Community Policing in Turkey, with the primary goal of reducing authoritarianism and police violence through strengthening community relations, led to somewhat different outcomes. Specifically, the reform stimulated the population to strengthen police activity, creating a new type of community-police interaction. Hence, the previously despised figure of the police informer was transformed into a respected, responsible and vigilant practitioner involved. In author's opinion, both alternatives are a positive result from the implementation of Community Policing. However, the result must be predictable, and therefore, given the experience of Turkey, before the implementation of specific reforms, it is expedient to consider all possible scenarios and evaluate their potential effect. The establishment of trust between law enforcement and society is a multifaceted undertaking, as noted by Schaap (2021), due to the intricate interplay of institutional and social factors that are highly variable in nature. Thus, as exemplified in the author's research, the large-

scale invasion of the Russian Federation on its territory turned out to be a significant trigger for the augmentation of confidence in law enforcement in Ukraine. This is evidently related to the effectiveness of law enforcement in critical conditions and the growth of national unity. In Ukraine, the National Police should use this important stage to consolidate its authority and improve relations with citizens, which ultimately should lead to a reduction in the crime rate and effective prevention thereof.

Similar conclusions are drawn by Madsen and Kammersgaard (2022), who maintain that the effectiveness of community police initiatives depends on the ability of the latter to fit them into social processes that reflect community's social dynamic. Scholars hold that Community Policing should become a reflexive practice, not just apply evidence-based method regardless of the community. De Maillard and Terpstra (2021), noting the differences in the implementation of the Community Policing model in different countries, highlight the following barriers to effective reform: political priorities, socio-economic differences and ethnic tensions, professional interests, available organizational resources. The said scholars call the political climate, socio-economic inequality, relations between the police and the government, and police traditions as factors influencing reforms. These factors necessitate a thorough examination of the historical, political, cultural, and socio-economic contexts in order to implement targeted reforms. Consequently, this further underscores the author's conclusions as presented in the current article.

## Conclusion

The primary objective of the police force in any nation is to maintain law and order, ensuring the safety and protection of its citizens. A major impediment to achieving this aim is the pervasive lack of confidence that many individuals have towards their local law enforcement agencies. This leads to the need to review the existing practices of the police service and direct the vector of such activities to the cultivation of reliable and trustful relationship with the community, alongside with efficient communication. This study considered one of the popular approaches to the development of police-community interaction currently, namely the concept of Community Policing.

The analysis carried out in the study made it possible to reveal approaches to the introduction of Community Policing in some EU countries



(the United Kingdom, the Netherlands, Denmark and France). During the characterization of these approaches, prevalent strategies were identified that are utilised through specific administrative and legal instruments utilised by these nations, namely:

- public engagement in Community Policing;
- instructing and training of police officers;
- provision of advice and consultations;
- crime analysis and prevention.

The analysis of the diverse forms of interaction between law enforcement and citizens in the UK has bolstered its reputation as a successful model for Community Policing implementation. This suggests that selecting and adapting optimal modes of interaction to specific country conditions can enhance efficacy when introducing Community Policing. The significance of developing effective electronic platforms for police-community interaction was underscored.

The evaluation of Ukraine's preparedness for the implementation of Community Policing has demonstrated that the country has favourable conditions, both legally and socially, to further advance the above concept. The population's trust in law enforcement agencies appears to be a crucial factor in the successful implementation of the researched concept.

The outcomes of this research can be utilised by law enforcement agencies to enhance the execution of the Community Policing concept, while considering global practices. Subsequent investigations should delve into revealing the nuances of particular engagement modes between police personnel and society, in particular, Neighbourhood Watch and Home Watch Network.

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## The impact of political stability on economic development after a military invasion: the experience of the countries of the Middle East and Southeast Asia

### Вплив політичної стабільності на економічний розвиток після військового вторгнення (досвід країн Близького Сходу та Південно-Східної Азії)

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#### Abstract

Economic development after a military invasion depends on a number of factors led by the establishment of peace and political stability. However, the restoration of stability is a difficult test for the post-war economy because of a number of reasons, which include the destruction of institutions, conflicting interests of the government and society, violation of legitimacy, humanitarian crisis, and many others. The aim of the article is to study the ways of achieving political stability and its impact on economic development after the military invasion. The SWOT analysis and case study methods were used during the research. Using the example of Iraq and Vietnam, the appropriateness of using such advantages as the availability of a resource base, opportunities to attract international support, and effective reforms in the economic


#### Анотація


Економічний розвиток після військового вторгнення залежить від численної кількості факторів, основним з яких є встановлення миру та політична стабільність. Проте відновлення стабільності є важким випробуванням для повоєнної економіки через ряд причин, серед яких можна зауважити руйнування інституцій, конфліктні інтереси влади та суспільства, порушення легітимності, гуманітарну кризу та багато інших. Метою статті є дослідження шляхів досягнення та впливу політичної стабільності на економічний розвиток після воєнного вторгнення. Під час дослідження застосовувались методи SWOT-аналізу та кейс-стаді. В результаті проведеного аналізу було встановлено, що у ході післявоєнного відновлення (на прикладі Іраку та В'єтнаму) доцільно застосовувати такі переваги, як

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sphere in the course of post-war recovery was established. Such limitations as the reduction of human potential, the destruction of infrastructure, and the increasing public debt should be taken into account in the course of recovery. The solution to the outlined problems can be effective fight against corruption, the strengthening of the institutional component, effective reforms in the economic sphere, as well as overcoming the environmental consequences of the war and restoring the physical and mental state of the population. The role of political stability in this process is significant. The main ways to achieve it include a team of patriot reformers, increasing the transparency of government actions, conducting inclusive policies and achieving social equality and welfare.

**Keywords:** political stability, post-war recovery, military invasion, corruption, social equality.

## Introduction

The post-war recovery of the country is an extremely complex process that combines political, economic, social and other areas of recovery. Brown et al. (2011) note that the post-conflict period should not be reduced to one specific event — it is a process that involves the achievement of a number of peace milestones: cessation of hostilities and violence, signing of political (peace) agreements, integration, demobilization and disarmament, return of refugees, restoration of functioning of the state, reconciliation and social integration, economic recovery.

Achieving peace milestones is impossible without achieving political stability, which is a particularly challenging task for countries that have just went out of military conflict (Almukhtar, 2020; Ruwanpura et al., 2020; Premarathna, 2021). Disputes within the administrative machine and between different population groups, which often occur or even intensify in the post-war (often crisis) environment, can significantly slow down or disrupt the recovery process. Political instability delays the adoption of important reforms, reduces investment attractiveness, forces refugees to delay their return to the Motherland, and may lead to a new conflict in the worst case (Hisari & Fouseki, 2020; Warr, 2019). In turn, the stabilization of the political situation contributes to the minimization of the specified

наявність ресурсної бази, можливості щодо залучення міжнародної підтримки, а також ефективні реформи в сфері економіки. В ході відновлення ватро враховувати такі обмеження, як скорочення людського потенціалу, руйнування інфраструктури, зростання обсягу державного боргу. Вирішення окреслених проблем вбачається у ефективній боротьбі з корупцією, посиленням інституційної складової, ефективних реформах в сфері економіки, а також подоланні екологічних наслідків війни і поновленні фізичного і психічного стану населення. Роль політичної стабільності у цьому процесі є визначною, а основними шляхами її досягнення є наявність команди реформаторів-патріотів, підвищення прозорості дій уряду, проведення інклюзивної політики та досягнення соціальної рівності та добробуту.

**Ключові слова:** політична стабільність, післявоєнне відновлення, військове вторгнення, корупція, соціальна рівність.

threats and creates favourable conditions for development.

The history of the countries of the Middle East and Southeast Asia includes many armed conflicts related to ethnic, religious, political, territorial, economic, and other factors (Mehrl & Thurner, 2021; Gleick, 2019; Khalid et al., 2020). This is evidenced by the civil war in Syria, which has been going on since 2011 — currently the conflict is almost frozen, and the country has suffered a major humanitarian crisis (Hale, 2019; Walther & Pedersen, 2020; Lantis, 2021). Another example is the 2006 Lebanon War (the conflict is still ongoing), which caused a protracted economic crisis (Mounir Moghnieh, 2021; Farran, 2021), as well as the Arab-Israeli conflict, which lasted for nearly a century (Feinstein, 2018; Amal, 2020).

In the author's opinion, Iraq and Vietnam are the most relevant examples for studying the impact of political stability on economic recovery after a military invasion (Butt, 2019; Payne, 2020). Hassan and Ibrahim (2022) note that some economic reforms show effects in the short term, continuing in the medium and long term. The effect of other reforms can be tangible in the medium and long term only. A relatively long time has passed since the end of the conflicts in Iraq and Vietnam, which makes it possible to assess the success or failure of state measures for post-war economic recovery in the medium and



long term and to note the role of political stability in this process. Brown et al. (2011) note that the key aspects of economic recovery are the state of economic development, the availability of natural resources, and the existence of significant horizontal inequality. Regarding these aspects, there were mistakes, ineffective decisions and steps in the process of post-war reconstruction of Iraq and Vietnam, which can serve as a positive experience for other countries in the process of post-war reconstruction.

First of all, it is worth taking into account the negative experience because mistakes in the course of restoring peace can lead to serious economic, social, political consequences or even to the renewal of the conflict. As the experience of Iraq and Vietnam shows, the most significant threats to the restoration of peace are: corruption, weak institutions, misuse of funding, ineffectiveness of reforms, insufficient care for the consequences for human health and ecology. With this in mind, important lessons that can be learned in the course of studying the post-war reconstruction of Iraq and Vietnam are: the need for effective use of donor funds and taking into account the possibilities of their return; carrying out reforms on time and with proper prioritization; strengthening the role of the private sector; balanced social and environmental policy.

The aim of the article is to study the ways of achieving political stability and its impact on economic development after the military invasion. The aim was achieved through the fulfilment of the following research objectives:

- Assess the post-war state of the studied economies by conducting a SWOT analysis and identifying strengths and weaknesses, threats and opportunities;
- Identify measures and decisions that can provide positive and negative lessons for post-war economic recovery using the example of Iraq and Vietnam;
- Determine the role of political stability in post-war economic recovery using the examples of Iraq and Vietnam;
- Identify the ways to achieve political stability after the war.

The leading methods used in the research are SWOT analysis and case studies. A SWOT analysis allows to discuss the main aspects of post-war recovery in terms of existing strengths, opportunities, weaknesses and threats. A case study is used for an in-depth study of a specific

example in order to identify positive and negative experiences.

## Literature Review

The periodic escalation of existing conflicts and the emergence of new conflicts in the world cause researchers' unquenchable interest in the issues of post-war recovery. Brown et al. (2011) suggest that developing a typology of scenarios that can unfold in post-war economies is more effective than searching for a universal approach.

Yasiry (2020) discusses the purpose of the US invasion of Iraq and also analyses the results of the post-war reconstruction of Iraq on the part of the US. The researcher does not justify the military invasion, noting that the war cannot be considered as a humanitarian intervention.

Hassan and Ibrahim (2022) examine the economic challenges and policies of recovery and stability for post-war economies. As an example, the researchers study the case of Iraq for 2000-2019. The researchers determine the motives and factors of the war, its consequences and problems of the post-conflict phase, and also touch on the topic of recovery policy.

Al-jawareen (2019) examine another invasion of Iraq by ISIS in 2014. The researchers analyse the economic costs associated with this invasion. The conflict continued until 2017, and the researchers note its devastating effects, exacerbated by the fall in international oil prices.

Lafta (2019) examine the economic problems of Iraq after the 2003 war and the invasion of ISIS. The researchers note significant advantages of Iraq compared to other developing countries: significant agricultural potential, availability of labour force, large reserves of oil and gas. However, there are a number of problems that hinder the country's development: the construction of dams by Turkey and Syria, which has reduced the flow of water, dependence on neighbouring countries for the transportation of goods, dependence on oil and gas.

The example of Vietnam enables assessing the long-term effects of post-war recovery. Panchenko et al. (2021) analyse the politics of economic nationalism and patriotism in Vietnam. The researchers focus on the security component of the economy and the advantages its adaptation provides to countries.

Studying the case of Vietnam's post-war development, the researchers often refer to the



experience of implementing “doi moi” (recovery policy), a course adopted by the Communist Party of Vietnam in 1986 and still in force with constant revisions. Ho (2020) describes the reforms implemented under the renewal policy, notes the country’s major achievements over the past 30 years and challenges to the country’s recovery. Vu-Thanh (2022) notes that post-doi moi private sector development is a success, but only a partial one, as further reforms are hampered by a number of political and economic obstacles.

Many works emphasize that the Vietnamese government ignores environmental problems. Not least, such problems are the result of military operations, when large areas of mangrove forests were destroyed by chemicals, affecting flora, fauna, soil, water and the agricultural sector during the Vietnam War. In this regard, Hai et al. (2020) examine the history of mangrove restoration in Vietnam, noting the major successes and failures of the process. Studying

the relationship between economic development and the state of ecology in Vietnam, Vo and Ho (2021) conclude that foreign direct investment may lead to further aggravation of environmental problems in the long term. The literature review gives grounds to note an understudied aspect of post-war recovery — the ways of achieving political stability in the post-war economy.

## Methodology

The first step of the study was to determine the countries being the most indicative examples of post-war economic recovery in terms of political stability. The experience of recent conflicts in the countries of the Middle East and Southeast Asia was analysed for this purpose. Table 1 provides a brief overview of recent conflicts in the regions selected for the research, the study of which, in the author’s opinion, can be useful for measuring the impact of political stability on economic development after a military invasion.

**Table 1.**  
*Key information about the studied conflicts*

Country	Conflict	Period	Official reasons	Main actors	Main result
Middle East					
Iraq	War in Iraq	March 20, 2003 - December 15, 2011	The official reason is the weapons of mass destruction in Iraq.	The USA and Great Britain — on one part, while Iraq and Syrian volunteers were on the other during the invasion phase.	Military and political victory of the USA.
	The ISIS offensive	June 4, 2014 - 2017	Political and ethnic instability in Iraq, territorial ambitions of ISIS	The government of Iraq, Iran and other allies — on the one part, the Islamic State — on the other	Iraq’s victory
Syria	Civil war in Syria	March 15, 2011 — to date	Demonstrations that were part of the Arab Spring turned into an uprising and war. Protesters demanded the resignation of the President and the end of one-party Baathist rule.	Syria, Syrian opposition, Islamic State, Syrian Kurdistan and external forces (Russia, Turkey, USA).	The conflict is ongoing
Lebanon	Lebanon war of 2006	July 12, 2006 – to date (ceasefire since August 14, 2006)	Hezbollah’s capture of two Israeli soldiers and Hezbollah’s constant attacks on Israel.	Hezbollah, Israel, Lebanon	The conflict is ongoing
Southeast Asia					

Vietnam	The Vietnam War	September 26, 1959 - April 30, 1975	The desire of North Vietnam for unification under the communist regime, geopolitical and ideological reasons from outside parties (in particular, the USA and the USSR).	Communist North Vietnam (supported by the USSR and the PRC) and South Vietnam (supported by the USA, Australia, South Korea, etc.).	Military victory of North Vietnam, defeat of the United States
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Source: (compiled by the author)

As Table 1 shows, the conflicts in Syria and Lebanon are ongoing. These countries are characterized by a difficult economic situation. Therefore, Iraq and Vietnam are the most relevant examples for studying the impact of political stability on economic recovery after a military invasion. A long period of time has passed since the end of the conflicts, which makes it possible to assess the success or failure of state measures for post-war economic recovery and to assess the role of political stability in this process.

Thus, the selection of countries for analysis was determined on the basis of several key criteria. First of all, the presence of conflicts in the regions of the Middle East and Southeast Asia, in particular in Syria, Lebanon, Iraq and Vietnam, was taken into account. Countries with ongoing conflicts were excluded because their economies are isolated or experiencing significant difficulties. The second criterion was the availability of information on the recovery of economies after military conflicts. Countries where sufficient data could be obtained and their effectiveness analyzed were included in the study. The stability of the political environment during the post-war period was also taken into account. Countries with political stability were selected for further analysis in the context of the relationship between political stability and economic development.

The state of the post-war economies of Iraq and Vietnam was analysed by using a SWOT analysis, which made it possible to determine the

strengths and weaknesses, opportunities and threats regarding the economic recovery of the selected countries. The next step was to analyse the positive and negative lessons that can be learned about the post-war economic recovery of the studied countries. The conducted case study of the examples of Iraq and Vietnam made it possible to summarize the results of recovery and determine the role of political stability in it, as well as to offer recommendations on ways to achieve it in countries that have undergone military invasion.

## Results

### *SWOT analysis of post-war economies*

Determining the factors that had (continue to have) an impact on post-war economic recovery, and the role political stability has played in this process, should begin with identifying the post-war state of the studied countries. It is proposed to apply a SWOT analysis of the post-war economies of Iraq and Vietnam for this purpose. This analysis will help to assess the following aspects:

Strengths – post-war advantages that can be used by the country during economic recovery;  
 Weaknesses – aspects and factors that may hinder effective post-war recovery;  
 Opportunities – available reserves, promising solutions, external resources;  
 Threats — the most dangerous factors that can threaten to reduce the effectiveness of recovery or return to a state of conflict (Tables 2-3).

**Table 2.**  
*SWOT analysis of the post-war economy of Iraq*

Strengths	Weaknesses
<p>Projected reduction of public debt relative to GDP in 2023 (up to 42.5%);</p> <p>Significant reserves of oil and gas;</p> <p>International financial support</p> <p>Opportunities</p> <p>2003-2013:</p> <p>Write-off of 80% of debt by the Paris Club (\$32 milliard);</p> <p>Creation of a trust fund with the assistance of the UN, which aggregated more than \$1.3 milliard;</p> <p>The USA expanded its guarantees to \$60.6 milliard by 2012;</p> <p>2014 — to date:</p> <p>Obtaining loans between 2016-2018 from the IMF, the World Bank, etc. participants in the amount of \$18 milliard;</p> <p>Development of a document jointly with the World Bank Group, which establishes 5 areas of recovery: governance, reconciliation, social development, infrastructure development, economic development;</p> <p>The start of activities of the Iraq Reform, Recovery and Reconstruction Fund in 2018;</p> <p>Adoption of the White Paper of economic reforms by the government with the aim of overcoming the fiscal crisis, solving problems with insufficient budget financing, solving structural problems of the economy.</p>	<p>The total amount of foreign debt at the end of 2003 was \$120 milliard;</p> <p>In 2014, the capture of Iraqi territories by ISIS caused the forced displacement of about 5 million people, and the amount of real losses by 2017 reached \$107 billion;</p> <p>The ratio of public debt to GDP in 2020 was 71.6%;</p> <p>Dependence on oil revenues;</p> <p>Drought</p> <p>Threats</p> <p>2003-2013:</p> <p>The four funds between which most of the American money was divided fell didn't achieve their goals because of high levels of corruption;</p> <p>Unresolved ethno-sectarian problems;</p> <p>Unsuccessful attempts to diversify the economy in order to reduce dependence on oil;</p> <p>Lack of significant results from the implementation of the decentralization reform;</p> <p>Influence of terrorist organizations;</p> <p>2014 — to date:</p> <p>Delaying the implementation of investment projects for the private sector and other reforms regarding the restructuring of the economy;</p> <p>The White Paper does not address climate change;</p> <p>The deepening of corruption problems and the lack of communication between the parties.</p>

**Source:** compiled by the author based on (Nabok, 2022)

**Table 3.**  
*SWOT analysis of Vietnam's post-war economy*

Strengths	Weaknesses
<p>Large oil reserves;</p> <p>A large number of young people and cheap labour;</p> <p>Effective prioritization helped, first of all, to develop the agro-industrial complex and ways of selling products, and later to start developing tourism and industry;</p> <p>Opportunities</p> <p>Approval of "recovery policy" or "doi moi" in 1986, promoting market reforms, economic integration, expansion of opportunities for the private sector;</p> <p>Successful application of tools for the creation of economic, industrial zones, export processing zones;</p> <p>Research successes in the field of post-traumatic recovery techniques;</p>	<p>After the war, most of the big cities were almost destroyed, there was catastrophic destruction of infrastructure and human casualties, the number of which ranged from 3 to 7 million people according to various sources;</p> <p>Threats</p> <p>Significant damage to ecology after the war — the destruction of jungles and mangrove forests by chemicals caused a drop in productivity, damage to flora, fauna, soil, water and air, and people's health. Recovery requires considerable effort and time;</p> <p>Psycho-emotional state ("Vietnam syndrome") and physical health of war veterans;</p> <p>Corruption;</p> <p>Ideological disputes;</p>

**Source:** compiled by the author based on (Dmytrenko, 2022)

The conducted SWOT analysis gives grounds to draw the following key conclusions:

- both countries suffered catastrophic damage during the wars, which continues to have an impact after a long period of peace;

- various strengths and opportunities can be used on the way to recovery — from the availability of resources to the attraction of international support and the implementation of effective government decisions;
- the weaknesses after military invasions are, first of all, the death and resettlement of people, which leads to a limited number of labour force, significant destruction of infrastructure, losses, and the growth of public debt;
- the key threats to recovery are corruption, institutional weakness, misappropriation of funds, ineffectiveness or the failure to make necessary reforms, as well as such long-term consequences as damage to the environment and human health.

### ***Positive and negative experience of the studied economies in terms of post-war recovery***

The cases of Iraq and Vietnam offer the following lessons for post-war recovery:

- 1) The need for international support for a war-torn country is an important aspect of recovery. However, the achievement of the set goals is possible only with the effective use of donor funds, which involves targeting the allocated funds, as well as comprehensive programmes to fight corruption and strengthening the institutional component. It is also important to coordinate donors' plans for the country's recovery with national plans and direct efforts not only to the implementation of individual projects, but also to broad support of priority industries. Besides, it is worth realistically assessing the country's ability to repay loans.
- 2) Reforms must be carried out on time, and their effectiveness depends on the correct arrangement of priorities, which consists in determining the most important sectors and directions of reforms.
- 3) During the crisis, the private sector is one of the main "saviours" of the economy, and therefore, it is necessary to strengthen its role in the plans for the recovery of the economy. This may involve changes in legislation, tax policy, various support programmes, as well as solving ideological issues.
- 4) The population plays a leading role in post-war recovery, so it is worth focusing on providing people with work, especially the youth, repatriation of refugees, compensation for the damage caused by the

war, restoration of mental and physical condition, providing support to war veterans, improving the quality of education, etc.

- 5) The elimination of the negative consequences of the war for ecology is not the least issue.

This direction of recovery requires consolidated efforts on the part of the damaged country and other countries of the world, because today the problem of ecology is a common challenge for all nations.

### ***The role of political stability and ways of achieving it***

The role of political stability in the country is key to the successful application of identified lessons from post-war economic recovery. Restoration of peace and elimination of internal contradictions is possible only under the condition of stabilization of the political situation. At the same time, political disputes can lead to a split and renewed conflict.

Peace and political stability are crucial aspects for attracting foreign investment, developing the private sector, and returning refugees. Effective implementation of reforms is impossible without concerted actions of the government, while political disputes lead to the prolongation of the implementation of reforms, postponing their potential positive results.

Achieving political stability is often a difficult task, especially in a country that has just emerged from a military conflict. Achieving political stability should be the result of joint efforts of the government and the population. In this regard, it is worth providing some recommendations that can play an important role in achieving political stability:

- after the war, the country should be headed by a team of patriot reformers, who should focus on post-war reconstruction with the support of the population, not on internal disputes;
- government activities should be as transparent as possible to ensure public control over the actions of politicians. the development of e-government, as well as the programme for improving the information literacy of the population, plays a significant role in increasing the transparency of the government's actions;
- it is advisable to conduct an inclusive policy — it is necessary to create conditions not

only to ensure freedom of speech, but also to take into account the views of people from different population groups in the field of politics, for example, through the implementation of specialized programmes and projects, the creation of public organizations, unions. One of the directions of implementation of an inclusive policy should be the elimination of religious, ethnic, and ideological contradictions in society, taking into account the interests of various population groups, as well as actions aimed at achieving national unity, identity, and respect among people;

- political stability depends not least on the population well-being, ensuring equal rights, and reducing horizontal inequality. Therefore, governments should implement a balanced social policy aimed at ensuring equal opportunities and prospects to realize the potential of each person.

## Discussion

Brown et al. (2011) focus on economic recovery. The researchers note that economic development, the availability of natural resources, and horizontal inequality affect the possibility of reviving the conflict and economic recovery. Regarding Iraq, it was noted that there is a significant social and economic horizontal inequality in the country. In the author's article, this factor is defined as one of the decisive factors in achieving political stability, which plays a key role in post-war economic recovery.

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Hassan and Ibrahim (2022) suggest the following areas of reform for Iraq: restructuring the economy, attracting foreign investment, reforming the financial system, reducing state intervention, developing exports, fighting corruption, controlling natural resources, developing infrastructure in the areas of health care and education. In the author's opinion, these directions should be complemented by the implementation of a balanced social policy to ensure the interests of various ethnic groups. This will contribute to increasing political stability, which is the basis for the implementation of further reforms.

Yasiry (2020) examines the results of post-war reconstruction of Iraq on the part of the US. The researcher notes that the goals of achieving political and economic stability have not been achieved. The US should have taken action to encourage the Iraqi government to implement an inclusive, less aggressive policy toward Sunni Arab, Kurdish, and Shiite Arab regions. Such conclusions confirm the author's position regarding the exceptional place of political stability in the post-war economic recovery, because any efforts to overcome economic problems may come to naught because of the exacerbation of political disputes in the government and among the population.

Analysing the key consequences of the ISIS invasion of Iraq, Al-Jawareen (2019) singles out the three most critical problems: high dependence on oil, high level of corruption, post-war urban reconstruction. However, the study pays insufficient attention to the internal contradictions and social inequality, which can disrupt political stability and inhibit economic development.

Lafta (2019) note the role of political stability in solving a number of economic problems and overcoming the consequences of military invasions. The solution to the problem of lack of water in Iraq may be solved by concluding a number of agreements with Turkey and Syria. Logistics problems are solved by building relations with neighbouring countries. This study cites another dimension of achieving political stability — international, which is not defined in the author's article. The author's research focuses on achieving political stability within the country, while establishing proper communications with international partners is a key aspect of ensuring political stability on the world stage.

Panchenko et al. (2021) consider the case of Vietnam, noting that the country effectively uses its natural and human resources, successfully combining innovation and regional features in the development of the agricultural sector. Ho (2020) notes problems in Vietnam's development: the level of economic development is still insufficient and not sustainable; limitations in solving social and environmental problems; slow pace of political reforms; lack of effective solutions to prevent the decline of political ideology. Examining the development of the private sector in post-doi moi Vietnam, Vu-Thanh (2022) notes a number of problems impeding further reforms. The main problem is determining the balance between political



ideology and economic legitimacy. These studies prove the correctness of the author's opinion that political stability is an important factor for economic recovery. Vietnam's economy is developing rapidly, but it would be more efficient provided the resolution of ideological contradictions.

Despite the rapid economic development of Vietnam, the country's government pays insufficient attention to environmental aspects. In light of the emergence of the concept of sustainable economy and the growing attention of governments to environmental safety, environmental problems should be considered in a complex with economic and political aspects. Hai et al. (2020) explore the challenge of restoring mangrove forests in Vietnam that were severely damaged during the Vietnam War. The active participation of the community is important in this process. Vo and Ho (2021) found a relationship between the economic development of Vietnam and the deterioration of the environment in the country. In this article, environmental problems are considered as one of the most significant negative consequences of the war in Vietnam, but their connection with economic indicators and political aspects is not investigated. At the same time, identifying the connection between ecology and political stability can become an important area of further research.

## Conclusions

The conducted research confirms the key role of political stability in the restoration of the economy of countries after a military invasion. The SWOT analysis carried out in the gives grounds to conclude that both studied countries (Iraq and Vietnam) suffered significant damage during the wars, the consequences of which still have an impact after a long period of peace. On the way to economic recovery, countries can use their strengths and opportunities (availability of resources, attraction of international support, effective government decisions). Vulnerable areas of economies after military invasions are a limited number of labour force, significant destruction of infrastructure, losses, and the growth of public debt. The main threats to recovery are corruption, institutional weakness, misappropriation of funds, ineffectiveness or non-adoption of necessary reforms, damage to ecology and human health.

The examples of Iraq and Vietnam give grounds to note the importance of international support for countries devastated by the war, the

implementation of appropriate economic reforms, strengthening the role of the private sector, involving the population in recovery and caring for their well-being, as well as eliminating environmental consequences.

The key factor for a successful recovery is political stability in the country, which is achieved by approving a team of patriot reformers at the head of the country, increasing the transparency of the government's activities, conducting an inclusive policy, and improving the population welfare, balanced social policy.

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## Ensuring media security in the era of information globalization

### Забезпечення медіа-безпеки в епоху інформаційної глобалізації

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#### Abstract

The aim of the study is to identify key threats to media security and ways of their minimization. The methods of statistical analysis, case studies, content analysis, and rating analysis were used in the article. The study established that the biggest threat to media security is the spread of misinformation. This threat is complex because of the ability to spread in multiple ways and channels using a number of tools hybridized by misinformation, including propaganda, fake news, information leakage, manipulation, falsification of media content, etc. The spread of disinformation from Russia and China is of particular concern. Case study proved that disinformation is spread in many ways, and new media only deepen this problem. The consequences of the use of disinformation are public unrest, riots, mistrust of the media, and a threat to democratic values. The main areas of ensuring media security are defined as: application of technological measures, improvement of the legislative framework at the national and international levels, improvement of media literacy of the population through

#### Анотація

Метою дослідження є визначення ключових загроз та напрямів їх мінімізації у сфері медіа-безпеки. У статті використано методи статистичного аналізу, кейс-стаді, контент-аналіз, рейтинговий аналіз. В результаті дослідження встановлено, що найбільшою загрозою для медіа-безпеки є розповсюдження дезінформації. Ця загроза носить комплексний характер через можливість розповсюдження численними способами та каналами з використанням ряду інструментів, які гібридизує дезінформація, у тому числі пропаганда, фейкові новини, витік інформації, маніпуляції, підробка медіа-контенту тощо. Особливу стурбованість викликає поширення дезінформації з боку Росії та Китаю. Проведений аналіз кейс-стаді дозволив довести, що розповсюдження дезінформації здійснюється багатьма способами, а нові медіа лише поглиблюють дану проблему. Наслідками застосування дезінформації є хвилювання населення, заворушення, недовіра до медіа, загроза демократичним цінностям.

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appropriate educational programmes and specialized campaigns. The results of the study can be used by government officials and media content providers to improve media security.

**Keywords:** media security, traditional media, new media, misinformation, fake content, media literacy.

## Introduction

Ensuring media security in view of aggravating conflicts of various origins is the priority for the governments and media content providers. This is explained by the decisive impact of information resources on all processes in modern society, as well as the rapid development of new information technologies (Bahrini & Qaffas, 2019), which has a double impact. On the one hand, innovation facilitates quick access to information for users in real time, thereby enabling timely response to events and planning for the future (Ortiz-Ospina & Roser, 2019). On the other hand, many new ways of information misuse related to information theft, its use by criminals, data distortion, creation of fake content, etc. are emerging (Liu et al., 2021; Pennycook & Rand, 2021). Such actions may have serious implications both at the individual level and at the state level (Vraga & Tully, 2021; Colomina et al., 2021). In the field of media, dishonest use of information can be aimed at influencing the election process, spreading propaganda, provoking public unrest, and intimidating the population (Tandoc, 2019; Brody, 2019).

The main focus of the study is the problem of misinformation, as it is complex because of a large number of ways of distribution and serious implications for society and the state. In addition to the traditional ways of spreading disinformation (in person, in television news), new digital media create additional space for the spread of unreliable data. Disinformation hybridizes such threats as propaganda, fake news, information leakage, manipulation (Treverton et al., 2018). The large volumes of digital information and the uncertainty of the human factor make it almost impossible to develop a single practical approach to combating

Основними напрямками забезпечення медіа безпеки визначено: застосування технологічних заходів, удосконалення законодавчої бази на національному та на міжнародному рівнях, підвищення медіа-грамотності населення через відповідні освітні програми та спеціалізовані кампанії. Результати дослідження можуть бути використані урядовцями та провайдерами медіа-контенту для покращення системи забезпечення медіа-безпеки.

**Ключові слова:** медіа-безпека, традиційні медіа, нові медіа, дезінформація, підроблений контент, медіа-грамотність.

disinformation and ensuring media security in real time (Zhang et al., 2022).

Concrete examples can help to understand the harmful effect of misinformation. Thus, Colomina et al. (2021), examining the impact of disinformation on democratic processes and human rights around the world, reveal the role this phenomenon played during the spread of the COVID-19 pandemic. In 2020, between January 20 and February 10, 2 million messages were distributed on Twitter, which made up about 7% of the total number of messages on the social network, and spread conspiracy theories about the coronavirus. This contributed to growing anxiety among the population, who did not know where to look for truthful information, and even more, it contributed to the public's disregard for safety rules, which put many lives at risk. Gunther et al. (2018) performed calculations regarding the impact of misinformation on the 2016 US presidential election. As the scientists note, a large number of messages demonizing the candidates and containing distorted facts were spread through all the main means of information dissemination (television, radio, social networks). The researchers note that if their estimates are even remotely accurate, the effect of spreading such messages was enough to influence the results of the vote, which was very close.

The researchers study various technological means of combating the abuse of media content (Lian, 2009; Bindu et al., 2018), as well as legislative aspects in this area (Marsden et al., 2020) and ways to improve public awareness (Shen et al., 2019). At the same time, the researchers most often study individual aspects of the problem or, on the contrary, studies cover information security as a whole. This study



contains a comprehensive analysis of threats to media security and determines directions for its provision.

The aim of the article is to identify key threats and directions for their minimization in the field of media security. The aim of the article involved the fulfilment of the following research objectives:

- Analyse media security threats, in particular, disinformation as the main threat and its components (propaganda, fake news, information leakage, manipulation, forgery of media content);
- Conduct a case study of individual cases of media security violations;
- Determine key areas of media security.

Accordingly, the research structure consists of the following subdivisions:

- 1) Analysis of threats - the subsection provides for the analysis of key threats to media security, the main of which is disinformation, which includes, among other things, their main characteristics, goals, ways of distribution.
- 2) Case studies of disinformation cases - at this stage, the countries that are the main actors in conducting global disinformation campaigns are identified, as well as individual examples of the use of technologies to spread disinformation, for example, deepfake, collection of user data, phishing attacks.
- 3) Regulatory measures to combat disinformation - the last section reveals the essence, advantages, disadvantages and directions for optimization of the latest EU legislation related to the fight against disinformation, and also contains statistical data on the values of Media Freedom Score and Media Literacy Index in 2022 and Most used media to access news in Europe.

## Literature Review

Media security is a relevant issue, especially because of the new risks associated with digital technologies. This entailed the emergence of the concept of “new media”. Dhiman (2023) reveals the essence of new media as a digital form of communication and dissemination of information through the Internet and social networks. Temmermans et al. (2022) note that deepfake techniques enable creating near-realistic media content. Derner and Batistič (2023) report that the new platform ChatGPT,

which has gained high popularity among consumers, is capable of generating malicious text and code, creating unethical content, disclosing confidential information, facilitating fraudulent schemes, and collecting information.

Most often, researchers are concerned about the spread of fake news, misinformation, propaganda, and the leakage of confidential information. These malicious actions are often associated with cyber-attacks aimed at violating the integrity of the information system. ALSaed and Jazsar (2021) identify the most common types of cyberattacks: phishing, malware, malicious domains, and fake news. The researchers propose micro-level countermeasures, while Nagasako (2020) examines the impact of cyberattacks at the interstate level, global cyberattacks committed by individual countries. The devastating consequences of such cyber-attacks can manifest themselves through their influence on election results and the threat to democracy, which is why such operations are defined in the article as “misinformation”. Caramancion et al. (2022) also wrote on the approach to disinformation as one of the main cyber threats, noting that the lack of inclusion of disinformation in the glossary of cyber threats is a shortcoming of modern standards in the field of cyber security. Petratos (2021) concludes that misleading information is not a cyber threat in itself, but poses cyber threats to business, healthcare, mass media, financial markets, electoral process, and geopolitical space.

Along with misinformation, fake news are often considered in the academic literature. Rodríguez-Ferrándiz (2023) defines this concept and analyse the perception of fake news by the public. Sousa-Silva (2022) recognize the dangers of fake news related to two factors: the threat to democracy and the difficulty of detecting such news.

So, the realized media security threats can have a global effect. Researchers often touch on the topic of the impact of media threats on the election process and their role in the development of information warfare. Pyrhönen and Bauvois (2020) note an increase in threats to media security during elections, when the community expects the expose of certain misdeeds of political elites, which creates a fertile ground for various smear campaigns. Tan (2020) offers his own election management digital readiness index. Kumar (2022) discusses the concept of information war, examining the adequacy of international law to counter it.



## Methodology

### *Research design*

In accordance with the tasks set in the study, the content of the study is divided into subsections that contain an analysis of threats to media security, a statistical review and case studies of cases of media security violations, and directions for ensuring media security. In the first stage of research using content analysis, key threats to media security were identified. This made it possible to establish a list of such threats, to briefly describe their essence, to outline the motivation of attackers to implement threats and to determine the most complex threat (disinformation), which combines a number of other tools (propaganda, fake news, information leakage, manipulation, forgery of media content, etc.).

At the second stage, using statistical analysis, the number of disinformation campaigns conducted during 2016-2020 was determined by the main actors who carried out such campaigns. It has been established which countries most often carried out disinformation campaigns, as well as in which territories they were implemented. With the use of a case study, several examples of the use of disinformation for the purpose of transforming public opinion were revealed. The types of disinformation that were considered in the case study are deepfake technologies and the use of personal data for the purpose of conducting phishing attacks.

The third stage, during which the method of content analysis was used, reveals the key regulatory measures to combat disinformation. At this stage, the main attention is paid to the analysis of the legal framework of the European Union, in particular, to such documents as the General Data Protection Regulation (GDPR), the Proposed Law of the European Union on Artificial Intelligence (EU Law on Artificial Intelligence), the Law on Digital Services (Digital Services Act, DSA). The analysis made it possible to identify the main tasks of the documents, their advantages and disadvantages, as well as to suggest directions for improvement. In addition, at this stage, the need to increase media literacy and public awareness of disinformation, especially in countries where socio-political processes have been significantly affected by disinformation and information warfare, is noted. In this context, the results of

using the ranking method to determine the Media Freedom Score and the Media Literacy Index are presented. Media Literacy Index 2022 includes the following groups of indicators (which, in turn, contain several subindexes): Media Freedom indicators (40%), Education indicators (45%), Trust (10%), New forms of participation (5%). The weight of each group of indicators in determining the integral value of the media literacy index is indicated in parentheses. Also, with the use of statistical analysis, the shares of the European population using one or another channel for receiving news, namely television news, online news platforms, radio, social media and print publications, are given.

### *Sampling*

The sample consists of European countries because the European Union was the most active in the field of legislative support of media security. During the analysis of the indicators Media Freedom Score and Media Literacy Index and Most used media to access news in Europe in 2022, data from 41 European countries were used, the full list of which is presented in Figure 2. During the analysis of the legislative framework, documents in force in the countries were used in the EU.

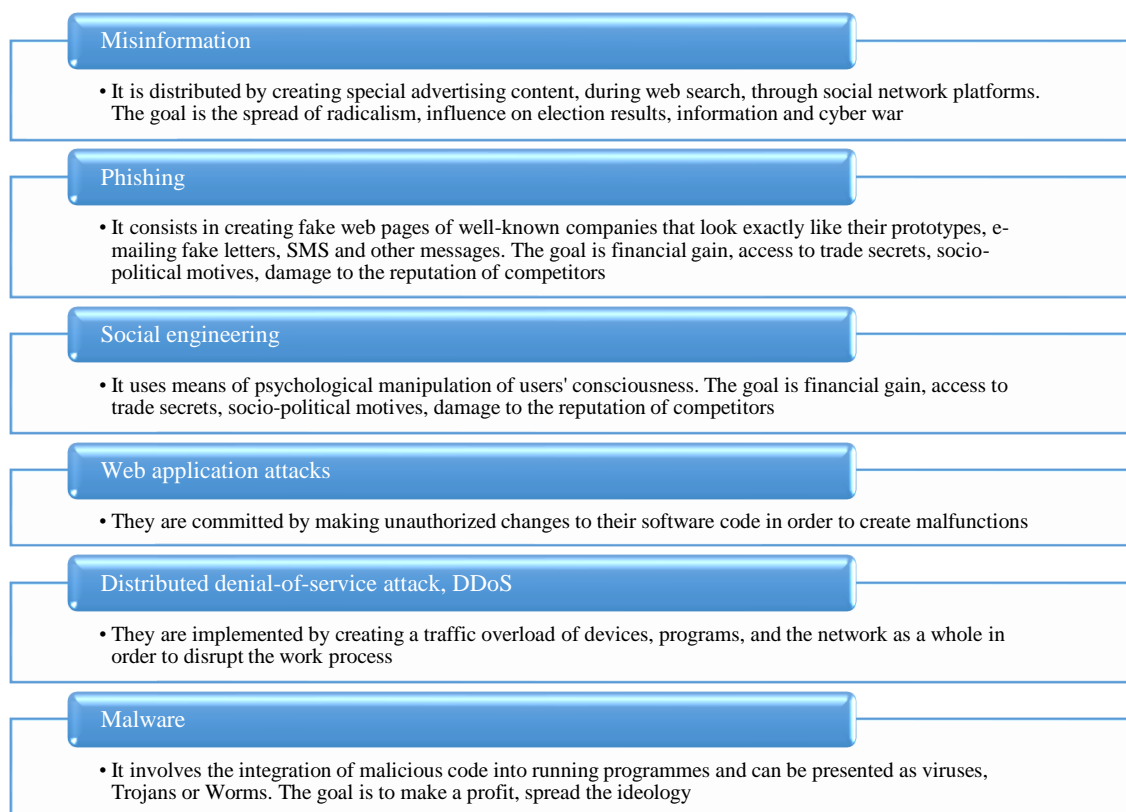
### *Information background of the research*

Academic periodicals of different countries, the legislative framework of the European Union, and data from the report The 2022 Media Literacy Index Main Findings and Possible Implications were used as the background information for the research (Lessenski, 2022).

## Results

### *Analysis of threats*

Ensuring media security involves awareness of the entire range of threats that can disrupt it. However, the rapid development of technologies in the modern world causes an increasing number of new challenges. Therefore, recognizing the need for permanent monitoring of the information sphere regarding the emergence of new threats, it is advisable to focus on those threats that can cause the most significant negative geopolitical, social, and economic consequences. The main threats are presented in Figure 1.



**Figure 1.** The main threats to media security  
 (built by the author according to Caramancion et al. (2022))

Disinformation occupies an exclusive place among the threats presented in Figure 1. In the author's opinion, the mentioned threats (with the exception of disinformation and social engineering) relate mostly to the need to strengthen cyber security in the media sphere. In other words, the countermeasure against these threats should be aimed at improving the security and stability of technological solutions in the field of media against unauthorized interference. Many countries have a regulatory framework for countering such interference, but it is quite possible to detect them. At this time, disinformation is a complex phenomenon: it can spread through various channels even without the use of the latest technological means, although it acquires more forms with their use. Disinformation is difficult to detect, especially if it is not an outright deception and presented as the views of individuals or parties. Besides, the international and national legislation of countries have insufficiently defined or missing important aspects regarding countering misinformation.

So, disinformation should be considered as a key threat to media security. It combines a number of such tools as:

- propaganda;

- fake news;
- information leakage;
- manipulations;
- fake media content.

The complexity of the phenomenon of disinformation is expressed through the possibility of its realization through the information leakage by using cyber-attacks, the role of disinformation in information war, as well as significant influence on political processes through the transformation of public views. Disinformation can cause such serious consequences as the loss of public trust in the media, social unrest, and influence on democratic processes.

#### *Case studies of cases of disinformation*

The destructive impact of disinformation can be demonstrated by analysing cases in which disinformation campaigns played a significant role. Studies (Nagasako, 2020), analytical reports (Lublin Triangle Perspective, 2022) and statistics (OECD, 2022) testify that Russia is most often the main actor in conducting global disinformation companies, followed by China. The impact of Russian disinformation campaigns

has particularly grave implications in the context of Russia's large-scale invasion of the sovereign territory of Ukraine on February 24, 2022. The use of deepfake technology to influence social sentiments in Ukraine can be an illustrative case of the use of disinformation tools. Although the origin of the video has not been established, it is believed to have been part of an information war waged by Russia. In the video, Ukrainian President Volodymyr Zelenskyi allegedly tells Ukrainian soldiers to give up the struggle and surrender the war. The record had clear signs of a fake, because the video was of low quality and it was easy to recognize a fake (Kumar, 2022; Papanis et al., 2014). The purpose of its distribution was to sow panic, create public unrest in the country, and it was also intended to sow doubts about the credibility of future addresses of the President.

In addition to deepfake technology, hackers also widely use the collection of user data (for example, collected by advertisers) that they obtain through data leaks. Information can be used to increase tension in society, because the data obtained is directed to the development of tools that deepen human prejudices. Moreover, hackers use personal information to commit phishing attacks, as happened before the 2016 US presidential election, when Russian cybercriminals hacked into the email of a US government official to obtain and release information (Kumar, 2022). The use of bots to

spread disinformation in social networks is gaining popularity.

#### *Key areas of ensuring media security*

The main measures to ensure and strengthen media security can be divided into the following areas:

- technical measures;
- improvement of the national and international legal framework;
- improvement of user media literacy and awareness.

Technological measures include various methods of media content encryption during its reception, storage and transfer, watermarking and fingerprinting methods, digital signatures, certificates, secure communication protocols, etc. The effectiveness of using these tools depends on the involvement of qualified cyber security specialists, as well as the readiness to make appropriate investment.

The strengthening of threats of various origins, including hybrid ones, necessitated the development of legislation on countering misinformation. The EU activity, which conducts an effective policy to combat misinformation, deserves special attention. In this regard, it is appropriate to analyse the latest EU legislative acts in this area (Table 1).

**Table 1.**  
*Recent EU legislative acts on combating misinformation*

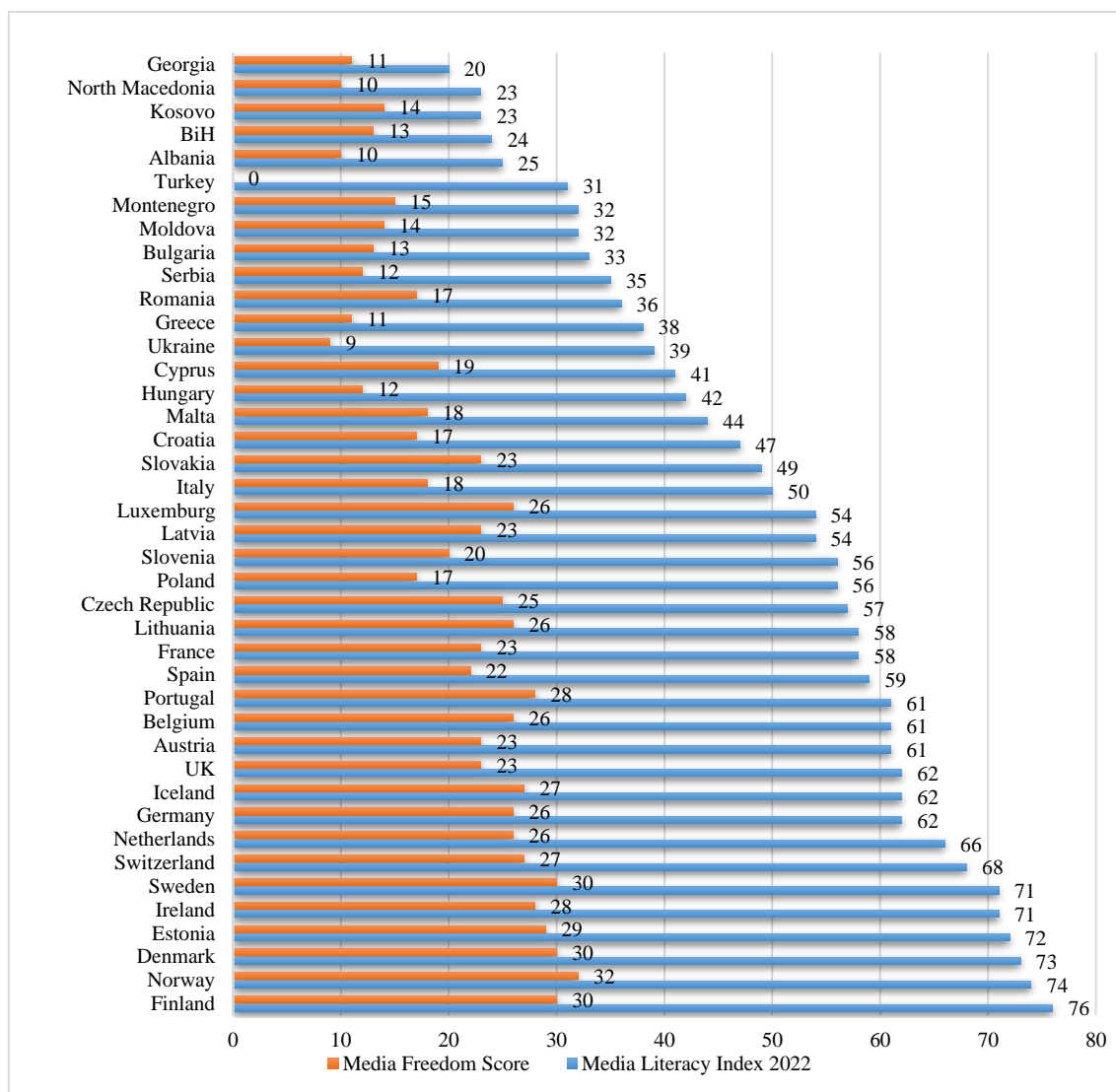
Legislative act	Purpose	Advantages	Disadvantages	Areas for improvement
General Data Protection Regulation (GDPR)	Protection of privacy and regulation of campaigns for personal data processing and protection	Obliges companies to integrate privacy into the operation and creation of new systems. Possible positive impact on reducing the sale of personal data to brokers. Large fines for breaking the rules encourage compliance. Regulations governing the use of deepfake technology	Difficulties in implementing the requirements of the regulation, unregulated issues related to information attacks	To increase efficiency, companies should implement effective internal policies, implement reliable technological security measures, train personnel and cooperate with experts
The EU Artificial Intelligence Act (EU AI Law)	Regulation of the use of artificial intelligence technologies for consumer protection	Distribution of risks by levels and application of different measures for each level	Insufficient requirements for transparency, lack of their combination with a clear sanction for non-compliance	Strengthening requirements for transparency, introduction of sanctions for abuse of artificial intelligence

Digital Services Act, DSA	Combating misinformation	Demand that technology companies shall be held liable for content created by users and enhanced through the application of algorithms on their platforms. Demand to remove inappropriate content. for Transparency requirements	Determining the balance between responsibility for content and freedom of expression. Balancing transparency and privacy requirements. Difficulties during realization and implementation.	Creation of conditions for productive cooperation between regulators and companies, improvement of crisis protocols
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Source: created by the author based on Kumar (2022)

The EU has taken a number of decisive actions in the field of combating misinformation, but the current legislation needs constant revision and improvement because of the rapid development of technologies and the increased number and scale of threats. Besides, international norms should be supplemented by the development of legislation in the field of media security at the national level, because the media sphere of

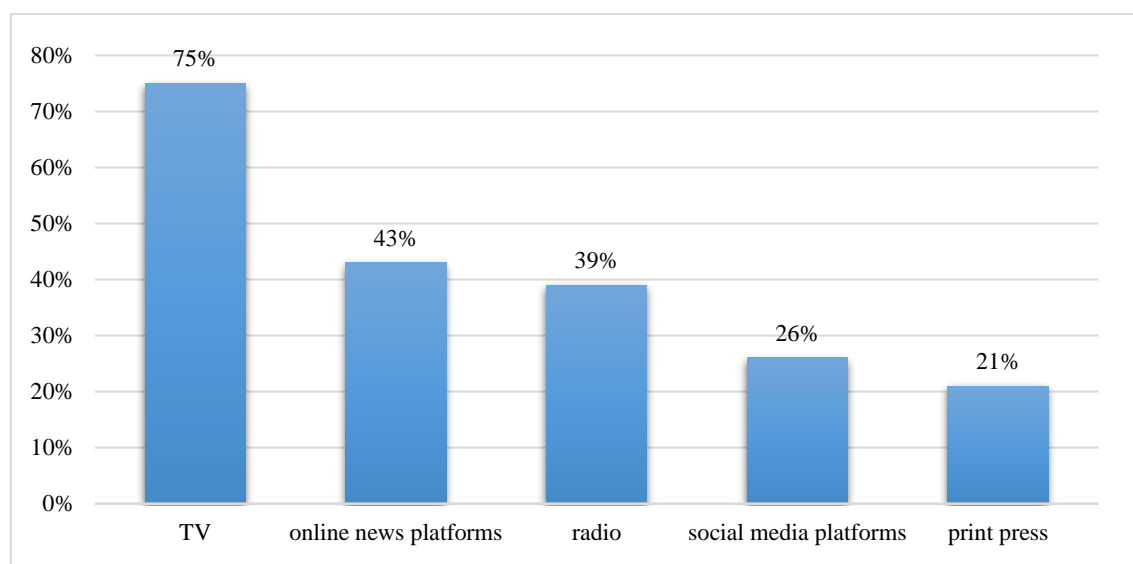
different countries has its own peculiarities that must be taken into account. The need to conduct recurrent campaigns for Internet users and employees of companies in the field aimed at increasing their awareness and media literacy is worth noting in this context. Figure 2 shows the values of two important indices in this area for European countries, namely Media Freedom Score and Media Literacy Index.



**Figure 2.** Media Freedom Score and Media Literacy Index 2022  
(built by the author based on Lessenski (2022))

The greater the value of the indicators shown in Figure 2, the higher the country's position in terms of media literacy and media freedom. The list is headed by the Scandinavian countries - Finland, Norway and Denmark. At this time, countries such as Ukraine, which is a vivid example of a state that has been significantly affected by information war, is very low on the list for both indices. Therefore, it is critically

important for the state to promote the development of responsible journalism and improve media literacy of the population, encourage it to critically evaluate the proposed content from various sources, especially in view of the full-scale invasion of Russia into Ukraine. Sources through which Europeans get news and their percentage of popularity are shown in Figure 3.



**Figure 3.** Most used media to access news in Europe (built by the author based on Lessenski (2022))

The majority of users prefer television, although a significant share of the population increasingly uses new media, which necessitates close attention to aspects of their regulation. Television is heavily censored, and new media can be virtually unmanageable. This once again emphasizes the development of relevant legislation, means of technological countermeasures against disinformation and other threats, as well as promoting the improvement of media literacy. Improving media literacy will be most effective if special educational programmes are introduced in schools and universities. This will contribute to the regular assimilation of the necessary skills, which should be updated and reinforced through regular media awareness campaigns.

## Discussion

The results obtained during the study of the legislative aspects of ensuring media security are consistent with those of Nagasako (2020), who focuses on the need for the development of international norms and rules of countering misinformation. A problematic aspect in the development of legislation in this area is combating disinformation while preserving

freedom of speech. An emphasis on the need to develop national legal standards along with international ones is common in the studies.

The findings on improving media security through improved media literacy and the development of responsible journalism are consistent with those of Dhiman (2023). The researcher notes the need to develop critical thinking, conduct fact-checking, educational campaigns, develop responsible journalism, ensure ethical standards in the media, etc. The author of this article reveals these and other activities are elements of media literacy.

Temmermans et al. (2022) described an approach to overcome the challenges of deep fakes and non-fungible tokens. The essence of the method is to develop a modular scalable structure containing various protected media applications. Derner and Batistič (2023) provide strategies for mitigating the negative effects of using ChatGPT, including tagging data, advanced content filtering, scanning raw data, or using artificial intelligence to filter it. ALsaed and Jazzar (2021) propose solutions to mitigate cyber-attacks: developing general guidelines for teleworkers; rapid risk management



mechanisms; fight against infodemic campaigns; international cooperation; use of software tools; application of safe and updated systems. Unlike these studies, the author's work does not dive deep into the technological aspects of media security, it focuses on legislative issues, problems of insufficient user awareness and media freedom.

Caramancion et al. (2022) conclude that cyber threats, where disinformation is identified as one of those threats, play on human weaknesses. In order to counter these threats, the cybersecurity content of manuals must be regularly updated, and disinformation must be viewed through the prism of the harm it causes to individuals, organizations, and governments. In general, agreeing with the researchers' conclusions, the author of this article is inclined to separate disinformation from cyber threats. First, disinformation is not only spread in cyberspace, and second, it rather uses cyber means for its spread, but is not one of them.

Petratos (2021) provides recommendations for countering the cyber risks of misleading information: creating digital transformation strategies; recognition, identification and assessment of cyber risks; establishment and adoption of standards and norms; use of various tools to combat misinformation; partnership development; a sufficient amount of investment in measures to combat misinformation. Researchers consider disinformation as a factor that can create cyber risks for various actors in cyberspace. In the author's opinion, disinformation does not create cyber risks, but uses their potential to spread its harmful influence. Therefore, disinformation is the primary source of problems, and countermeasures should include not only countering cyber threats and strengthening technological characteristics, but also legislative, social, educational, and psychological aspects.

Rodríguez-Ferrándiz (2023) identified a trend in the spread of rumours as "virality" and "memeticity" that prevail over the credibility of the source and even the credibility of the reported event. The motivation that drives users to spread the news depends not so much on its accuracy, but on the tastes, moods of the community, as well as party support. These findings support the findings of this study regarding the need to improve media literacy.

Sousa-Silva (2022) note the availability of technological means to detect fake news, but find a lack of a proper mechanism in this area. The

researchers believe that forensic linguistic analysis is an effective way to detect fake news. In the author's opinion, given the high speed of information dissemination, media literacy skills can be more useful, and forensic linguistic analysis should be used in some difficult cases.

A number of studies focus on the problems of spreading disinformation during elections. Pyrhönen and Bauvois (2020) analyse the nature of the spread of disinformation during elections, while Tan (2020) offers his own electoral management digital readiness index. The index provides an assessment of the legal framework, strengths and weaknesses of election management bodies, and includes criteria such as the type of election management model, the rules regulating online campaigns and disinformation, the degree of confidence in the rule of law, and technological aspects of digital economy readiness. In the author's opinion, the index proposed by the researcher can provide an approximate estimate of the readiness of the election process management, but it has limitations, because this process is influenced by too many factors. The author also believes that the assessment of the readiness of the election management should include the readiness not only of the governing bodies, but also of the citizens, which involves, among other things, in their ability to recognize disinformation.

Studying the problems of spreading disinformation during the information war, Kumar (2022) notes the Ukrainian case of the large-scale invasion of Russia on the territory of Ukraine. The researcher identifies the inadequacy of the current regime of international law in the field of combating disinformation as the main problematic aspect, and therefore the main way of combating it is to improve the legal system at the international level. This point is worth agreeing, because the development of legislative aspects regarding the introduction of certain rules and responsibility for their non-fulfilment is the most effective way of ensuring media security, and should be accompanied by the improvement of the technological resources and awareness.

## Conclusions

The conducted analysis emphasizes the need to create a comprehensive approach to ensuring media security in the era of information globalization. The main threats to media security were determined as a result of the study, the most significant of which is disinformation. Disinformation is a complex phenomenon and

can spread through numerous channels even without the use of the latest technological means. The latter contribute to acquiring an increasing number of forms of realization. Disinformation combines propaganda, fake news, information leakage, manipulation, fake media content. The complexity of the phenomenon of disinformation is manifested by the possibility of implementing it through the information leakage using cyber-attacks, the role of disinformation in information war, and a serious impact on socio-political processes.

Russia and China cause greatest concern regarding the volume of disinformation and propaganda being spread, especially in the context of Russia's invasion of Ukraine. Case studies of cases of disinformation gave grounds to note the variety of ways of its implementation, including through the latest deepfake technologies and phishing attacks.

The conducted analysis determined the main areas of ensuring media security, which include: technical measures, improvement of the national and international legal framework, improve media literacy and user awareness. The measures proposed in each of the areas will increase the level of media security in the countries, in particular by making the fight against disinformation more effective. The prospects for further research may be developing a comprehensive programme for improving the media literacy of the population in terms of different age groups and subjects of the implementation of the programme.

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## Gender semiology in folklore traditions: Russia, China and Adygea


### ГЕНДЕРНАЯ СЕМИОЛОГИЯ В ФОЛЬКЛОРНЫХ ТРАДИЦИЯХ: РОССИЯ, КИТАЙ И АДЫГЕЯ

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#### Abstract


The article presents an analytical analysis of the linguosemiotic features of the female portrait in the folklore fund of the linguocultures of Russia, the North Caucasus and China in the aspect of the intergender dichotomy "male-female" as the implementation of the policy of "soft power" of the ethnos to preserve its vitality. Hypothesis: The dichotomy of masculinity and femininity in traditional culture is presented as the result of the interaction of ethno-cultural strategies of the ancestral cult, in which the role of a woman is defined as the keeper of the knowledge of the people with the competencies of a housewife who needs help and care from a man. The relevance of the study is due to the growing research interest in the vitality of traditional cultures, which continue to influence the lives of modern women. Chinese, Adyghe and Russian folklore for the first time becomes the object of comparative analysis of the linguosemiotic


#### Абстракт


Статья представляет аналитический разбор лингвосемиотических особенностей женского портрета в фольклорном фонде лингвокультурах России, Северного Кавказа (Адыгея) и Китая в аспекте межгендерной дихотомии «мужское-женское» как реализация политики «мягкой силы» этноса для сохранения его витальности. Гипотеза: Дихотомия маскулинности и феминности в традиционной культуре представляется как результат взаимодействия этнокультурных стратегий культа предков, в котором роль женщины определяется как хранительницы знаний народа с компетенциями хозяйки дома, которая нуждается в помощи и заботе со стороны мужчины. Актуальность исследования обусловлена ростом исследовательского интереса к витальности традиционных культур, которые продолжают влиять на жизнь современных женщин.

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characteristics of the image of femininity in the form of "feminine" folkloratives identified for the first time. The methodology uses a linguosemiotic approach and the theory of complex metagraphs in modeling the speech-behavioral gender matrix of women through the prism of folklore. The results show that folklore is a reproducible mechanism of "soft power" of gender regulation in the ethno-cultural practice of folk art.

**Keywords:** semiotics of the female image, traditional psycholinguistic characteristics of a woman, "feminine" folklorative, semiotization, signs of femininity, Adygea, China, Russia, ethno-cultural mechanism of "soft power".

## Introduction

Semiotic verbalization of the gender stereotype of femininity actualizes the experience reflected by the collective consciousness (Xiaoxiao, 2022), which plays a key role in understanding the history of the development of the linguistic picture of the world in traditional communities, which include speakers of Adyghe, Chinese, Russian linguistic cultures with the dominant standards of traditional society. At the same time, the uniqueness of the role of verbal markers in the folklore subcorpus from this point of view practically remained beyond the attention of researchers. As a rule, the situation of the vitality of tradition was considered in the situation of distraction and separation of the ethnic group (Kudaeva, 2021; Ruan, & Karabulatova, 2021).

In this regard, "each element, being included in the system, acquires a new quality, a new significance, i.e. system properties, therefore it is logical to assume that each reference word of the folklore text receives an additional semantic load determined by the structural properties of the "folklore picture of the world" (Khrolenko, 1992: 19).

Thus, for speakers of the Abkhaz-Adyghe languages, which include Adygs, Abkhazians, Kabardians, Circassians, the study of this fragment of the traditional linguistic picture of the world is the most important key to understanding the specifics of their ethnocultures (Bizheva 2017; Gutov, 2022; Unarokova, 2019). At the same time, the Chinese traditional picture of the world reflects a slightly different view of femininity and the tasks of women in

Китайский, адыгейский и русский фольклор впервые становится объектом компаративного анализа лингвосемиотических характеристик образа женственности в виде впервые выделенных «феминных» фольклоративов. Методология использует лингвосемиотический подход и теорию сложных метаграфов в моделировании речеповеденческой гендерной матрицы женщин через призму фольклора. Результаты показывают, что фольклор есть воспроизводимый механизм «мягкой силы» гендерного регулирования в этнокультурной практике народного творчества.

**Ключевые слова:** семиотика женского образа, «феминный» фольклоратив, цифровая лингвофольклористика, Адыгея, Китай, Россия, этнокультурный механизм «мягкой силы».

ethnoculture, thanks to the verification of gender policy in Chinese society for thousands of years and the acceptance of the diversity of gender roles, which is demonstrated by the traditional Beijing opera (Chen, 2020). At the same time, the Russian gender line, despite statements of adherence to tradition, reveals lability and variability under the influence of external factors (Lezhnina, 2014). Femininity in the conceptual linguistic picture of the world of the traditional ethnosocium is one of the forms of reflection of mentality and ethnic consciousness in relation to a woman, explicating the source of ethnic identity of various forms of spiritual life of the traditional community.

## Literature Review

The dispute about the mechanism of gender in human sociocultural practice is predetermined by interest in studying the role of social, biological, psychological and ethno-cultural factors in the formation of gender stereotypes in a particular society (Dicke et al., 2019; Gasanova et al., 2016; Anah, C., & Okere, M., 2019; Courteau, 1991; Hongru, 2022; Khachmafova et al., 2017; Novikov et al., 2023; Xiaoxiao, 2022; Vykhristyuk, 2022, etc.). The relevance of the study is predetermined by the choice of a semiotic approach to the study of the category of femininity as a prototype of a woman in traditional linguoculture, which allows us to identify and describe stable ideas about gender behavior and semiotic characteristics of a woman determined by the ethnoculture of the Adygs, Chinese and Russians.



The study of the features of the formation of gender stereotypes in the ethnosocium, depending on cultural patterns, contributes to the theoretical understanding of the features of the formation of an axiological picture of the world. Scientific research aimed at describing cultural codes within the framework of linguistics focused on the anthropocosmos (Belousova, & Bairamova, 2020; Bizheva, 2017; Bulegenova et al., 2023; Guketlova, 2009; Tintin, 2022; Khakuasheva, 2014; Maslov, 2020; Ryko, 2017), as well as the study of gender in language and discourse (Gasanova et al., 2016; Khachmafova et al., 2017; Xiaoxiao, 2022; Chen, 2020; Vykhristyuk et al., 2022) confirm this position.

As a rule, the literary form of the language levels the genetically primary properties of identity, revealing the determinism of the ethnic worldview of the language. In this regard, it is preferable to analyze paremiological, phraseological and folklore material, where the internal form of the language has been preserved to a greater extent (Bizheva, & Ulakov, 2011; Vykhristyuk et al., 2022).

Consider gender-typed fit the theory gender schema (Dicke et al., 2019; Kurochkina & Shakhmatova 2014; Starr & Zurbruggen 2017; Su et al., 2009), which evolving perceptions of it standards in modern society with sustainable traditional paradigms (Fleming & Agnew-Brune, 2015).

Semiotic markers of nonverbal human behavior are aimed at translating psychophysiological standards of response in a particular society through body movements and voice (Eckland et al., 2019; Unarokova et al., 2023). The principle of the influence of the processes of conceptualization and mediatization is fundamental for the formation of the cognitive matrix of the ethnosocium on the formation of the gender conceptsphere in traditional linguistic cultures (Starr, & Zurbruggen, 2017).

The feminine folklore of TV is embedded in the speech-behavioral matrix (Karabulatova et al., 2015), reflecting the value system of an ethnic collective, which may well be represented as a kind of cognitive map (Olyanitch et al., 2019), "the dimensions of which reflect the semantics of concepts and related values. This can be done if you know (i) how to define map dimensions and (ii) how to distribute concepts in these dimensions" (Samsonovich, & Askoli, 2007: 1).

## Materials and methods

Based on this postulate, we used as a practical material lexical and phraseological unit containing ethnocultural signs and characteristics inherent in the female image, extracted from the folklore of the Adyghe corpus of the language, as well as folklore of Chinese and Russian languages, which gives grounds to identify universal features of femininity characteristic of traditional ethnic communities in its implicit opposition to masculinity.

Based on the selected typological characteristics, the "feminine" folklorative was first identified, which means the collective image of the feminine principle in traditional folklore. The introduction of the term "folklorative" makes it possible to formalize the linguocognitive characteristics of the traditional gender code represented in the folklore subcorpus of languages with traditional cultural dominance.

A detailed list of thematic folklore markers of femininity was compiled thanks to such digital platforms as Adyghe Corps, Semantic Scholar, RSCI, Google Scholar and such special platforms as the Casket of Fairy Tales, with descriptions of specific feminine folkloratives that are contained in the folklore of traditional linguistic cultures. The search queries included the following keywords: the magic wife, Chinese fairy tales, Adyghe fairy tales, North Caucasian Nart epic, Circassian and Russian fairy tales, a hero woman, a swan princess, a peony girl, a birch girl, etc. This made it possible to identify about 198 documents with keywords characterizing femininity in the repertoire list. At the same time, these feminine folkloratives were grouped according to the methods and types of representation, which made it possible to build a multigraph system for the implementation of the "soft power" of the ethnos in the formation of a reproducible speech-behavioral gender matrix in the folklore.

Feminine folkloratives are considered based on the dualism of masculine and feminine in their polar realizations in oral folk art in traditional cultures. The methodology of the analysis is based on the principles of consistency and anthropocentrism. To achieve this goal, the following scientific research methods were used: descriptive method (observation, typologization, interpretation and generalization); semiotic analysis, which made it possible to identify clusters of signs that actualize the stereotypical image of a woman in traditional linguocultures; linguoculturological analysis, which identified

and described gender-marked phraseological units as code representatives of femininity in traditional linguocultures.

## Results and discussion

Semiotic grounds for studying the gender stereotype of femininity in traditional linguoculture allowed us to establish and describe stable, determined by the analyzed ethnolinguocultures, ideas about the external, behavioral and status-conditioned characteristics of a woman, which we consider as signs of femininity in the "feminine" folklore we highlight. The need to distinguish such a terminological unit as a folklorative is due to the very fabric of the folklore work, which is characterized by stable imagery. Under folklore,

we propose to designate a folklore-conditioned stable image that has typological features that characterize the speech and behavioral standard in a particular ethnic society. In turn, the folklorative can be referred to as the sphere of animated characters – subjects, (such as: the red maiden – in the Russian folklore tradition; the blue-eyed peacock – in the Chinese folklore tradition; slender as a chamois – in the Adyghe folklore tradition, etc.), and inanimate objects (such as a painted portrait, a mountain river, an extinct stove, etc.). In addition, folkloratives, as a rule, have dual characteristics, reflecting the traditional duality of the world. Thus, the feminine folklore as a stable image of femininity in folklore is contrasted with the masculine folklore as a stable image of masculinity in the folklore subcorpus (fig.1).

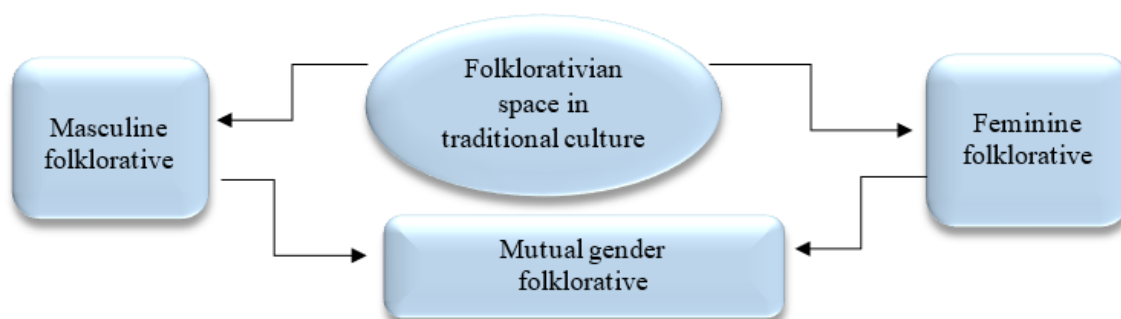


Fig.1. Systeme of gender in traditional folklore.

At the same time, female power often exceeds male, which is reflected in both Adyghe and Chinese, Russian folklore. In this connection, images with features of mixed gender appear in traditional folklore, which ensures the development of a dramatic conflict in a folklore work due to the mixing of gender roles (Fig. 1).

Despite the criticism of the constants of traditional culture, it is impossible not to admit that traditional cultural codes have preserved the recognition of the power and worship of female power, as an originally laid tradition of feminism, which has preserved echoes of the knowledge of matriarchy. So, the Russian *Marya Morevna* / *Tsar-Maiden* / *Blue-eyed* has not only beauty, but also wisdom, remarkable physical strength, witchcraft magic, which allowed her to defeat *Koshchei the Immortal* himself. She is the daughter of the ancient Slavic goddess *Mary/Morena*, who ruled cold, winter and death (Dobrynya, (n/d)). It is not by chance that her daughter *Marya Morevna* acts as a warrior, a hero, as the ancient Russian forerunner of feminism: her husband *Ivan* becomes a householder, and the virgin-hero *Marya* herself

(not *Maria*, namely *Marya*, which has a reference to the pronunciation of the variant of the name *Morena* / *Mara* – Z.Kh., etc.) goes to war.

Russian fairy tales usually refer to a man as *Ivan*, but the Russian female anthroponymicon reveals a variety: *Marya Morevna*, *Marya the artist*, *Nastasia Mikulishna*, *Vasilisa the Beautiful*, *Vasilisa the Wise*, *Elena the Beautiful*, *Tsar Maiden*, *Alyonushka*, *Varvara-beauty long braid*, *Snow Maiden*, etc.

The Adyghe fairy-tale anthroponymicon is even more diverse and variable:

*Diguliph* - the daughter of the Abkhazian god of fertility *Digul*;  
*Dzagash* (variants: *Dzeguashch*, *Dzegashch*, *Zagvash*) – the woman-leader of the army;  
*Kiyshchkyhan* (Chishkhan, Chishchkhyan) – the patroness of blacksmithing crafts, etc.

If the European man of that time defined the world from the angle of religion and faith in God, then the Adygs looked at the world differently, namely, through the prism of the so-called

"Adygeism", which means a comprehensive moral and ethical system of an ethnic group characterized by absolute value, since it served as the main regulator in all spheres of life, subordinating even religious consciousness, which makes it similar to the system of Taoism. These Chinese features appeared due to active cooperation with the Kalmyk princes on the battlefield against neighboring tribes and peoples (Koltsova, 2022). Adygs (Circassians) This is how religion's place in the hierarchy of spiritual values is determined in the proverbial fund: "Religion can be changed, you can't change the nation." Self-identification at the level of belonging to an ethnic group was invariably higher than self-identification by religion. The mythology of the Adygs, imprinted in the monuments of oral folk art, in the past was the main carrier of cultural traditions in the language (Afaunova, 2019).

In Adyghe folklore there is an image of a female hero *Lashin*, who fights with a hero enemy. However, she can not only masterfully wield a club and a sword, but also heal the sick. This shows the strength and power of the feminine principle, which can be both aggressive in overcoming obstacles, and creative, pacifying to recreate balance and harmony. Her name has been characterized as a name with an unclear etymology (Namitokova, 2012), however, some researchers suggest the Turkic etymology of the anthroponym in a distorted version: *Lyachin* "falcon" in the Tatar language (Buhurov, 2018).

In our opinion, we have an interpretation in the direction of interpreting the female name *Lashin* from a male point of view. An interesting fact is that in folklore the falcon acts only as a masculine folklore, as a solar symbol (as in the culture of Ancient Egypt, Ancient Greece, Ancient Russia, etc.). If we look at the falcon among the Slavs, then according to the beliefs of the Slavic peoples, the falcon is a god-the first bird and the first God in the male hypostasis as opposed to the female hypostases in the form of a swan or a duck. In Indian mythology, the falcon is one of the deities that appeared from a lightning strike, and therefore the falcon is a sign of Agni. Ancient Egyptian myths brought to us the image of the god of light and heaven Horus, which is represented in the form of a falcon or a man with a falcon's head. In Arab countries, the falcon is also a symbol of courage, freedom, and the status of masculinity (Morozova, 2021). In this regard, the version about the falcon as the designation of a woman in the Adyghe culture is unfounded. The phenomenon of interlanguage paronymy, implying the sound similarity of

words of two languages, which led to a misunderstanding when trying to interpret the name *Lashin*. This discrepancy with zoomorphic folkloratives reflects the "obscured" etymology of the name *Lashin*, as pointed out by R. Namitokova (1976).

In folklore, the role of a warrior is not ordinary, since tradition ascribes to her the preservation of the biologically predetermined role of a guardian and mother, therefore, the unusual and forced behavior of a woman as a warrior is always emphasized. For example: *Nastasya Mikulishna – polenitsa*, or the hero maiden, the daughter of the epic hero *Mikula Selyaninovich* and became the wife of *Dobrynya Nikitich*. Her speech-and-speech profile is described in the fairy-tale epics "*Dobrynya and the Serpent*"; "*The marriage of Dobrynya*": "*Nastasya Mikulichna's daughter took out of the leather bag of the hero here and began to say these words: 'If the hero is old, I will cut off his head. If there is a young hero, I will take him prisoner. If love appears in me, I will get married. If I don't love you, I'll squeeze in one palm and press the other on top...'*" (Russian folk tale "Dobrynya" (n/d)).

The Adyghe warrior woman *Lashin*, the wife of the boastful, arrogant young dzhigit Kurgoko, also acts similarly: her strength is equal to the strength of three men, and her figure resembled a jug, she could throw a cow over the fence with one hand. She enters into battle with China Khan (Shartanov, 1977). Regarding pragmatic labeling with the help of symbol names, it can be noted that anthroponyms do not always correlate with a real historical character. Although some researchers believe that either Genghis Khan's troops, Tatar tribes, or Nogai neighbors are hiding under the name of Kitai Khan (Buhurov, 2018). Reconstruction of events recorded only in the oral tradition is difficult. However, the facts of the use of the Buddhist 12-year animal cycle in the culture of the North Caucasus and the activity of the Great Silk Road for several centuries in this territory were naturally reflected in folklore. The creation of branches of the Great Silk Road has made a great contribution to the development of the culture of the North Caucasus (Koltsov et al., 2019; Tikunov et al., 2018).

Such symbolic names (*Lashin*, *Kitai-khan*) can create a narrative of understanding the intersections of Chinese, Russian and Adyghe folklore as a mythopoetic history of intercultural communication of these peoples, so far apart from each other. So, in Chinese linguoculture, the image of the goddess *Lishan Laomu*, the daughter of the first creative goddess *Nyuva*, is

especially revered. This image of the goddess Lishan is interesting because she is represented in Chinese folklore as the heavenly wife of the northern barbarian prince Xuyuan/ 胥 轩, descendants from this marriage who represented the Shang dynasty (17th-11th centuries. BC) and Zhou (11-221 BC) were able to rule the peoples who lived far to the west. In the image of the holy mother *Lishan*, real and fantastic features were intricately intertwined, which allowed her to be attributed to one of the hypostases of the *Heavenly Mother Guan Yin*. It is quite possible that the images of *Lishan* and *Lashin* have the same basis on the basis of contamination. This is supported not only by the connection of the names *Lishan* and *Lashin*.

Chinese folklore has preserved the names of five warrior heroines, some of them were real historical persons who were sacralized in the Chinese fairy tale tradition:

- 1) *Hua Mulan*/ 花 木 蘭, whose image has been repeatedly filmed by the Disney film company. This image echoes the Russian beauty Nastasya Mikulishna, who also changes into men's clothes and goes to battle;
- 2) *Fan Lihua*/ 樊 梨花 is a female warrior, a popular image in traditional Chinese opera. It acts as an allegory of feminist heroism in traditional Chinese culture, becoming the basis for various post-interpretations in our time. The fairy tale tells how, in the name of love, Fan abandoned her family, her homeland, giving her land to enemies for love, so in Chinese culture she acts as a symbol of all-consuming passionate love, the personification of the fire of love;
- 3) *Mu Guiyin*/ 穆 桂 英 female warrior, is a collective image of women with leadership qualities of the Yang family. One of the important feats is not only the victory over the terrifying military formation of the Heavenly Gate and the repulse of the invasion of Western Xia, but also the support of her husband, the general, whose work Mu Guiyin continued after his death;
- 4) *She Saihua*, or *She Taijun*/ 佘 賽 花, the matriarch of the aforementioned Yang clan. In Chinese folklore, she is portrayed as elderly but defiant matron with a dragon-headed staff. The staff, as the legends say, was given to her by the Emperor of Song. However, this heroine is considered a real historical character in contrast to the fictional image of Mu Guying. The mythologization of the image of She Saihua

contributed to the consolidation of the symbol of loyalty, devotion, perseverance and female courage behind him;

- 5) *Liang Hong Yu*/ 梁 紅 玉, also a real historical character who has undergone mythologization, is considered a symbol of patriotism, since she managed to pay off the debt of her father, who sold her into slavery, with her military skills. While in slavery, she met her husband, with whom she defended the independence of China.

In this regard, it is interesting to consider the archetypal representation of women in the traditional value codes of a particular linguistic culture we are considering (Ryko, 2017). So, folklore nominees of gender identity in traditional linguocultures do not so much refer to the designation of biological sex (such as: *bzylfyg*/ woman in the Adyghe language; 女人/ nǚrén - woman in Chinese), as they indicate a social role in society according to the criteria of social belonging: *orphan*, *girl*, *widow*, *wife*, *bride*, *mistress*, *daughter-in-law*, *mother-in-law*, *girl*, etc. Thus, the archetypes of a woman in the Adyghe linguoculture are verbalized by nominating signs that have emoticems of a positive or negative attitude towards a woman in a particular ethno-linguistic culture: *Shykheageus* (wife), *Shyuguashche* (mother-in-law), *Nyse* (bride), *Kyese bzylfyge* (mistress), *Schyuuage* (angel, beloved woman), *Tyuan* (rival). It should be noted that the Adyghe language taboos the concept of a virgin, using instead the euphemism *ipsheshashkhye zereshyt* – meaning "as beautiful as in her youth."

Chinese folklore is also characterized by a special attitude to the virginity of the heroine. So, according to legend, a quarter of all varieties of tea in China are still collected exclusively by virgins, or young girls who are considered as such, are not married. In this regard, in China there is such a concept as 茶 处 女 / *chá chù nǚ* / *tea virgins*. A reverent attitude to tea was formed in ancient times, it is believed that the useful properties of Shen-Nong tea were discovered (about 2700 BC), who is also revered as the founder of the culture of plant care and herbal medicine (Krayushkina, 2013).

At the same time, in the Russian folklore we will not find the designation of a mistress. But the following will be more widely represented: *orphan*, *stepdaughter*, *stepmother*, *grandmother*, *princess*, *merchant's daughter*, etc. The status and class affiliation of a woman are indicated by the following linguistic signs: *goschepshash*



(*princess*), *orkpshash* (*noble girl*), *fekollpshash* (*peasant*), *uneIut pshash* (*young maid*), etc.

In the Chinese folklore subcorpus, such nominations as: *herbalist*, *healer*, *pharmacist*, *peasant*, *townswoman*, *mother*, *old woman*, *single woman*, *bride*, *mother-in-law*, etc. are widely represented (Yellow Stork (n/d)).

The correlation of the influence of the mechanisms of ethno-cultural and gender identity on the formation and reproduction of the speech-behavioral matrix in traditional linguistic cultures has been actively developed recently, taking into account in-depth modeling in neurotargeting (Corbett, 2006; Tintin, 2022; Luchinskaya et al., 2018). The analysis of gender differences in the aspect of social semiotics makes it possible to understand the socially approved palette of gender behavior in traditional linguistic cultures from the point of view of stable and floating gender identity.

According to the fair statement of U. Eco, the code is "a system of communicative conventions that paradigmatically connect elements, a series of signs, with a series of semantic blocks (or meanings) and establish the structure of both systems: each of them is governed by a rule of combinatorics that determines the order in which elements (signs and semantic blocks) are arranged syntagmatically" (Eco, 2019). And the culture of an ethnic group is a space of cultural meanings that are verbalized in the form of signs and codes in the language (Astafurova, & Olyanich, 2008; Khachmafova et al., 2017). In this regard, an important perspective for studying the ethnocultural specifics of the gender stereotype of femininity is the analysis of verbalized markers of femininity with semiotics, since it operates with basic concepts in the form of a sign and a code.

In principle, these cultural codes translate the ideas accepted in a certain ethnic society, ensuring the constant reproduction of tradition (Karabulatova et al., 2017). Semiotic mechanisms of gender actualization in communication have recently become in demand in scientific research of various profiles (Afaunova, 2019; Anah, & Okere, 2019; Vykhrystyuk et al., 2022). The code of culture in semiotics is understood as a set of signs and mechanisms formed by stereotypes of linguistic and cultural consciousness, i.e. a matrix that determines the way of thinking and designations.

Cultural codes, according to V.M. Savitsky, "when verbalized, they turn into linguistic and

cultural codes that function in speech communication and are the verbal embodiment of cultural codes" (Savitsky, 2016: 57). He notes that cultural codes are assimilated by native speakers in the process of ontogenesis together with their native language.

## Conclusion

The semiotics of gender juxtaposition is vividly represented in the folklore subcorpus, therefore, the analysis of the initial sign structure itself is important, which can implicitly represent the components of the cultural paradigm of the people, with the peculiarities of their thinking and speech-behavioral standard. The linguistic and cultural approach taken in the article is aimed at identifying a system of unique archetypes and images of femininity in different structural languages, which captures the values that make up the architecture of the identity of the people, in which mentality and spiritual and moral attitudes play the role of connecting links.

The presented analysis of the features of the semiotic representation of the image of a woman as a feminine folklore in the traditional linguocultures of the East and West in Eurasia allows us to trace the process of gender dichotomy in the linguocognitive map of the ethnos.

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## Using online constructor as a means of increasing motivation to study literature

### ИСПОЛЬЗОВАНИЕ ОНЛАЙН-КОНСТРУКТОРА КАК СРЕДСТВА ПОВЫШЕНИЯ МОТИВАЦИИ К ИЗУЧЕНИЮ ЛИТЕРАТУРЫ

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#### Abstract

The aim of this paper - presents the experience in creating a layout of an electronic literature textbook using an online constructor. The "Arctic Robinsonade" plot served as the material for the textbook. The methodological apparatus of the research involves the synthesis of such approaches as hermeneutics and comparative studies. The present investigation is of teaching theory and techniques and digital technologies. The questionnaire surveying method was used to collect the empirical material. Mathematical methods of processing, analysis and interpretation of the pedagogical experiment results were applied in the course of the work. The methods of analyzing differences between independent samples, ranking method, method of testing significance of zero and alternative hypotheses were used for statistic information processing in MS Excel. The results: the capabilities of online constructor Tilda to work on the design of multimedia study aid are determined and described; the model of the chapter in multimedia textbook in native literature is developed; the sections of multimedia study aid are described, the examples of the tasks are given, the efficiency of applying the service of creating websites (online constructor) is established. The developed multimedia product is useful for school teachers and students.

#### Аннотация

Цель статьи – представить опыт создания макета электронного учебника литературы с использованием онлайн-конструктора. Материалом для учебника послужил сюжет "Арктической робинзонады". Методологический аппарат исследования предполагает синтез таких подходов, как герменевтика и сравнительные исследования. Настоящее исследование разработано на стыке теории и методики преподавания и цифровых технологий. Для сбора эмпирического материала был использован метод анкетного опроса. В опросе приняли участие студенты дневной и заочной форм обучения, специализирующиеся на филологии (т.е. интактные группы). Опрос проводился в два этапа – в ноябре 2021 года и в апреле 2022 года. Применялись математические методы обработки, анализа и интерпретации результатов педагогического эксперимента. Для статистической обработки информации в MS Excel использовались методы анализа различий между независимыми выборками, метод ранжирования, метод проверки значимости нулевых и альтернативных гипотез. Результаты исследования: определены и описаны возможности онлайн-конструктора Tilda для работы над дизайном мультимедийного учебного пособия; разработана модель главы в мультимедийном учебном пособии по родной литературе; описаны разделы мультимедийного учебного пособия, приведены примеры заданий, объяснена практическая значимость изучения сюжета "Арктической робинзонады" и установлена эффективность применения сервиса

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**Keywords:** Digital Humanities, Online constructor, Arctic robinsonade.

создания веб-сайтов (онлайн-конструктор); сделан вывод о том, что в современных условиях разработка учебных пособий на основе онлайн-сервисов и их реализация абсолютно доступны. Разработанный мультимедийный продукт полезен для школьных учителей и студентов.

**Ключевые слова:** Цифровая гуманитаристика, Онлайн-конструктор, Арктическая робинзонада.

## Introduction

The aim of this paper is to represent the textbook chapter, developed with the help of online constructor, containing multimedia materials to study the plot about the adventures of Mezen "Robinsons" on Spitsbergen described in the story "The Way to Grumant" by K. S. Badigin, a sea captain and conqueror of the Arctic region, and comprehend the educational potential of IT-technologies as applicable to literary education of schoolchildren and students, determine the successfulness degree of the experience in online learning of work of fiction.

The problem of developing competences in the field of using, developing and launching online textbook and online courses in the educational process is an urgent topic of investigation. The relevance is also explained from the point of forming a new education paradigm and applying e-learning in a higher school (Polevaya & Sitnikova, 2021).

The education digitalization is a two-forked process. On the one hand, the application of gadgets attracts to studies and facilitates them, to some extent. On the other hand, students forget about books. This creates the problem: people stop reading.

Much attention is paid to the problem of decreasing interest in reading among young people in modern life. The "functional illiteracy" problem emerged as far back as in the 80s of the XX century. This term is applicable to a person, who is not able to fully and partially perceive the general idea of the text, retell the content, cannot single out the basic idea of the text, and also formulate his/her own opinion about what he/she has read. The UNESCO researchers, who developed this concept, say that functional illiteracy is associated more with an insufficient level of erudition, and not just the ability to read and write. Therefore, an increasing number of teachers, methodologists, librarians, and researchers raise this problem and look for the ways to draw attention to reading every year (Vorontsov, 2009).

The factor of an illiterate, non-reading person has a negative impact even on economic life. Unemployed people are less likely to become those ones, whose intellectual level is high, and the relationship between reading and labor productivity has also been revealed (Kozol, 1985).

It is important to understand the fact that we live in reality that presupposes a strong relationship with the digital world. It is necessary to find a way to take advantage of the positive aspects of our reality, while preserving the foundations of the national centuries-old culture.

Many researchers note that in the modern world the work on the development of interest in reading cannot be fulfilled without the aid of Internet technologies (Arkhipova, 2013), (Krylova & Russak, 2014), (Russak, 2015), (Gao, 2023). Productive experience was noted using such tools as websites, social networks, blogs, online quizzes, ratings of books and writers, media travels, book trailers, virtual book exhibitions. These tools make it possible to:

- 1) stimulate a reader's activity;
- 2) create a demand for literature;
- 3) organize interpersonal communication about literature;
- 4) develop the institution of professional and peer recommendations;
- 5) study the features of young people reading activity.

The experience of attracting young people to reading exists in foreign countries primarily in libraries. The introduction of the following innovations gave a positive result.

1. Makerplace in the library. The use of equipment that allows creating something new, such as a 3D printer, a heat press machine for T-shirts, a laser cutter for engraving in libraries. That allows attracting additional classes and increasing the flow of readers (England).



2. Coding clubs. These are clubs, whose work is aimed at teaching teenagers and adults programming, as well as robotics (England).
3. Digital storytelling. This is a project that attracts writers to work, allows the reader to decide for himself/herself into which channel the story plot will guide. This way of reading not only attracts readers, but also contributes to the improvement of thinking (England).
4. A virtual reality. Books are another reality into which a reader gets. Virtual reality may complement this opportunity and see the history. The library also invites readers to create a virtual excursion (USA).
5. Mobile applications. Applications offer such functionality as, for example:
  - library catalog,
  - interactive library recommendations and lists,
  - virtual excursions of the library,
  - calendar of library events,
  - the possibility to read e-books and articles,
  - the possibility to book up a book and others.

These functions make it easier to interact with the library and attract new readers (USA, England, and Europe).

6. Open source libraries. The library's working hours are increased to 24 hours a day, thereby allowing readers to come at a time whenever convenient to them (England) (Garland, 2018).

Thus, the libraries in England, the USA, and Russia are doing extensive work to promote and support reading across the population. It may be said that this is one of the strategic objectives of each state, the task of national security.

At the moment, there are good opportunities for introducing reading to teachers. The pedagogical arsenal of a literature teacher has been replenished through the use of such Internet technologies as webinars, online conferences, online platforms, electronic textbooks, electronic libraries, virtual laboratories and web quests. These learning tools may be supplemented with online constructors, with the help of which it is possible to develop author's tasks intended for a particular student (considering his/her abilities, academic performance, motivation and interests) or a group of students.

Most of the online constructors are designed to consolidate theoretical knowledge, test practical skills, increase motivation for the subject being

studied, as well as to organize independent and group work. Online constructors allow using gamification in the process of teaching various subjects at the school and university level. The primary purpose of such training programs is individualization, intensification and optimization of the educational process.

In this paper, we will consider the capabilities of the online constructor necessary for creating a multimedia literature textbook.

It is worth mentioning that nowadays there are a lot of publications in scientific periodicals, which describe the possibilities of using online constructors in various spheres.

An online constructor is a tool for creating a website without deep programming knowledge. Their purpose may be very different. Using such a program, one can, for example, remotely teach, develop assignments, evaluate students' progress, or quickly select the parameters and the entire content of the product.

The theme of creating such a constructor is represented in many publications. Let us begin with online constructors used in the educational environment.

The experience in developing a program using simple technologies is described based on foreign and national experience in the motivation effectiveness in the use of online gaming constructors for teaching schoolchildren. The author called it as "the constructor of universal didactic games" (Zhemchuzhnikov, 2014). He gave instructions and guidelines for creating and editing game sets for approbation of school education. Creating constructors may be easier with the help of ready-made tools. Intuitively comprehensible online creation tools are provided by Google. Unlike other constructors for beginners, these tools are simple and accessible, aimed at the convenience of representing materials. Although, they have a drawback – a ready-made design in the form of a website. It is not clear what the internal content is, where and how to prepare the initial elements of the course – texts, tables, multimedia materials, etc. (Borkovoy, 2016).

The task of introducing online forms into the educational process requires the use of new pedagogical technologies and skills. It is necessary to be able to create tasks, construct them in an interactive form, and create an adaptable algorithm that gives an independent assessment of the student training quality via the

Internet. This possibility is provided by the program “Online constructor of interactive tasks” (Navodnov et al., 2016).

As it is known, children perceive the world through the game. Didactic games are one of the active methods of cognitive activity. N. G. Gimatdinova writes about the choice of an interactive training program: “Given the current conditions for organizing the educational process, when e-learning using distance learning technologies is being introduced into traditional learning, the teacher is faced with the task of selecting digital tooling for developing didactic games for students” (Gimatdinova, 2021). The author gives a detailed overview of specialized national and foreign online constructors that allow developing didactic games for the mathematical background of schoolchildren, revealing the functional capabilities and recommendations for working with playgrounds.

Teachers need to work with several constructors for the learning process to remain comprehensive, interesting and deep.

It is reasonable to use resources with basic types of interactivity, such as interactive posters. Interactive posters are modern multifunctional teaching aids. When developing posters, a teacher, who is proficient in information technologies, may use, in addition to programming languages, modern website builders that facilitate the development of learning content using the example of popular builders such as Tilda Publishing, WordPress, etc. (Tsilinskaya, 2021).

Children of all ages love not only solving riddles and puzzles, but also playing computer games. Online constructors are suitable not only for play-based learning, they may be gamified. The main purpose of such curricula is to optimize the educational process, allowing the teacher to develop author’s assignments designed for each pupil individually (Nazarova, 2018).

Online educational activity tools increase student motivation and interest. They have a vast scope of application from conducting lectures and practical classes to writing scientific projects. These include online poll constructors, online whiteboards, quests, quizzes, presentations, etc. to help one learn the material. A similar idea about the need for digital technologies is expressed in the use of online services in teaching master degree students (Gerasimova, 2019). The transformation of the educational process should be taught and learned, and

information technologies should be applied in practice. The methodological aspects of teaching students, the choice of online constructors and the use of their functionality to create interactive electronic educational materials and practical work is presented by the example of using the Flippity online constructor (Puchkova, 2020).

Online constructors have not only a playing format in training. The demand for developing websites for various tasks has grown with the development of information technologies. Large projects cost a lot of money and time. Companies that find it financially difficult to create a website can resolve the issue on their own via contacting the most popular constructors Tilda, WIX, 1C-UMI. The platforms are ideal for creating small projects. However, the choice of website functionality on a free basis is little (Kiseleva, 2019). As was already mentioned, online constructors provide an opportunity to build a website for both a novice and an experienced webmaster. In a contemporary society, every stable company must have a representative website that will provide information support to the company. An interactive website is a set of communication tools between the website audience and the company. The best constructors make it possible to create a decent website and promote it on the Web even on a free basis. SetUp, Wix and Ucoz call attention among the numerous online constructors, which stand out against a background of the business rivals of free constructors with a user-friendly interface (Sannikova & Olenkova, 2015).

The life success largely depends on the use of modern technologies. The number of users, who have mobile devices, is growing every day, with the aid of which one can quickly access various information; install useful programs, games, etc. Mobile versions have their own online constructors. These platforms have all the things needed to create applications that are not so different from those made for a computer (Azhiniyazova, 2021).

The trends in the development of online constructors for creating tests are outlined in foreign publications. The experience of using Word Quiz Constructor (WQC), a Java application designed for automatic creation of test assignments from the Academic Word List (Coxhead, 2000) with various online and offline resources, is described in Ralph Rose (Rose, 2020). Construction in social networks such as the creation of online communication groups for young people is being actively researched. The concept of their identity is considered. In this

regard, it is argued that young people not only stage their own identity, but are also co-constructors of each other's identities through emotional communications (Larsen, 2016). People are united by different cultures. In online role-playing games, participants produce data, thus creating new material, for example, playing in the Middle Ages. Game mechanics combined with fun give users a sense of the past, solve social and adaptational problems. The trend is widely represented in Massively Multiplayer Online Games (MMOG). The problem of introducing gamification into learning is widely discussed at the global level. This is noted in the publications of scientists from different countries (Oliveira et al., 2023), (Wulantari et al., 2023), (Alzahrani & Alhalafawy, 2023), (González-González et al., 2023), (Araújo & Carvalho, 2022), (Demirbilek et al., 2022). A study conducted by scientists from Portugal concludes that there is a lack of empirical evidence of the effectiveness of introducing game elements into education (Jarnac de Freitas & Mira da Silva, 2023). In this paper, we are trying to make up for the noted lack of data.

Thus, a brief review of publications shows that there are a vast number of online constructors for

creating websites that demonstrates the productivity of this technology from a practical or fact-finding standpoint.

## Methodology

The developed layout of the multimedia textbook chapter was tested in the student audience. Two groups of students in the amount of 20 persons each took part in the experimental work during the academic year 2021–2022. The first group, the control group, studied the material in the traditional form organized as lectures in the institute auditorium. The other group, the experimental group, undertook training with the new multimedia textbook. Experimental hypothesis: it is required to test the effectiveness of using a new multimedia textbook.

To process the results, we applied the Mann-Whitney U-test from the family of nonparametric methods for analyzing differences with due regard for the allowable error level  $\alpha = 0.05$ .

Thus, the results of testing a group of students are presented in the table below considering the calculation of the rank sums for both samples (Table 1).

**Table 1.**  
*Data on testing groups of students*

S No.	Experimental group	Control group	R <sub>EG</sub>	R <sub>CG</sub>
1	11	7	36.5	8.5
2	11	10	36.5	31.5
3	8	9	17	25.5
4	11	8	36.5	17
5	8	8	17	17
6	10	8	31.5	17
7	9	6	25.5	3
8	9	6	25.5	3
9	8	6	17	3
10	7	7	8.5	8.5
11	8	8	17	17
12	8	9	17	25.5
13	10	6	31.5	3
14	12	10	39.5	31.5
15	12	9	39.5	25.5
16	9	8	25.5	17
17	10	7	31.5	8.5
18	11	7	36.5	8.5
19	8	6	17	3
20	7	10	8.5	31.5
			515	305

After the procedure for ranking all values of both samples and calculating the rank sums for the samples, it is necessary to calculate U1 using the formula:

$$U_1 = n_1 n_2 + \frac{n_1(n_1 + 1)}{2} - \sum R_1$$

$$U_1 = 20 * 20 + \frac{20_1(20_1 + 1)}{2} - 515 = 136$$

The next step is to calculate U2 using the formula:

$$U_2 = 20 * 20 - 136 = 284$$

Thus, the criterion  $U$  is equal to the smaller number from the pair  $U_1, U_2$ , i.e.  $U = 136$ .

Significance assessment will be fulfilled as follows. For a sample of  $n=20$  (relatively large sample), it is necessary to calculate the asymptotic (approximate) value of  $p$  through the normal distribution using the formula:

$$z = \frac{(U - \frac{n_1 n_2}{2})}{\sqrt{(\frac{n_1 n_2 (n_1 + n_2 + 1)}{12})}}$$

$$z = \frac{(136 - \frac{20 * 20}{2})}{\sqrt{(\frac{20 * 20 (20 + 20 + 1)}{12})}}$$

$$= -1,930069965$$

From  $z$ , we calculate the  $p$  value using the Microsoft Excel function NORMAL STANDARD DISTRIBUTION:  $p = 2*(1-NORMAL STANDARD DISTRIBUTION (ABS(z);1)) = 0.053598169$ .

As an indicator of the effect size (in our case, the effect size is an indicator of the hypothesis confirmation), we use  $r_{\text{effect}}$ , which is calculated as per the formula:

$$r_{\text{effect}} = \frac{|z|}{\sqrt{(n_1 + n_2)}}$$

$$r_{\text{effect}} = \frac{1,930069965}{\sqrt{(20 + 20)}} = 0,305170857$$

The effect size is estimated using the following set of criteria (J. Cohen):  $<0.1$  – no effect;  $0.1 \leq <0.3$  – weak effect;  $0.3 \leq <0.5$  – average effect;  $0.5 \leq$  – strong effect.

Let us review the results based on the calculated indicators.  $U_1 = 136$ ,  $U_2 = 284$ ,  $U = 136$ , calculation of  $p$  is fulfilled via  $z$ -value,  $z = -1.9$ ;  $p = 0.05$ ;  $r = 0.31$  (mean effect,  $r = 0.31 < 0.5$ ).

**Conclusion:**  $U = 136$ ,  $p = 0.05$ , the effect is average ( $r = 0.31 < 0.5$ ), therefore there is the reason to assert that there are differences between the groups in terms of the “Arctic Robinsonade” plot mastering level. Consequently, the pedagogical experiment showed that the use of the multimedia textbook when studying the “Arctic Robisonade” plot has a positive effect and allows increasing the level of mastering the material being studied.

## Results and Discussion

### Description of the multimedia study guide layout based on the online constructor

The paper is based on the following hypothesis: the process of forming students’ motivation to study literature will be more effective if teachers use modern multimedia aids in literature classes and consider the following factors that influence the formation of positive motivation: a situation of success, an emotional atmosphere, a variety of working practices, differentiated approach, etc.

The study of the “Arctic Robinsonade” literary plot using the tools of the multimedia textbook created based on the Tilda online constructor contributes to the pursuing of the following objectives:

educational ones – to introduce the history of the survival of the Mezen fishermen in the Arctic via referring to literary texts, to teach how to work with a literary text according to a given algorithm, teach the techniques of cognitive circuit technology, help students to move from simply mastering the book content to a deep perception of the text at the semantic content comprehending level;

developing ones – to promote the development of knowledge and abilities to work with a literary text, enrich the vocabulary of students and their ideas about the small motherland;

pedagogic ones – to promote the formation of a cultural and patriotically-minded personality, who knows the history and traditions of his/her native land, and the country as a whole.

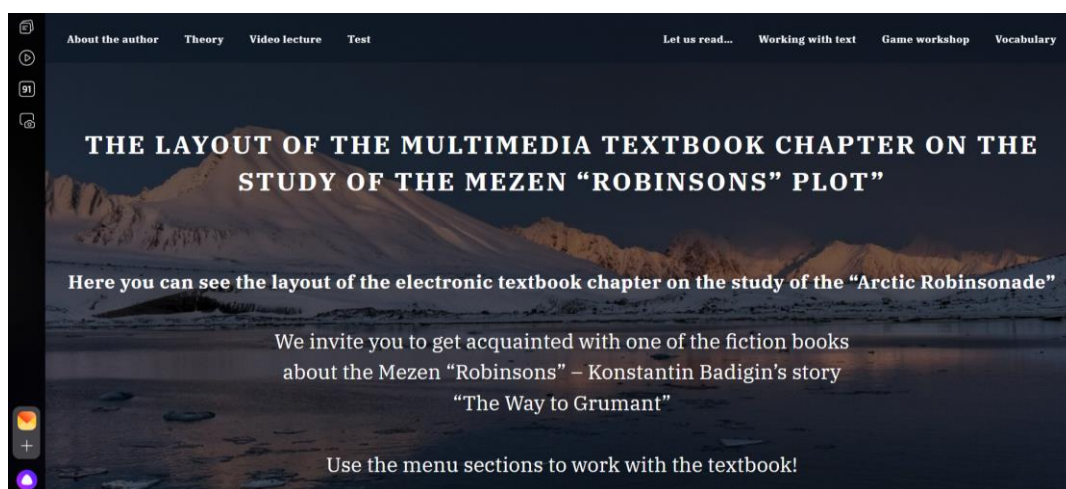
When mastering the theme, students comprehend such problems: the responsibility of a person for his/her actions, the relationship between human and nature, human and the state, the conflict between the capital city and the province. The diversity of world cultural experience is revealed through the knowledge of Pomorye authentic culture. While achieving this, the role of the book is invaluable, the significance of the “Arctic Robinsonade” fiction books, which transfers the experience of previous generations, their view of the world and human to the reader with the help of the fascinating plot, original characters, and an original display of past events.

The research being pursued presupposes the description of the chapter layout of the electronic multimedia textbook regarding studying the “Arctic Robinsonade” fiction books. This plot is

based on the real event of the 18th century – a six-year wintering of fisherman hunters in the Arctic on one of the islands of Svalbard. The following texts are included into the system of fiction books, conditionally united under the name the “Arctic Robinsonade,” the primary source of the plot is the book by Peter Ludovic Le Roy “The Adventures of four Russian sailors brought by a storm to the Island of Svalbard” (1760) – an artistically processed interrogation-interview of surviving fishermen; novel by Z. S. Davydov “Beruny” (1933); story by K. S. Badigin “The Way to Grumant” (1953); story by S. B. Radzievskaya “The Island of Courage” (1981).

The layout of the textbook chapter is based on the material of Konstantin Badigin’s story “The Way to Grumant.” The study of the story is significant from the standpoint of students mastering the features of the individual-author’s image of the Pomor fishery, and the North Russian mentality.

A layout of the multimedia textbook chapter concerning the study of the Mezen “Robinsons” plot is presented in the Internet in free access <http://arcticway.tilda.ws/>. The figure shows the title page of the textbook layout (Fig. 1) and a QR code for a rapid transition to the textbook website (Fig. 2).



**Figure 1.** Screenshot of the multimedia textbook layout cover page



**Figure 2.** QR code for quick access to the textbook website

The chapter of the electronic textbook titled “The Story of K. S. Badigin (1956) “The Way to Grumant” includes 8 sections:

- 1) About the author
- 2) Theory
- 3) Video lecture
- 4) Test
- 5) Let us read
- 6) Working with text
- 7) Game workshop

#### 8) Vocabulary

The first section of the chapter is intended to introduce students to the biography of the writer. The “Theory” section introduces the basic issues of the story – what events formed the basis of the author’s narration and what happened to the Pomors back in 1743; a reference is also given to who the Mezen “Robinsons” were, and the description of the Arctic artistic chronotope is given.



Watching the video lecture and solving the test assignment helps to consolidate the information from the “Theory” section. To proceed to completing the tasks of the test, one must click on the appropriate button on the textbook webpage. The test completion results are automatically sent to the teacher by e-mail, which reduces the time for checking homework.

The “Let us read...” section includes a hyperlink to the literary text. Having clicked on the relevant button of the textbook main menu, the user links to the Litmir.ru website, where the full text of the story is presented.

The “Working with text” section is necessary for organizing search work on the original. The section contains the fragment of text, as well as QR code to the page of the book for rapid transition to the fragment from a smartphone. Students perform tasks according to the special algorithm of 16 steps.

The “Game workshop” section contains a number of creative tasks. This section is aimed at consolidating the material covered; the work is organized in an interactive format.

The “Vocabulary” section contains literary terms used in the theoretical part of the textbook.

Thus, the multimedia textbook may be successfully used to organize classroom-based and remote activities of students when studying fiction books about the adventures of Russian sailors in the Arctic. The textbook is freely available in the Internet.

The theoretical material of the textbook is systematized in such a way that students can gradually immerse themselves in the study of the “Arctic Robinsonade” key plot. The set of tasks presented in the experimental textbook provides a progressive and systematic acquaintance with the material and makes the learning process fascinating and interesting. The use of the electronic textbook contributes to awakening the interest of various aged readers in literature about the Russian North.

### **Description of pilot and experimental work**

The research was pursued in two directions: training the control group within traditional and experimental conditions – using a textbook created based on the online constructor. The pilot work regarding studying the effectiveness of using the online constructor in the study of literature included the following stages:

Statement stage. At this stage, the survey poll was conducted to determine the level of students’ motivation. The questionnaire survey was conducted remotely using the Google Forms tool (Form for determining the level of motivation of students to study the plot of Mezen “robinsones”). The survey results showed that the average level of motivation to study the “Arctic Robinsonade” plot prevails in the experimental and control groups (44 and 52%, respectively). 38 and 24%, respectively, had a high level of motivation.

Formative stage. At this stage, exercises and tasks from the textbook were developed and tested based on the Tilda constructor: annotated reading, survey, testing, watching a video, working with a text fragment according to the algorithm, a game workshop, working with vocabulary.

Control stage. At this stage, a repeated questionnaire was carried out to determine the level of motivation to study the “Arctic Robinsonade” plot after the training work. The analysis of the results showed the effectiveness of using the multimedia textbook applying the online constructor. The students from the experimental group had a considerable increase in the motivational sphere level. Besides, positive trends were identified in the formation of skills while working with the literary text, its analyzing and interpreting.

The multimedia textbook may be considered as one of the factors in the positive learning motivation formation due to its characteristics: interactivity and accessibility for students, the inclusion of hypertextual information, links, video-, audio- and various photographic materials, as well as instant feedback tools.

### **Conclusion**

The existing fact of decrease in motivation for learning from one level to another cannot have a positive impact on the positive dynamics of knowledge quality. The same goes for studying literature. In this regard, the problem of increasing motivation for studying literature is very relevant.

The interest in the subject and the desire to master it largely depend on the technologies used by the teacher. There are many ways to encourage students to study their native literature, and one of them is multimedia aids that compensate for the lack of textbooks on the subject.

The use of such textbooks, being modeled with the help of special constructor programs in teaching literature, is one of the most important aspects of improving and optimizing the educational process, enriching the arsenal of tools and methodological techniques that allow diversifying the forms of work and making the class interesting and memorable for students.

Using online services allows customizing learning depending on the pace and depth of the course. Such a differentiated approach gives an excellent positive result, since it creates conditions for the successful activity of each participant of the course, causes positive emotions and, consequently, affects their academic motivation.

A modern teacher should effectively apply information and communication technologies in the educational process. The use of online constructors in the classroom and after classes is an effective factor in the development of students' motivation.

Students have the opportunity to apply their knowledge and skills within new conditions and they love it. A multimedia textbook based on an online constructor allows perceiving the material with enthusiasm. The process of mastering the material is much faster and easier.

The purpose of the experimental work was to substantiate the reasonability of using a multimedia aid while teaching literature. The research was performed based on a northern university. The students of 1-2 years of studies took part in the research. The total of 40 persons took part in the experiment. There were twenty students in the experimental and control groups.

So, we considered the aspects of applying the online constructor functionality to create interactive electronic study materials in the conditions of education digitalization. The attention is concentrated on the use of Tilda constructor in practical activities of literature teachers. The required minimum of information about this service is presented and pluses and minuses of using the online constructor are considered. The stages of work for introducing this resource into the teaching practice of future literature teachers are described. The description of practical work prepared for classroom teaching in the frameworks of historic and literary courses is given.

The main conclusion to be made is that the creation of study aid based on online constructor

is a manageable task for teachers of humanities. The application of such study aid at literature classes motivates students to study works of fiction not included into the main program in literature.

In further research it is necessary to more carefully consider the potential consequences of introducing the study aid into the school and university practice of teaching the course in native literature, for example, the didactic capabilities of the online constructor intended to study the history of sailing of Pomor "Robinsons" at the classes of native history and regional studies.

Tilda is a convenient constructor of websites for teachers. Specialists test its capabilities in different areas of knowledge: supplementary education in primary schools, foreign languages, mathematics, physics, advertising and PR-education, etc. The main advantage of our multimedia product is the opportunity to implement the learner-centered approach in the study process organization, to use additional information sources. Besides, the electronic textbook has a number of significant advantages in comparison with the classical textbook. First of all, this is step-by-step mastering of the course. Second, this is the organization of step-by-step work with the literary text. Third, this is the variety of tasks and ways of their completion. The multimedia textbook helps to effectively and quickly master the study material about the peculiarities of poetics of works of fiction of the "Arctic Robinsonade"; it allows students to get properly prepared and successfully pass credit tests on supplementary course.

Thus, the experimental results, as well as the comparison of the data before and after, indicate that the hypothesis was confirmed and the objective stated at the beginning of the research was achieved.

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## The problem of child safety in the digital space

### ПРОБЛЕМА БЕЗПЕКИ ДИТИНИ В ЦИФРОВОМУ СЕРЕДОВИЩІ

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#### Abstract


The rapid development of digital technologies has transformed the lives of children and young people. The digital space offers children endless opportunities to learn, play, communicate and express themselves. However, it also poses a number of risks and threats, such as cyberbullying, grooming and exposure to harmful content. The purpose of this article is to analyze the current state of the criminological safety of a child in the digital space based on a survey among Ukrainian schoolchildren aged 11-17. Our task is to determine the level of awareness of teenagers about safe behavior on the Internet, as well as to identify the most common threats and assess the level of risky behavior of Ukrainian children on the Internet. The article emphasizes that the range of threats to underage Internet users is much wider than to adults due to the peculiarities of this age group. Empirical research shows that schoolchildren tend to act rather carelessly in the digital space, particularly in regards to making new contacts and communicating online. We believe that the family and the school should play the dominant


#### Анотація


Стрімкий розвиток цифрових технологій змінив життя дітей та молоді. Цифровий простір пропонує дітям безмежні можливості для навчання, ігор, спілкування та самовираження. Водночас, він також несе в собі низку ризиків і загроз, таких як кібербулінг, грумінг та вплив шкідливого контенту. Метою цієї статті є аналіз сучасного стану кримінологічної безпеки дитини в цифровому середовищі на основі опитування українських школярів віком 11-17 років. Наше завдання – визначити рівень обізнаності підлітків щодо безпечної поведінки в Інтернеті, а також виявити найпоширеніші загрози та оцінити рівень ризикованої поведінки українських дітей в Інтернеті. У статті підкреслюється, що спектр загроз для неповнолітніх користувачів Інтернету значно ширший, ніж для дорослих, що пов'язано з особливостями цієї вікової групи. Емпіричні дослідження показують, що школярі, як правило, досить легковажно поведуться в цифровому середовищі, особливо стосовно віртуальних знайомств та онлайн-комунікації.

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role in familiarizing children with existing online threats and the fundamentals of safe behavior in the digital space.

**Keywords:** digital space, Internet, child, social media, social network, survey.

## Introduction

Modern communication media and the digital space as a whole have permeated every sphere of society to such a degree that picturing today's life without them is next to impossible.

According to Internet World Stats (2023), there are 5,3 billion Internet users in the world, i.e. 67,9% of the world's population (7,9 billion). As of January 2022, with a population of 43,3 million, Ukraine had 40,9 million users, i.e. 94,5% of the entire population (93,4% in 2019). 26,5 million of those use Facebook (compared to 9,5 million Facebook users in 2019) (Internet World Stats, 2023).

Thus, as statistics show, the number of Internet users keeps growing, in no small part due to children, who are among the most active users. The age of Internet initiation is going down as well: it is now common to find even preschoolers online, while modern gadgets play the role of digital babysitter. Modern technology gives today's schoolchildren access to digital libraries and various websites of educational, informational, and entertainment nature as well to free communication unrestricted by people's physical location. In other words, the virtual space also serves as a means of socializing, with social media like Facebook, Twitter, Instagram and the like making it possible to maintain social connections even under difficult circumstances (pandemics, wars, etc.), which helps children, particularly adolescents, deal with loneliness.

However, despite all the positive aspects of progress in the field of digital technologies, one also should not overlook the existence of a negative side to it, namely the vast number of threats present within the Internet environment, especially for children. These include risks to privacy, harmful content, fraud, cyberbullying, grooming, sexual violence and exploitation, etc. Moreover, recent events in the world and in Ukraine (the COVID-19 pandemic and the full-scale war in Ukraine) have further increased the number of children that started using the Internet for the first time to continue their studies and maintain social connections. The time children

Ми вважаємо, що саме сім'я та школа повинні відігравати домінуючу роль в ознайомленні дітей з існуючими онлайн-загрозами та основами безпечної поведінки в цифровому середовищі.

**Ключові слова:** цифрове середовище, Інтернет, дитина, соціальна мережа, опитування.

spend online has also risen dramatically, which increases the risk of encountering the aforementioned threats.

This shows that the issue of child safety in the digital space has only become more relevant in recent years and requires an in-depth study of its various aspects, which is the **purpose** of our **article**.

The study will help identify online threats to children and help develop strategies to protect them.

## Theoretical Framework or literature review

Safe use of modern information and communication technologies was studied by Pazyuk and Chernykh (2016), Snitko (2014), Udalova, Shved, Yevsyukova, Kuznetsova and Kolesnikova (2010), Lytovchenko (2010) and others.

The influence of the Internet on a child's mind was studied by such national and foreign researchers as: Batyrgareyeva (2019), Naidyonova (2012), Burov et al., (2018), Sokurenko et al., (2021), Ciarrochi et al., (2016), Park, Hong, Park, Ha and Yoo (2013), Rodriguez, Garcia and Ventisca (2021) and others.

Researchers from many different countries dedicated their efforts to studying children's behavior in the digital space and the threats they face on the Internet, in particular: Popadić, Pavlović and Kuzmanović (2020); Ponte (2019), Livingstone and Haddon (2009), Dewan (2022), Frank, Frank, Honzik and Jakeš (2019), Lukić (2022), Nain and Chaudhary (2022), Milosevic, Kuldass, Sargioti, Laffan, Norman (2022), Núñez-Gómez, Larranaga, Rangel and Ortega-Mohedano (2021). UK scientists Livingstone and Haddon (2009), researching the topic of online risks for children, concluded that online opportunities and online risks are inseparable.

Therefore, there is a need to constantly study what children do online and what interests them.

### Methodology

To achieve this, we made use of a range of general and specialized research methods for studying the socio-legal realities, which allowed us to ensure the objectivity and reliability of obtained data.

Thus, we used the dialectical method to identify threats that minors face online as well as to find basic measures for ensuring child safety in the digital space. The comparative method was used in our analysis of studies conducted in other countries on children's behavior in the digital space and the most common online threats and risk factors. The sociological method was implemented during a survey among secondary school students of Kyiv and Kyiv Oblast regarding their online habits and understanding of associated risks and threats, based on which we formulated ways to prevent crimes against children in the digital space. The descriptive statistics method was used when analyzing the survey's results.

The survey was conducted in Kyiv and Kyiv Oblast from November 2022 to February 2023 by experts of the State Research Institute of the Ministry of Internal Affairs of Ukraine among secondary school students aged 11-17. The sampling included two stages: a random selection of schools followed by a random selection of classes. All pupils in these classes were offered to fill out questionnaires via Google Forms. Sampling selection method: convenience sample. The final selection includes 925 pupils, with 364 (39,4%) boys and 561 (60,6%) girls. Distribution by age is as follows: 11 years old – 17,1%, 12 years old – 13,9%, 13 years old – 15,9%, 14 years old – 17,8%, 15 years old – 14,7%, 16 years old – 15,8%, 17 years old – 4,8%. Thus, the respondents are distributed by age almost evenly, with the exception of 17-year-olds who make up only 4,8% of the total number of respondents. The reason for this is the small number of 10th and 11th grades in Ukrainian schools. The sample is representative of the general population in terms of gender and age.

**Sources.** The problem of online safety for underage users is a priority for developed countries and a focus for numerous institutions, including international organizations, government bodies, and NGOs, as well as law enforcement agencies, educators, and researchers from various fields.

### Results and Discussion

The problem of online safety for underage users is a priority for developed countries and a focus for numerous institutions, including international organizations, government bodies, and NGOs, as well as law enforcement agencies, educators, and researchers from various fields.

For today's children, the Internet is not just a source of information but also a means of communication, socializing, and recreation – a place where they spend a significant part of their lives. The crises that occurred over the recent years, namely the COVID-19 pandemic and the war in Ukraine, have clearly demonstrated how important and irreplaceable digital technologies have become to children.

However, every year, the amount of content that depicts sexual violence involving children is steadily increasing: according to a report by the Internet Watch Foundation, the number of web pages containing such content more than doubled in 2022 compared to 2020 (51,369 and 25,050, respectively) (Internet Watch Foundation, 2023, April 25).

As the first step in our research on the state of child safety in the digital space, we decided to find out how much time per day on average Ukrainian adolescents spend on the Internet. Among the respondents, 36,5% reported that they spend 4-6 hours on the Internet; 23,1% – under 3 hours; almost every fifth (18,8%) – 7-9 hours. Two groups are of particular concern here: the first includes 7,1% of respondents who spend 10-12 hours online daily, while those from the second one (12,5%) are “always online,” i.e. they effectively “live” in the digital space.

This situation is not limited to Ukrainian schoolchildren. For instance, a survey among 1,350 Spanish children between the age of 6 and 12 showed that they spend 5 hours a day in front of a screen on average. Also, during the pandemic their use of mobile phones increased by 38% (Núñez-Gómez et al., 2021).

Meanwhile, according to a study conducted by Oxford researchers, the ideal time limit for using a PC and other electronic devices in terms of having a positive effect on a child's brain is 4 hours and 17 minutes. It's best for them to spend no more than two hours using a smartphone and no more than 100 minutes a day playing video games. This is sufficient time for developing social connections and skills, while beyond that

gadgets starts negatively affecting the child's brain (Maximum, January 25, 2017).

Citing a survey by the NGO Parents Together (conducted in April 2020), which found that the bulk of the children's time online is, unfortunately, spent on entertainment rather than educational content, the American Academy of Pediatrics recommends that middle schoolers spend no more than 2 hours per day in front of a monitor for entertainment purposes (Kiselyova, 2023). Similar recommendations have been voiced in Australia and Europe. Therefore, it is necessary to consider not just the amount of time spent by children online but also the nature of their activities in the digital space, even though the former is much easier for adults to control.

It's also necessary to remember that children that spend a lot of time online are prone to aggressive behavior and outbursts of unmotivated violence and cruelty even if they don't play video games. This was demonstrated by a survey by Salwa Al Majali (2020) conducted among Dubai schoolchildren aged 8-16: it shows that excessive use of the Internet leads to aggression, increased anxiety, depression, indifference toward others, and irresponsible behavior. Furthermore, such children have issues with communication and overly impulsive behavior as well as a lack of desire to help others. According to the author, this shows that excessive use of the Internet has a negative effect on children's mental health and may cause personality disorders (Al Majali, 2020).

We would also draw attention to the two-year study by Jonathan Chu et al., who, in their work "Screen time and suicidal behaviors among U.S. children 9-11 years old: A prospective cohort study" (2023), emphasize that each additional hour of the total time spent in front of a screen significantly increases the chances of suicidal behavior in children. Having analyzed a number of studies on this issue, namely Dunlop, More and Romer (2011) "Where do youth learn about suicides on the Internet, and what influence does this have on suicidal ideation?", Birbal Ria et al. (2009) "Cybersuicide and the adolescent population: challenges of the future?", Phillips, Diesfeld and Mann (2019) "Instances of online suicide, the law and potential solutions", Lee and Kwon (2018) "Twitter as a place where people meet to make suicide pacts", we can conclude that the virtual space can promote suicidal thoughts and intentions among adolescents with its content or even encourage them to commit suicide through the "support" or cheering on by online "friends". It's also clear that excessive and

unsupervised use of the Internet multiplies the chances of the child encountering harmful content or contacts.

Returning to our own survey, over half of the respondents exceed safe limits of screen time by a considerable margin. In light of the above, when children say they are "constantly online", their parents should consider not only the negative psychological impact on the child and the risk of Internet addiction, which experts define as an obsessive desire to go on the Internet while offline as well as inability to go offline (Shugailo, 2015, p.19), but also all the threats that their children may encounter in the digital space.

To find out whether schoolchildren are aware of the danger that being on the Internet exposes them to, we asked them, "*Do you think it is possible to get into a dangerous situation, or feel unsafe, on the Internet?*" The absolute majority of respondents (91,2%) answered that it is indeed possible to get into a dangerous situation online. Incidentally, during the survey among Spanish children aged 6-12 that was mentioned earlier, 54,5% also mentioned that they don't feel safe online (Núñez-Gómez et al., 2021).

To assess their level of awareness in regards to online threats, we had our respondents name the most common problems that using the Internet has caused them personally. The most frequent answer, mentioned by half of the respondents, was visual impairment (50,5%), second most frequent – getting distracted from studies (44,8%). The third most frequent answer (36,5%) was danger of falling victim to illegal acts, from stalking and sexual harassment to fraud and involvement in extreme games. Girls chose this answer more often (41,0% as opposed to 29,7% among boys). 35,1% of respondents also mentioned the risk of coming across harmful content (depiction of violence, propaganda of self-harm and suicide, etc.), with the percentage of girls and boys who chose this answer being about the same: 36,5% and 33,0%, respectively. In addition, almost every third respondent mentioned Internet addiction (32,5%). The percentage of girls and boys who chose this answer did not differ significantly: 34,8% and 29,1%, respectively. The number of those who answered that they experienced no problems because they know how to use the Internet safely was very small – 4,9%.

A significant number of the respondents have had personal negative experiences while using the

Internet. Thus, 53% of them have encountered fake news about the war in Ukraine.

Also, children often come across photos and videos depicting violence and cruelty, including murder, fights, bullying, etc. This was indicated by 40,3% of respondents. This particular threat deserves special attention. After viewing such content, the user may notice changes in one's mental or even physical state, such as increased anxiety, trembling of the limbs, suffocation, rapid heartbeat, confused thoughts, fear, anger, etc. Because of the war, violent content is everywhere these days, which has a traumatic effect on all Internet users, and especially children. Seeing such content often makes the viewer experience fear, giving the impression that violence and rash behavior are the norm. Viewing this content over long periods of time can cause changes in a child: in terms of behavior – manifested in feelings of alienation, loneliness, restlessness, apathy, lack of interest toward things that used to be important, new fears and concerns; mood – i.e. sadness and annoyance with the entire world; and sleeping habits – i.e. insomnia, often accompanied by early awakening or, on the contrary, late rising, as well as nightmares (Filonenko, Kasilova, & Dyakova, 2022, p.12). Therefore, adults should avoid watching news and videos about the situation on the front lines in the presence of children (especially younger ones) and discussing this subject in too much detail while children are around. Furthermore, they should refrain from posting such content on their social media if there are children on their friends list that would be able to see it. It's also necessary to explain to children that they should not view or disseminate such content in chats, e.g. in class chats, on their social media pages, etc. (Filonenko, Kasilova and Dyakova, 2022, p.12).

A considerable number of respondents – 37,9% – have been the target of insults, humiliation, harassment, threats, intimidation, and obscene language while communicating on social media; 36,3% have encountered malicious software (viruses); 30,6% – images of sexual nature. It should be noted that when answering another question, 42,7% of respondents indicated that they periodically (“often” – 7,7%, or “occasionally” – 35%) visit adult sites. So, despite the fact that the survey was anonymous, the children sometimes weren't completely honest, perhaps because the question concerned a potentially embarrassing subject.

According to 18,1% and 17,2% of respondents, respectively, they have encountered fraudulent

actions or theft of funds online, as well as had their social media accounts or e-mail hacked, with more boys than girls having experienced this by a large margin: 26,1% of boys and 12,8% of girls have experienced fraud or theft while 22,3% of boys and 13,9% of girls have had their social media accounts or email hacked. About every seventh student has come across proposals to buy them alcohol or drugs (14,7%). 14,6% of respondents have been subjected to sexual harassment on the Internet, with an almost equal number of girls and boys (14,8% and 14,3%, respectively). 12,2% admit that they have had their personal information, photos, or videos posted on the Internet without their consent. Every 9th student (10,9%) has faced extortion, boys twice more often than girls – 15,7% and 7,8%, respectively. Almost every 10th student (9,5%) has had offers to participate in extreme games like Blue Whale. 5,8% have received requests to take pictures of military vehicles, checkpoints, and other military targets.

According to the State Special Communications Service of Ukraine, the enemy gets 80% of its intelligence from public content on the Internet. It is for this purpose that the Russian military is so eager to try and involve Ukrainian children in these dangerous activities.

It should be noted that 22,4% of respondents say they have not encountered any trouble in the digital space whatsoever. One possible explanation for this is that parents are usually more diligent in monitoring children when they are younger: among the aforementioned percentage, the majority are 11- and 12-year-olds.

Since boys usually run into the above problems more often than girls despite better digital competences, the work on preventing incidents and crimes involving children should be done taking into account not just the children's skills but also their gender.

To find out how best to address these issues, we asked the children, “*Do you tell your parents about the problems you experience on the Internet?*” 37,3% answered that they do so regularly, 34,8% – that they report only certain problems, while 27,9% never notify their parents about this.

It should be noted that children tend to hide certain problems more often than others, such as sexual harassment (19,4%); offers to buy alcohol or drugs (17,4%); invitations to participate in extreme games (10,9%), etc. This is probably due



to fear that their parents would forbid them to use the Internet, or perhaps they are embarrassed to discuss such topics with their parents. Another possibility is that children simply doubt that their parents would be able to help with these problems, since the level of digital competences among adults is generally lower than that of children today.

This is confirmed by answers to the question *“Have your parents ever asked you for help with a computer or phone?”* The vast majority – 84,7% – said yes, with an almost equal percentage of boys and girls.

This indicates a breakdown in the established tradition of older generations passing on their experience to younger ones. After all, it’s the family that lays the foundation of a child’s social behavior, and the digital space should be no exception. However, parents today often have nothing to offer their children in terms of such knowledge and skills, thus discouraging them from asking for help in the first place. Incidentally, according to the first all-Ukrainian digital literacy survey conducted in December 2019, 53% of the population (based on the digital skills assessment methodology used by the European Commission) is below basic level: of those, 37,9% of Ukrainians aged 18-70 are at basic level while 15,1% have no relevant skills at all (Ionan, 2020, February 10). That is why, when they encounter difficulties, have questions, or require advice, they often turn to the virtual world and online “friends” rather than their parents.

Considering that children actively communicate in the digital space, with social media playing a dominant role in this, we wanted to know whether they follow basic safety precautions. Having previously found out that the vast majority of children (88,9%) know how to change privacy settings for their social media accounts, we asked them, *“Are your accounts on social media private?”* Despite the aforementioned skills, most of the respondents answered negatively, namely 53,2% (56,3% of girls and 48,4% of boys). A bit over a third answered yes, while 5,1% said they don’t know whether their accounts are private. 7,1% said they have no accounts on social media. These are mostly younger adolescents aged 11-12.

It should be noted that most social networks only allow registering an account if the user is over 13 (e.g. TikTok, YouTube, Instagram, Facebook, and Twitter). Thus, considering that the percentage of 11- and 12-year-olds among our

respondents is 17,1% and 13,9%, respectively, we can say with a high degree of probability that about 24% of the children (every fourth) lied about their age when registering accounts on social media. Similar results were obtained during a 2019 survey in the UK, according to which 18% of children aged 8-11 already have accounts on popular social networks (Kobzar, 2019). Sometimes children do this without their parents knowing, although a third of the parents, as it turns out, doesn’t even know about age restrictions for registration in the first place (Kobzar, 2019).

Also, children often have multiple accounts for accessing social networks. In 2022, an Ofcom study showed that 60% of children aged 8-11 have at least one account, which they registered simply by indicating a false date of birth (Miroshnikova, 2023).

Violations of age restriction rules on social media also come up in the study by Núñez-Gómez et al. (2021) *“Critical Analysis of the Risks in the Use of the Internet and Social Networks in Childhood and Adolescence”*. According to the researchers, children aged 9-16 use social media daily (or very frequently), with younger adolescents indicating a false date of birth to register an account. Older adolescents start creating several accounts on social media: the primary one, which their parents know about, and one or more other accounts that they use to search for information anonymously, freely express their opinions, follow the accounts of people they are interested in, etc.

With unhindered access to social media, a child can easily invite the attention of criminals. In light of this, we asked the children, *“Are there people on your friends list on social media whom you have never met in real life?”* As it turns out, the majority of respondents – 56% – are willing to add people they have never actually met. This is more prevalent among boys (61,0% against 52,8%).

So, despite the fact that most of the respondents have the necessary skills to adjust privacy settings on social media, they not only ignore this option but also carelessly add strangers to their friends list.

Some children add friends to get as many “likes” as they can for their posts or other content (e.g. photos or videos). This way they gain respect, recognition, and popularity among their peers. In addition, according to a 2016 study by researchers at the University of California,



getting a “like” or looking at a large number of “likes” on their photos activates the same part of the brain in adolescents as when eating chocolate or winning money (Sherman, Payton, & Dapretto, 2016). Stimulation of the brain’s so-called “reward center” makes adolescents spend more and more time on social media, posting photos, videos, etc.

The danger lies in the fact that by adding strangers, children give them access to personal details and may end up having regular conversations with them, potentially of a sexual nature. This can even lead to meetings offline. The war has only exacerbated this issue by severing children’s social connections, which they now seek to replace.

The next question in the questionnaire was meant to help us understand how cautious adolescents are when meeting people on the Internet. We asked, *“What personal information are you willing to share with a new online friend?”* 67,5% of respondents are willing to talk about their interests and hobbies; 48,2% – to give their first and/or last name; 20,1% – to send their photos, with girls somewhat outnumbering boys here (23% against 15,7%); 10,1% – to give their phone number; a bit over 5% – to say what school they go to. 26,5% of respondents don’t share personal details, while 14,5% say that they give false information.

Other answers, which were provided by 2,8% of respondents, are as follows: *“I share information only with my parents’ permission”*; *“I will report non-confidential information”* etc.

Since criminals often use online communication as groundwork before the actual crime, we had to find out whether children limit themselves to online when socializing with their Internet friends. In response to the question *“Have you ever had offline meetings with your online friends?”* almost 32,2% answered yes, with the percentage of boys (34,1%) and girls (31,0%) here almost the same. The frequency of face-to-face meetings with Internet “friends” rises significantly as the child gets older: among 11-year-olds, every seventh child had such meetings, as opposed to every second in the older age group. It’s unlikely that they fully realize the danger of such meetings.

It is unlikely that these students are aware of the dangers they may be exposed to when meeting virtual acquaintances. Parents and teachers should constantly remind children to be careful about meeting people in the digital environment

and following up with them, as well as about sharing personal information (photos, contacts, etc.) online. Children often become victims of sexting because they see it as a harmless and simple way to get complimented for their appearance through positive comments and likes rather than something dangerous (Ionan, 2020, February 4).

Furthermore, their age itself, which is characterized by the desire to experience new and unknown, even dangerous, things, pushes them toward risky behavior, including in the virtual space.

This is demonstrated by answers to our question regarding extreme games (challenges). First and foremost, it should be noted that the overwhelming majority (79,2%) of respondents is aware of the existence of so-called “death groups” on social media, such as Blue Whale, Red Owl, “Wake me up at 4:20,” “Run or die,” Momo, etc., which encourage adolescents to perform potentially lethal tasks and inflict bodily harm on themselves or even commit suicide. Also, children’s awareness of such games increases with age (63,3% among 11-year-olds and 86,4% among 17-year-olds).

It should be noted that 4,8% of respondents answered that they might agree to participate in such games, if only out of curiosity, while 11,2% were undecided. We believe that the latter could be persuaded to participate through professional psychological manipulation. This puts 16% of respondents at risk, i.e. one in six children.

We fully agree with Astorri and his co-authors (2023), who, in their study *“Online extreme challenges putting children at risk: what we know to date”*, concluded that in most cases, children and adolescents go into it with no intention to die. Unaware of the danger to their health, they do it for the thrill, because they want to try something new and unfamiliar. After all, most children are looking for new sensations and impressions in the virtual world, as well as for something they were unable to get in the real world from the people closest to them – support (according to a member of one of the “death groups”) (Kovalevska, & Gribanova, 2022). As noted above, the desire to take risks during adolescence occurs in part due to elevated neural sensitivity to the so-called “reward” (stimulation of the part of the brain responsible for the sensation of satisfaction at achieving certain goals) combined with the undeveloped capacity for cognitive control (Sherman et al., 2016).

In addition to the aforementioned death groups, various dangerous challenges spring up on the Internet every day. For instance, recently there was a popular challenge on Instagram that involved posting a photo of one's city to the user's Instagram Stories with a geotag. While harmless at first glance, such actions could result in tragedy during a war. There also exist challenges that pose a more obvious risk to one's health and even health. One example of this was the pill poisoning incident involving children who took part in a challenge to "swallow 40 pills and see what happens" after watching a video on TikTok.

In light of this, we decided to ask the children, *"Do you participate, or have you ever participated, in online challenges?"* The results were as follows. 68,5% don't participate in challenges; 31,5% (every third respondent) do it with varying frequency: 28,1% – occasionally, 3,4% – frequently.

We asked the children that have experience with challenges: *"What kind of Internet challenges do you participate in most often?"* 85,2% of respondents – an encouraging figure – mainly participate in safe challenges; 11,3% – in both kinds (safe and dangerous alike), as long as they seem interesting; and 3,4% – mainly in dangerous ones (those which can be dangerous to one's health or life). Looking at the answers through the lens of gender, boys are twice as likely to opt for dangerous challenges, or else they only take into account how interesting the challenge is and ignore safety considerations entirely.

In regards to whether their parents know what they do on the Internet, 54% answered in the negative or that their parents know about it only partially. Such a large percentage of parents that are ignorant regarding this issue presents a serious danger to their children.

## Conclusion

The survey's results demonstrate that the Internet has captured the hearts and minds of schoolchildren due to its accessibility, emotional appeal, and rich opportunities for learning, communication, and entertainment, which resonates with the desire of adolescents to experience adulthood and independence.

Considering the peculiarities of adolescence and the excessive activity of children on the Internet, the list of online threats for minors is much larger than for adult users.

Excessive and unsupervised use of the Internet may damage the child's physical and mental health and lead to such issues as Internet addiction; supplanted traditional forms of socializing; negative social influences that push adolescents toward illegal, antisocial, or destructive behavior; and the risk of falling victim to illegal acts like cyber violence, fraud, pornography, sexual harassment, incitement to suicide etc.

As the survey shows, most adolescents are aware of the threats they can come across while navigating the digital space, but they don't fully realize the extent of these threats.

Meanwhile, the older generations are increasingly lagging behind the developments in the digital world. Perhaps this why children today are often reluctant to ask adults for help with their problems.

Modern life is characterized by a constantly shifting balance between the real and virtual components, and the younger the generation, the more they see the virtual component as the dominant one. Therefore, family and school should remain the focal points where traditional forms of socialization prevail, while the digital environment is only a part of real life and serves as a tool that expands human capabilities.

It's especially important to help children realize that this tool comes with a set of mandatory safety rules, much like traffic rules. Given the nature of adolescence and our survey's results, we must point out that schoolchildren behave rather carelessly in the digital space, especially in regards to online acquaintances and communication. This issue has become particularly serious because of the war.

To ensure the safety of children in the digital space today, parents need to:

• speak with their children as often as possible (without any devices), talk with them about their state during stressful situations, support them and never leave them to deal with "dark" thoughts on their own;

• discuss universal rules of online safety with them (e.g. don't share personal details with online friends, don't share your posts or the posts of your relatives, don't exchange indecent photos and videos; don't agree to offline meetings with strangers or do this only in public places and in the presence of parents or other adults that you are sufficiently close with, etc.);

adjust, together with the children, privacy settings on their social media accounts and make them private. It's important to explain to the child that a geotag on a post or picture, a funny video on a social network, or a simple message can pose real danger, especially during a war; foster critical thinking in the children; this will help them better navigate the digital space and avoid negative situations in the future.

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## Some aspects of using modern innovative nanotechnologies in dentistry technical solutions, dilemma of implantation

### Algunos aspectos de la utilización de nanotecnologías innovadoras modernas en odontología soluciones técnicas, dilema de la implantación

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#### Abstract

In the article, the authors analyze the problem of using modern innovative nanotechnologies in dentistry. Currently, nanotechnology is used in treatment, prosthetics, preventive care of the oral cavity and teeth. Based on this, the use of nanotechnology in dentistry has a number of advantages compared to the traditional materials used, as they are more effective, affordable, structured, meet all modern parameters, and have high quality. Despite the widespread use of nanotechnology, in some cases, they may carry certain risks. Nanomaterials have higher activity, high permeability through the skin, lungs, and digestive tract. But the impact of nanoparticles on the body remains unexplored. In addition to safety problems of nanomaterials, their production is associated with a number of other problems: engineering, biological, and social. Specialists think about new ways to solve current professional problems. Time will tell how

#### Resumen

En el artículo, los autores analizan el problema del uso de nanotecnologías innovadoras modernas en odontología. Actualmente, la nanotecnología se utiliza en tratamientos, prótesis y cuidados preventivos de la cavidad bucal y los dientes. Según esto, el uso de la nanotecnología en odontología tiene una serie de ventajas en comparación con los materiales tradicionales utilizados, ya que son más eficaces, asequibles, estructurados, cumplen todos los parámetros modernos y tienen una alta calidad. A pesar del uso generalizado de la nanotecnología, en algunos casos pueden conllevar ciertos riesgos. Los nanomateriales tienen mayor actividad, alta permeabilidad a través de la piel, los pulmones y el tracto digestivo. Pero el impacto de las nanopartículas en el organismo sigue sin explorarse. Además de los problemas de seguridad de los nanomateriales, su producción está asociada a otra serie de problemas: de ingeniería, biológicos

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successful the process of integrating narrow-profile research into practical activity will be. The development of new and implementation of existing nanotechnology medical technologies is a promising direction of the development of modern dentistry.

**Keywords:** nanotechnology, nanomaterials, nanoparticles, dentistry, medicine.

## Introduction

A beautiful smile not only boosts self-confidence, but also reflects the health of the body. The oral cavity contains many more different types of bacteria than other parts of the gastrointestinal tract, and this number ranges from 160 to 300 species. Inflammatory diseases of the oral cavity occur when the normal balance between the own and foreign microflora is disturbed. The originality and peculiarity of the oral cavity lies in the fact that, firstly, two vital functions of the human body are carried out through it and with its help - respiration and nutrition, and, secondly, that it is constantly in contact with the external environment. The mechanisms functioning in the oral cavity are under constant double influence - the influence of the body, on the one hand, and the external environment, on the other.

Oral hygiene is very important because it can have a significant impact on a person's health and quality of life (Lamster, 2021). Oral health received a lot of attention at the 74th World Health Assembly in 2021 (Lamster, 2021). The main common oral diseases are caries, periodontal disease, and tooth loss. Therefore, disease prevention requires special attention and innovation.

Conventional therapeutic approaches yield superficial outcomes that fail to achieve the desired effects. The emerging field of nanotechnology, particularly within the realms of dentistry and medicine, has sparked considerable interest among researchers due to its potential applications and the distinct advantages it offers compared to traditional materials.

The integration of nanotechnology into contemporary dentistry has facilitated the implementation of cutting-edge principles for addressing oral health concerns, specifically those pertaining to gums and teeth. The widespread adoption of nanotechnology within

y sociales. Los especialistas piensan en nuevas formas de resolver los problemas profesionales actuales. El tiempo dirá hasta qué punto tendrá éxito el proceso de integración de la investigación de perfil estrecho en la actividad práctica. El desarrollo de nuevas tecnologías médicas nanotecnológicas y la aplicación de las ya existentes es una dirección prometedora del desarrollo de la odontología moderna.

**Palabras clave:** nanotecnología, nanomateriales, nanopartículas, odontología, medicina.

the dental field can be attributed to the robust growth of the oral hygiene industry, a progression that relies heavily on the introduction of inventive methodologies for acquiring products and sourcing raw materials. Nanotechnology finds application across various domains within dentistry, including radiography, orthodontics, surgery, and therapeutic interventions. Owing to their minuscule dimensions, nanoparticles exhibit exceptional penetrative capabilities, enabling effective tissue infiltration, filling, and pathogen combat. Today, many studies are being carried out simultaneously, looking at different ways of using nanoparticles for various dental purposes. It is believed that the beginning of the active development of nanotechnology was a report by Nobel Prize-winning physicist Richard Feynman in 1959. In 1968, Alfred Cho and John Arthur developed the theoretical basis for surface nanotechnology. In 1974, Norio Taniguchi coined the word "nanotechnology". In 1986, nanotechnology became known to the general public. The American futurist Eric Drexler published a book in which he predicted that nanotechnology would soon begin to develop rapidly. In 2000, the US Administration announced the National Nanotechnology Initiative. In 2004, the US Administration supported the National Nanomedicine Initiative as part of the National Nanotechnology Initiative. *Research Problem*

Modern innovative nanotechnologies offer great promises for dental treatment enhancement, diagnostics, and preventive measures. However, the implementation of these cutting-edge technologies in dentistry is challenging. This article explored the research problem concerning the dilemmas faced in introducing and integrating modern innovative nanotechnologies in dentistry and delved the importance of this issue.

What are the challenges of implementing modern and innovative nanotechnologies in dentistry?

How can these challenges be overcome to improve oral health?

Why is it important to address this problem?

The importance of addressing the dilemmas of implementing modern innovative nanotechnologies in dentistry cannot be overstated. The lacks in the field have significant consequences for patients, dental health professionals, and society in general.

What consequences does it have for patients, dental health professionals or society in general?

For patients, unresolved challenges may result in limited access to state-of-the-art dental treatments, diagnostics, and preventive measures, hindering the improvement of oral health and overall well-being.

Dental health professionals will face difficulties in adapting and evolving technologies as well as delivering the highest standard of care if these challenges persist.

Society may suffer from missed opportunities to advance oral healthcare, contribute to overall healthcare system efficiency, and benefit from

the societal and economic advantages that improved dental health can provide.

In conclusion, the research problem regarding the implementation of modern innovative nanotechnologies in dentistry is a critical issue that must be addressed to unlock the full potential of these technologies and promote improved oral health for individuals and society as a whole.

Thus, addressing these challenges is paramount to harness the full potential of modern nanotechnologies in dentistry and subsequently improve oral health.

### Research Focus

The focus of the study is innovative nanotechnologies in dentistry.

### Research Aim

The purpose of the study is to analyze some aspects of the use of modern innovative nanotechnologies in dentistry, their technical solutions and implementation dilemmas.

Let us examine the most recent research findings and publications in the domain of cutting-edge nanotechnology within the field of dentistry (Table 1).

### Theoretical Framework or Literature Review

**Table 1.**  
*Research on the use of nanotechnology in dentistry*

Authors	The subject of the study
Abduazimova-Ozsujlu et al., 2021	use of innovative technologies in dentistry
Vasiliu et al., 2021	application of nanotechnology and smart nanomaterials
Amissah et al., 2021	nanotechnology in the prevention and treatment of dental caries
Ni et al., 2019	use of nanoparticles in periodontal treatment
Omanović-Mikličanin et al., 2020	nanocomposites and matrix materials
Song, Ge, 2019	application and basic mechanisms of antibacterial nanoparticles in dentistry
Sun et al., 2019	nanoparticles in antibacterial applications

Source: author's own development

The analysis of scientific publications presented in Table 1 above is aimed at studying the field of dentistry and the introduction of nanotechnology in this area. We note the growing interest in the use of innovative technologies and nanomaterials in dental practice. The main areas of this research include the treatment of caries with nanoparticles, the use of nanotechnology for the prevention and treatment of caries, and the use of nanoparticles in the treatment of periodontal diseases. Table 1 of the authors' scientific papers

illustrates the diversity of thematic areas and opportunities for further research in this area. It is important to take these scientific achievements into account when developing new methods and technologies of dental practice in order to improve the health of patients.

The results obtained indicate the potential of nanotechnology and nanomaterials to improve the quality of dental treatment and prevention. Therefore, it is necessary to continue research in

this area to develop new effective methods and tools in the field of dentistry.

Today, the issue of using innovative technologies in dentistry is being studied (Abduazimova-Ozsujlu et al., 2021). The replacement of so-called "passive" dental materials that do not interact with the oral environment with "smart/intelligent" materials that have the ability to change their shape, color or size in response to external stimuli such as temperature, light, humidity has received much attention in recent years. A strong trend in dentistry is the use of nanotechnology and smart nanomaterials, such as nanoclay, nanofibers, nanocomposites, nanobubbles, nanocapsules, solid lipid nanoparticles, nanospheres, metal nanoparticles, nanotubes, and nanocrystals. Among nanomaterials, smart nanoparticles have several advantages over other materials, creating the possibility of using them in various dental applications, including preventive dentistry, endodontics, restoration, and periodontal disease (Vasiliu et al., 2021). The need for and improvement of caries treatment methods using nanotechnology is being emphasized. Tooth decay occurs due to prolonged acid production when sugar is metabolized by a bacterial biofilm, which leads to the loss of calcium and phosphate from the enamel, so it is effective to use nanoparticles in the treatment.

*Streptococcus mutans*, an acidogenic bacterial strain, presents a formidable clinical challenge owing to its intrinsic resistance to established conventional therapeutic modalities, such as cefazolin and ampicillin. Furthermore, topical agents, notably fluoride, frequently exhibit suboptimal efficacy due to their susceptibility to rapid salivary clearance. Nonetheless, the incorporation of nanoscale drug delivery systems has yielded notable improvements in therapeutic outcomes. These enhancements stem from the enhanced solubility of therapeutic agents, augmented penetration into the deeper layers of the biofilm matrix, extended residence within the buccal cavity milieu, and a concomitant mitigation of the emergence of drug-resistant phenotypes. These pioneering advancements hold substantial potential in the rejuvenation of therapeutic agents characterized by limited physicochemical attributes, and they merit consideration for future research endeavors within the purview of *Streptococcus mutans* management (Amissah et al., 2021).

The restoration of the lost periodontal structure in the treatment of periodontitis remains a challenging clinical task due to the limited

regenerative potential of cementum, periodontal ligament, and alveolar bone under the conditions of periodontal disease. Achieving periodontal tissue regeneration necessitates the regulation of the inflammatory response and subsequent differentiation of periodontal cells due to the infectious nature of the disease. It is worth noting that 45 nm gold nanoparticles (AuNPs) have demonstrated a significant anti-inflammatory effect and the ability to enhance the inflammatory microenvironment in periodontal tissues by influencing the production of inflammatory and regenerative cytokines and by modulating the polarization of macrophages. Consequently, they have an impact on the differentiation of human periodontal ligament cells (hPDLs). These 45 nm AuNPs not only directly influence hPDLs but also play a role in regulating the initial inflammatory response in periodontal tissues by modulating macrophage phenotypes. This creates an environment characterized by controlled levels of inflammatory cytokines and the presence of reparative cytokines such as bone morphogenetic protein-2 (BMP-2). This, in turn, facilitates PDL differentiation, promotes the regeneration of periodontal tissues, and contributes to the prevention of periodontitis progression (Ni et al., 2019; Xue et al., 2019). The fundamental concepts of nanocomposites are introduced, and we delve into the types of matrix materials that categorize nanocomposites into three groups: metal matrix nanocomposites, ceramic matrix nanocomposites, and polymer matrix nanocomposites. Modifying the filling factor of silver nanoparticles by just 5 percent results in substantial alterations to both the actual and imaginary components of the effective permittivity of the nanocomposite material. In the context of a graphene-based nanocomposite, a notable absorption peak is detected when the silver filling factor reaches 0.2. Conversely, for a nanocomposite relying on graphene oxide, an absorption peak becomes evident at a silver filling factor of 0.1. In both scenarios, the highest level of absorption is witnessed in the nanocomposite material containing nanoparticles with a 5 nm radius (Omanović-Mikličanin et al., 2020; Khademi et al., 2019; Zafar, 2020). The above review of the current scientific literature discusses in detail the possibilities of using nanomaterials and nanopreparations in dentistry, which is of interest to various dental professionals, as these materials demonstrate new useful properties. Modern theoretical knowledge is being successfully implemented in practical dentistry, and nanomaterials have now become standard components of everyday dental practice. Some scientists also review the

development, use, and underlying mechanisms of antibacterial nanoparticles in dentistry, including restorative dentistry, endodontics, implantology, orthodontics, dentures, and periodontics (Song, & Ge, 2019). Multifunctional nanoparticles also have great potential in the field of antibacterial applications aimed at preventing and controlling the progression of periodontitis (Sun et al., 2019). To date, many authors have published review articles discussing the potential of nanotechnology in dentistry, including newly developed materials, but the literature lacks reviews that describe in detail the science behind nanotechnology and link it to the significance and application of nanotechnology in dentistry.

### Methodology

This review attempts to summarize and present the current data on the work of scientists and specialists in the field of using modern innovative nanotechnologies in dentistry.

### General Background

Theoretical methods were used: analysis, synthesis, and generalisation of literature on the use of nanotechnology in dentistry. The method of comparing nanocomposites with other composite materials was also used. Nanotechnology has been explored in an attempt to improve process and overall performance in dental practice. Therefore, understanding how these materials can be used in our daily practice requires a deeper understanding of the science behind nanotechnology. This article reviews nanomanufacturing applications in the treatment, prosthetics, and preventive care of the oral cavity and teeth.

### Data Analysis

Studies by foreign and domestic scientists analyzing the use of innovative nanotechnologies in dentistry from 2019 to 2022 have been included.

The article scrutinizes the application of nanotechnology and intelligent nanomaterials, advances in caries treatment methodologies through nanotechnological interventions, and assesses nanocomposites, which categorize into three distinct classes: metal matrix nanocomposites, ceramic matrix nanocomposites, and polymer matrix nanocomposites. A comprehensive overview of extant literature pertaining to the utilization of nanomaterials and nanopreparations by dental experts is provided.

## Results and Discussion

### Nanotechnological Advancements in Dentistry

Abduazimova-Ozsujlu et al. (2021) points to innovations in dental practice. Dentistry, as a science, does not stand still, new technologies are developing, new principles of treatment and patient management are being applied. Before moving on to consider innovative nanotechnologies in dentistry, it is necessary to first clarify the term “nanotechnology”. The prefix “nano” is adopted in the International System of Units (SI) and corresponds to one billionth of the original unit. For example, a nanometre (nm) is equal to  $1 \cdot 10^{-9}$  m. Highly dispersed solid-phase objects whose dimensions range from 1 to 100 nm are called nanoparticles. Capable of self-organisation, they can form agglomerates, clusters, and other ordered structures up to several micrometres ( $1 \cdot 10^{-6}$  m) in size.

The word “nanotechnology” does not carry any negative or fantastic connotations - it is simply that advances in physics and chemistry have enabled researchers to operate with objects in the nanometre range. Nanotechnology is a branch of science that deals with objects of extremely small size, on the order of a hundred nanometres. The processes of nanotechnology are based on the laws of quantum mechanics and include atomic assembly of molecules, new methods of recording and reading information, local stimulation of physical and chemical reactions at the molecular level, etc. It is believed that the active development of nanotechnology began with a report by Nobel Prize-winning physicist Richard Feynman in 1959. The scientist proposed the method of atomic (molecular) assembly, the essence of which is the manufacture of materials and parts from the elementary constituent elements of matter - atoms or molecules. Dr. Eric Drexler is the author of the concept of nanotechnology, or, as he is called, the “father of nanotechnology”. In 1981, he published an article in which he described the basic principles of molecular engineering and the directions of scientific thought on the development of nanotechnology (Song & Ge, 2019). One of the most progressive industries is dentistry, where the latest achievements of science and technology are successfully applied. The development and creation of nanocomputers capable of not only performing quantum computing but also controlling the nanomachines of the future - nanobots - opens up new opportunities for

medicine. In the future, nanobots will adapt to the environment by sensing its slightest changes, move as needed, and perform molecular assembly to repair damaged areas, which will provide high potential for the use of these devices for medical purposes, especially in dentistry, where the doctor is faced with the task of not only curing and relieving the patient of pain but also preserving its appearance and functionality to the maximum extent possible. With the advent of this technology in dentistry, the boundaries of possibilities have expanded significantly. The founder of research in the field of nanodentistry was Robert Freitas. In 2000, he published an article about the potential use of nanorobots for orthodontics and dentin regeneration, as well as the use of nanomaterials in oral hygiene products. According to scientist, nanomedicine is the tracking, correction, design, and control of

human biological systems at the molecular level using engineered nanoparticles and nanotechnology. The creation of nanomedicine is a matter of the near future; it does not exist yet, but there are rapidly developing technologies that allow us to create unique devices and applications that open up new opportunities and directions in various areas of modern medicine. The global dental community was introduced to the “nanoworld” in autumn 2002 when the first composite material of the new generation, Filtek Supreme nanocomposite, was presented at the International Dental Exhibition in Vienna (Fig. 1). A high degree of filling combined with abrasive wear resistance, good polishability and high aesthetics allowed this subfamily of composites to become a standard restorative material and complete the evolution of inorganic filler sizes from macrofilled to nanohybrid.



**Figure 1.** Filtek Supreme nanocomposite  
Source: (Chávez-Andrade et al., 2019)

In dental practice, nanotechnology has found application at all stages. The ability to deliver the active ingredient directly to the problem area has brought the treatment and prevention of oral diseases to a new level of efficiency.

Currently, nanotechnology is used for:

- in treatment (nanocomposite materials, glass ionomer cement of triple curing, tooth canal fillers based on modified nanocompounds, regenerating agents based on short peptides);
- in prosthetics (elimination of the consequences of periodontal diseases due to

- the compaction of periodontal tissues and fixation of mobile teeth, implantation of implants through the root of a loose tooth);
- in preventive oral and dental care (toothpaste, gels, and rinses with nanoparticles that have bioantioxidant, anti-inflammatory, and deodorising effects, artificial protective plaque for teeth based on nanotubes).

Nanoparticles are able to pass through biological barriers, carrying the necessary molecules precisely to the intended target (Table 2).



**Table 2.**  
*Nanoparticle types and their applications in medicine*

Liposomes	(nanospheres of aqueous substance enclosed in a lipid membrane) are unique carriers of medicinal substances
Ceramic nanoparticles	are often used as drug carriers in the treatment of tumours
Iron oxide nanocrystals	can be used in the diagnosis of diseases using magnetic resonance methods
Composite shells	are used as drug carriers
Silver nanocrystals	are used for the topical treatment of infected skin wounds
Fullerenes (a new allotropic form of carbon)	have their own biological activity, exhibiting antioxidant properties
Carbon nanotubes	are a plane rolled into a cylinder and are of great interest as drug carriers with controlled release capabilities
Quantum particles	are used in the diagnosis of tumours and other diseases

Source: (Moradpoor et al., 2021)

Japanese scientists have used advanced nanotechnology to create a material called nanocrystalline medical hydroxyapatite (nano-mHA). This artificially synthesised material is completely similar to natural hydroxyapatite (or calcium hydroxide phosphate), the main mineral in bone and hard tooth tissue. It consists of 97% tooth enamel and 70% tooth bone. The health and beauty of teeth depends on the condition of the enamel, which protects the tooth from external factors. The enamel of a healthy tooth is translucent, its natural colour is close to the colour of ivory. However, under the influence of the environment, diet and individual characteristics of the body, teeth lose their supply of valuable hydroxyapatite, the enamel becomes covered with plaque and stains, dull and cloudy, tooth sensitivity increases and caries develops. One of the most effective methods of its prevention and treatment is nanotechnology (Amissah et al., 2021). Ensuring the timely supply of the required amount of minerals to the tooth tissue can prevent the development of caries at an early stage. The ability of tooth tissue to regenerate is provided mainly by hydroxyapatite. In the process of remineralisation, new hydroxyapatite crystals are formed. Medical nano-hydroxyapatite is designed to solve the problem of restoring the structure of tooth tissue (Blinova & Rumyantsev, 2021). The nanoscale form of hydroxyapatite was developed by Japanese researchers who have been studying this problem since 1978. Today, thanks to the development of nanotechnology, the improved formula of nano-mHAP consists of two-dimensional nanoparticles - on average 50 nanometres instead of nanoparticles. Particles with a size of 300 nanometres were used previously (1 nanometre = 1 millionth of a millimetre). This has significantly increased the restorative properties of nanohydroxyapatite when acting on tooth enamel and bone tissue (Moradpoor et al., 2021). During toothbrushing, hydroxyapatite nanoparticles are incorporated

into tooth tissues and repair microscopic defects and enamel damage. The ability of nano-mHA to form strong bonds with proteins leads to the destruction of plaque and its effective removal (Martin et al., 2019). As a result, the enamel becomes smooth and more resistant to bacteria. A standard oral hygiene kit can only act superficially. Products with nanoscale components are able to penetrate deeply into the organs and tissues of the oral cavity. This makes it possible and significantly increases the effectiveness of the impact on the roots of the teeth and gum layers. For example, for the most effective remineralisation of teeth, hydroxyapatite particles are added to toothpaste and gels. Thanks to these particles, the rate of tooth enamel restoration is significantly increased (Sun et al., 2019).

Nowadays, the drug “VIVAX Dent” has proven itself well, offering a number of therapeutic and prophylactic agents, including:

- balms-rinse containing a complex of amino acids, aloe vera;
- anti-inflammatory toothpaste containing a complex of amino acids, with bisabolol, with betulavit;
- gel with bioantioxidant and amino acid complex Neovitin (Tong et al., 2019).

A study by American scientists from the University of Texas Health Science Centre at San Antonio has shown that nano-hydroxyapatite not only prevents caries but can also eliminate caries at an early stage. This is due to the ability of nano-mHAP ions to penetrate the microscopic spaces between the enamel prisms, integrating into the crystal lattice of tooth enamel hydroxyapatite crystals. Due to its biocompatibility and bioactivity, nanohydroxyapatite, unlike fluoride, which has toxic properties, does not add anything “foreign” to tooth enamel. It naturally ensures the supply of

minerals to the tooth tissues and restores the enamel structure.

The ability of nanomaterials to reproduce the mechanical, physicochemical, and aesthetic properties of dentin and tooth enamel is a significant advantage for their use in dental restoration (Ali Sabri et al., 2021). Some of the composite materials used in dentistry today are nanomaterials, which include ceramics, silicon, sapphire, or even diamond nanoparticles. Such materials are similar to natural teeth in terms of aesthetics, but they are significantly superior in terms of strength and hardness.

The advantage of nanomaterials over traditional composites is primarily due to the optical properties of nanoparticles, their better polishing ability, and the preservation of the polished surface for a long time. There are two main types of dental composite materials containing nanoparticles: nanocomposites and nanohybrids, which differ in the size of the particles they contain. Thus, nanohybrid composites include fillers of different sizes, for example, large glass particles (on average, about 2000 nm) mixed with particles of about 10 nm, and nanocomposites contain particles of more uniform size (particles of about 75 nm are mixed with particle sizes from 5 to 25 nm) (Loyola-Rodríguez et al., 2019). The advantages of nanoscale fillers are increased wear resistance,

reduced shrinkage, reduced shrinkage stresses, better polishability, more pronounced gloss, and special fillers. The mechanical strength of true nanocomposites is comparable to that of the best microhybrid composites. On the other hand, nanocomposites are highly aesthetically pleasing (Valerio et al., 2019). Liquid nanocomposites are widely used in medical practice. Improved strength and aesthetic characteristics make it possible to use these materials in situations that previously required long and labour-intensive treatment.

In dentistry, nanocomposites are being actively introduced into the technology of replacing wedge-shaped tooth defects, for minimally invasive filling of carious lesions, direct and indirect dental restoration, etc. It can be noted that nanocomposites have a small particle size and are universal in use, unlike macrofilled, microfilled, and hybrid composites. In terms of their positive properties, nanocomposites are superior to composite materials. For example, while macrofilled composites have only high strength, nanocomposites are easy to polish, have low shrinkage, are highly aesthetic and colourfast (Omanović-Miklićanin et al., 2020). Nanocomposites have practically no negative qualities (except for the high cost of the material), which cannot be said about other composite materials (Table 3).

**Table 3.**  
*Comparative characteristics of nanocomposites with other composite materials*

	Macro-filled	Micron-filled	Hybrid	Nanocomposites
Particle size	1-100 microns	0.007 - 0.4 µm	0.04 - 5 microns	Nanocluster up to 1 µm
Average particle size	5-30 microns	0.2 µm	1 micron	20 - 75 nm
Filler content by weight (%)	75-85	36-79	75-87	78.5 nm
Indications	Loaded cavities of 1.2 classes; cavities of 5 classes in unaesthetically important areas; superstructure of the tooth stump for artificial crowns.	Restoration of anterior teeth without high load; cosmetic contouring of macrophylls	Universal, but in some cases of restorations are not always effective in cavities of classes 2, 4, 5. (Not ideal filling surface)	Universal, used for filling all groups of teeth and classes of cavities, correcting the anatomical shape and colour of teeth.
Positive properties	High resistance	Aesthetics; excellent polish; uniform wear of the matrix and filler.	Acceptable aesthetic properties; sufficient strength; the quality of the filling surface is better than that of macrofilled composites. Not ideal surface quality (worse than microfilled composites); insufficient polish, low dry gloss resistance.	Highly durable; colour stable; easy to polish; highly aesthetic; antagonists do not erode; low shrinkage (2.2%).
Negative properties	High roughness; poor polish; unaesthetic appearance; discolouration; secondary caries; high abrasiveness.	Low resistance		Material cost

Source: (Reduwan Billah, 2019; Abd El-Fattah et al., 2021)

The inception of nanocomposite technology in the dental market occurred during the Vienna trade fair in October 2002, when 3M ESPE introduced their pioneering product. This breakthrough was the culmination of extensive and protracted research efforts dedicated to the development of the revolutionary 3M ESPE Filtek Supreme dental filling material, which incorporated a nanofiller component (3M ESPE, 2010). In the context of nanocomposite materials, a fundamental distinction exists between "true" nanocomposites and nanohybrid composites. "True" nanocomposites are characterized by their composition comprising exclusively of nanoparticles and nanoclusters. The technology employed in nanohybrid composites entails the integration of nanoparticles into conventional filler matrices. A "true" nanocomposite filler, for instance, combines unbound silicon nanoparticles measuring 20 nm in size, as well as zirconia particles with dimensions ranging from 4 to 11 nm. Additionally, these materials contain agglomerated clusters comprising 20 nm silicon particles and 4-11 nm zirconia particles. This amalgamation of nanoparticles and nanoclusters within a single material result in a material characterized by a remarkable degree of homogeneity, exceeding 75%, thereby affording it substantial mechanical strength. Notable representatives of "true" nanocomposite materials in this category include Filtek Supreme and Filtek Supreme XT, both manufactured by 3M ESPE (Jandt & Watts, 2020). Nanocomposites are easily and quickly polished to a "dry" mirror shine and retain this shine for a long time. This is due to the fact that under conditions of abrasive wear, as the organic matrix wears away, only individual nanoparticles that are not "recognised" by a beam of visible light are detached from the clusters. The material has low shrinkage (2.2%) due to the use of high molecular weight resins Bis-GMA, UDMA, Bis-EMA in the organic matrix. Low shrinkage ensures good edge adhesion of the material, allows the material to be introduced into the cavity in horizontal layers and non-directional polymerisation. The small particle size also provides high transparency and opalescence ("milky") colour. In dentistry, opalescence can be defined as the level of yellow light passing through the filling compared to the level of blue light reflected (when looking at the filling in front of a black background). This effect is called "Rayleigh colour scattering" in honour of the 19th-century physicist Baron Rayleigh. The effect is as follows: when light hits a filler particle, it is either absorbed or scattered. When white light hits very fine particles, it scatters red,

yellow, and green colours in the forward direction, while blue rays are reflected in the opposite direction. This effect explains the "chameleon" effect or the imperceptible transition of the filling into the surrounding tooth tissue, as the effect of multiple light scattering occurs. The nanocomposite has the property of plasticity, which makes it possible not to stick to the working part of the instrument. Quick gloss and long-term preservation, high strength - all this makes the material versatile (Kolenko & Lytvyn, 2019; Jiao et al., 2021). The use of nanotechnology in implantology is possible by applying nanoparticles to the surface of implants that can control the processes of protein adsorption, cell differentiation, and adhesion. For example, biologically active calcium phosphate nanocrystals applied to titanium implants stimulate the process of osseointegration, which significantly increases the long-term effectiveness of implantation (Naik et al., 2020). Therefore, nanotechnologies that modify the surface of dental implants are increasingly used today. The future of dentistry in this area is seen in the synthesis of the use of nanotechnology and the biomimetic approach (biomimetics are products that mimic the natural structure and properties of biological materials), ensuring that they can be used to restore damaged enamel, taking into account the biological response. To date, several types of nanocoatings for dental implant surfaces have been developed: diamond coating, hydroxyapatite coating, and metal-ceramic coating. Only a few manufacturers produce implants with nanoparticle surface treatment. A number of laboratory and preclinical studies have shown that the results of fixation of implants with a nanomodified surface are significantly higher compared to conventional implants (Vasiliu et al., 2021; Pinto et al., 2019). However, to date, there have been no large randomised clinical trials that could confirm the high survival rate and durability of implants with a nanoparticle-treated surface. The most well-known manufacturers of dental products using nanotechnology are Nobel Biocare, Dentsply Sirona, Straumann, 3M, Danaher, Ivoclar, Heraeus Kulzer, and Zimmer Biomet Dental. The companies are actively investing in the development of projects related to the nanomodification of dental implant surfaces to maintain high sales volumes in the market in the future (Ismailov et al., 2022; Makonin et al., 2022; Xu et al., 2019). According to expert reports, the demand for implants with nanomodified surfaces will increase in the coming years due to the results of studies confirming the benefits of this product. Sales will also be boosted by the growing number of elderly

people with adentia in Western countries and rising incomes in Asia, Africa, and South America. In addition, the medical community is widely promoting the importance of maintaining healthy teeth and gums and the link between oral diseases and other systemic diseases. All these factors will lead to the growth of sales of nanocoated implants in the market. Currently, the majority of sales are in Europe and North America, with progressive growth observed after the economic crisis of 2009. Representatives of Straumann said that the first research in the field of nanotechnology for dentistry began in 2010. The first works of the company's specialists were published in 2012 and 2013. SLActive implants are actively installed in Europe, North and Latin America, and in 40 countries in the Asia-Pacific region. The largest number of sales are in Europe, the USA, Brazil and Japan. To date, more than 6.5 million implants have been sold.

Nobel Biocare produces Xeal nanostructured abutments, which are sold in Europe, Canada, Hong Kong, Australia and New Zealand, Croatia, Turkey, Greece, India, and Vietnam. Nobel Biocare has been developing Xeal and TiUltra anodised surfaces for 5 years. Clinical studies of the products were published in 2019 and will continue for several more years.

Thus, it is obvious that modern technologies are actively used to develop products that are widely used by dentists. For example, according to representatives of Nobel Biocare, the most popular products are implants with new surfaces - NobelActive and NobelParallel.

Currently, three-dimensional printing (3D printing) technology is being used in many industries, using special 3D printers. Such 3D printing has found application in digital dentistry, which has become possible thanks to its active implementation by orthopedic doctors. This technology makes it possible to manufacture dentures, bypassing the labour-intensive costs associated with making an impression of the jaw, casting a plaster model of it, manufacturing dentures, fitting dentures to an artificial (model) jaw, and then fitting dentures to the patient's jaw. To overcome these difficulties in dentistry, 3D printers are used to make dentures, which are much more efficient and productive than conventional milling machines used in dentistry. The 3D printer produces moulds for casting teeth, as well as teeth and crowns themselves, not only quickly and efficiently, but, most importantly, taking into account the anatomical features of the patient's oral cavity (Naik et al., 2020; Tavares et al., 2021).

### *Challenges and Dilemmas in Dental Implantation*

Despite the widespread use of nanotechnology, in some cases, it can carry certain risks. Nanomaterials are highly active and permeable to the skin, lungs, and digestive tract. Therefore, the constant use of such materials can lead to their penetration through the bloodstream to various organs and further accumulation in the organs. This can result in inflammatory processes and even gene mutations.

But the impact of nanoparticles on the body remains unexplored. In addition, it is difficult to separate the effects of nanoparticles from other factors that affect clinical outcomes. The release of particles into the bloodstream is considered a risk factor for the inflammatory process. However, to date, there is no scientifically proven evidence of the negative impact of nanoparticles.

The physical and chemical properties of nanoparticles vary depending on their origin and can have different effects on living organisms. The study of the cytotoxicity of particles formed during the destruction of nanocomposite materials has emerged as an urgent problem in recent years along with the development of nanotechnology and the widespread use of nanocomposites in the medical industry. Nanoparticles penetrate into cells by endocytosis and are contained within endocytic bubbles. The apoptogenic effect of silicon nanoparticles is associated with both cytotoxic effects, such as increased lipid peroxidation and subsequent damage to the plasma membrane, and genotoxic effects, such as chromosomal aberrations during mitosis. For example, silicon nanoparticles with diameters of 14-, 15-, and 16-nm have a toxic effect (TC(50)) at a concentration of 33-47 µg/cm<sup>2</sup>, and nanoparticles with diameters of 19 and 60 nm - at a concentration of 89 and 254 µg/cm<sup>2</sup>, respectively. Thus, silicon oxide has size-, dose-, and time-dependent cytotoxicity. At the same time, smaller particles exhibit significantly greater cytotoxicity than larger particles. In the modern literature, information on the toxicity of silica is increasingly found. There are numerous studies proving the cytotoxic effect of silica nanoparticles when they enter the respiratory system from production.

Despite the fact that all restorative materials used in hospitals are certified and recommended for filling carious cavities of all classes, there are still a number of questions about limiting the use of nanocomposites on those tooth surfaces where



abrasion and accumulation of nanoparticles occurs more rapidly.

### Potential Solutions and Future Directions

In April 2017, the European Parliament introduced rules on the use of medical devices, including nanotechnology. They raised the issue of the need to create a single description of all nanomaterials to ensure their safe use and the legitimate use of materials by manufacturers. The Regulation introduced the concept of nanomaterials as natural, recycled, or manufactured materials containing particles in a free or bound state, 50% or more of which have an external dimension of 1 to 100 nm.

However, ISO standards for nanomaterials have not yet been fully developed, so laboratory and clinical studies are required before a new product can be marketed. In addition to safety concerns, the production of nanomaterials poses a number of other challenges: engineering, biological, and social. Firstly, due to their tiny size, it is difficult to arrange the particles correctly according to a given plan. Secondly, nanomaterials are pyrogenic, which causes environmental problems. The third problem is how society will perceive new types of materials. To indicate the use of nanocomposites for single-patient volumetric restorations, additional fundamental studies of the biocompatibility and biosafety of modern nanocomposite materials are needed. However, when assessing the biosafety of a nanocomposite material, the types of cells analyzed, the conditions of exposure of nanoparticles to cells, and cytotoxicity assays should be taken into account.

The introduction of new nanocomposite materials into practical medicine requires fundamental research on their biosafety. The use of such materials can have different effects on different cells, tissues, organs, and the human body as a whole. For example, the universal restorative material 3MTMESPETMFiltekTMUltimate is recommended by manufacturers for filling anterior and posterior groups of teeth (including occlusal surfaces), for core augmentation, splinting, and indirect restorations, including inlays, onlays, and veneers. However, given the possible negative impact of nanocomposite particles released during abrasion on body cells, we consider it advisable to limit the use of the material on occlusal surfaces, since in this area restorations are subjected to greater mechanical stress and wear out faster.

### Conclusions

The letter combination “nano” should no longer surprise a modern dentist. Even at the beginning of the 21st century, nanotechnology was a relatively new page in the intellectual epic novel that humanity is writing. Today, fundamental theoretical knowledge is being actively integrated into applied fields of science and technology, and nanomaterials are becoming a common attribute of daily dental practice. An important role in the development of nanotechnology in dentistry is played by the development of new nanomaterials that can meet the necessary properties and requirements. A review of research on the properties of nanomaterials allows us to assess the prospects for the use of nanotechnology in dentistry. Dental nanomaterials are a new area of research, the benefits, and risks of which are still unknown. Long-term clinical trials are required to evaluate them. Nevertheless, implants with a nanomodified surface will become increasingly popular over time due to the current outstanding results of their placement. The large number of elderly people with adentia and the growing prosperity of the population in some regions of the world will lead to an increase in sales of such products. Some researchers argue that nanotechnology has reached such a level that in the future it will be possible to fully restore damaged teeth. Let's wait, maybe this incredible idea will become a reality someday.

Some scoffers say that at this rate, dentists will soon not be needed. In fact, any process must be managed by a highly qualified specialist. Without him, all supertechnologies are like a computer in the hands of a Neanderthal - a pile of scrap metal.

### Suggestions for Future Research

The integration of novel nanocomposite materials into clinical dentistry necessitates comprehensive investigation into their biocompatibility. These materials may induce varying effects on distinct cells, tissues, organs, and the overall human physiological system. Considering the potential adverse consequences associated with the release of nanocomposite particles during wear and tear, it is prudent to exercise caution and restrict the application of such materials to occlusal surfaces. This decision is rooted in the fact that restorations in this region experience heightened mechanical stresses and consequently exhibit accelerated wear and tear. Additional investigation is required to elucidate the mechanisms of nanomaterial exposure,



evaluate their potential toxicity and risk to human health. Assessing the danger posed by nanoparticles and nanomaterials to the human organism demands the creation of innovative and potentially distinctive methodologies. These methodologies must consider factors such as size, shape, methods of stabilization, modification, and alterations in their movement within both the environment and the human body.

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## The ways of representing hidden meanings in English-language fiction discourse

### Las formas de representar significados ocultos en el discurso de ficción en lengua Inglesa

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#### Abstract

The article attempts to justify the expediency of linguistic research' direction that reveals the pragmatic qualities and cognitive basis of different types of implicit speech in English-language fiction discourse. Latent meanings in fiction text/discourse have repeatedly been the subject of research. The totality of implicit speech' types and researched on the means that actualize it is identified. Referring the methods of cognitive linguistics, the pragmatic potential of speech means for the expression of the hidden meaning is illustrated by the prose English-language texts. The aim of this article was to identify the totality of the types of implicit speech and research on the means that actualize it in English-language fiction discourse. In this researching work, we analyzed such speech means of expressing implicit meanings as: a specific use of idioms, i.e., hints, additional nuances of meaning. Observing how innuendo is used can provide some insight into the speaker's goal when he or she chooses that discourse strategy. In conclusion, it is noticed that the hidden meaning, e.g., in the presence of an additional metaphorical transfer, may require a great deal of cognitive effort from the reader. We proved that the hint is characterized by a wealth of implicit potential.

**Keywords:** Pragmatics, cognitive aspect, implicit discourse, hidden meaning, idiomatic expression.

#### Introduction

The purpose of a work of fiction is to convey certain meanings, ideas, thoughts, theories of the author, many of which are expressed indirectly, implicitly, or even encoded, if the author so desires. The interpretation and decoding of these

#### Resumen

El artículo intenta justificar la conveniencia de dirección la investigación lingüística que revela las cualidades pragmáticas base cognitiva de diferentes tipos de discurso implícito en discurso de ficción en lengua inglesa. Los significados latentes en el texto/discurso de ficción han sido objeto de investigación en repetidas ocasiones. Se identifica la totalidad de tipos de discurso implícito y se investiga sobre los medios actualizan. Haciendo referencia métodos de lingüística cognitiva, se ilustra el potencial pragmático de medios discursivos para la expresión del significado oculto mediante los textos en prosa en lengua inglesa. El objetivo de este artículo era identificar la totalidad tipos de discurso implícito e investigar los medios que lo actualizan en el discurso de ficción en lengua inglesa. En este trabajo de investigación, analizamos tales medios discursivos de expresar significados implícitos como: un uso específico de modismos, es decir, insinuaciones, matices adicionales de significado. Observar cómo se utiliza la insinuación puede proporcionar cierta información sobre el objetivo hablante cuando elige esa estrategia discursiva. En conclusión, se observa significado oculto, por ejemplo, en presencia de transferencia metafórica adicional, puede requerir un gran esfuerzo cognitivo por parte lector. Demostramos que indirecta se caracteriza por gran riqueza de potencial implícito.

**Palabras clave:** Pragmática, aspecto cognitivo, discurso implícito, significado oculto, expresión idiomática.

meanings and ideas is the cornerstone of the whole linguistic discipline of interpreting a fiction text. In understanding or deciphering these meanings is often the reader's main aesthetic and intellectual pleasure in perceiving a

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work of fiction. In other words, any literary work carries out a set of pragmatic tasks of various qualities: informative, aesthetic, intellectual, emotional, etc., all of which are determined by the author's intention.

It should be admitted that authors often use symbols to convey deep or hidden meanings in their work. In order to compare two seemingly unrelated things, writers use metaphors and similes, allowing readers to infer deeper meanings through the comparison. But the most powerful tool often used to convey implicit meanings in fiction is irony. For example, in George Orwell's "Animal Farm," the animals overthrow their human oppressors to establish an equal society, but eventually, the pigs become the new oppressors (Orwell, 2021). This irony highlights the corruption of power and the dangers of totalitarian regimes. Authors use foreshadowing to hint or suggest future events within their stories as well as the subtext that refers to the underlying meaning conveyed through characters' actions, dialogues, or situations. Many works of fiction implicitly critique or comment on social or political issues. Latent meanings in fiction text/discourse have repeatedly been the subject of research, although not in the cognitive-pragmatic paradigm (Carston, 2002). Today the problem of the system and classification of linguistic means of expressing implicit meanings is still totally unresolved. Researchers usually study a certain group or groups of such means. In our article, such speech means of expressing implicit meanings are analyzed: a specific use of idioms, i.e., hints, additional nuances of meaning. Furthermore, the use of metaphors can be examined, where words or phrases are used in a figurative sense to convey implicit meanings. This includes analyzing the underlying comparisons and associations conveyed through metaphorical language. Additionally, the use of euphemisms can be explored, which involve substituting mild or indirect words or phrases for more direct or potentially offensive ones. It is a novelty to investigate how euphemisms can convey implicit meanings by allowing speakers to address sensitive or taboo topics in a more socially acceptable manner.

Moreover, we delve into the realm of rhetorical devices, such as hyperbole and understatement. These devices involve using exaggerated or understated language to convey implicit meanings, often to emphasize a point or create a specific effect on the audience.

Lastly, we examine the role of context in understanding implicit meanings. Context plays a crucial role in deciphering the intended implicit meaning behind certain linguistic expressions. We explore how factors such as cultural background, social context, and shared knowledge can influence the interpretation of implicit meanings.

Overall, our article aims to contribute to the understanding and classification of linguistic means for expressing implicit meanings. By analyzing various speech means, including idioms, metaphors, euphemisms, irony, and rhetorical devices, we aim to shed light on the complexity of implicit communication and provide a framework for further research in this area.

The task is to show examples of the expression of a hidden meaning by a transformed phraseological expression, the ability of allusions to express hidden meanings by alluding to them, the additional nuances of meaning with pragmatic potential. This work wants to demonstrate, that additional semantic nuances can be created by various linguistic means in different combinations. And the core answer to the question we want to find: is the pragma cognitive analysis advisable for describes the characteristics of implicit speech as a linguistic unit, further study of speech means and types of implicit speech?

### **Theoretical Framework or Literature Review**

Thus, in this scientific paper we have the aim to study the pragmatic potential of speech means referring to the methods of cognitive linguistics. Until recently, it was thought that cognitive linguistics did not have a developed research methodology. Many results in cognitive research were based on the linguistic introspection of the scientist, which many researchers also call simple intuition. Linguistic introspection is a productive method of research that leads to important results. However, empirical and / or experimental confirmation of the obtained theoretical research conclusions is also required. Thus, it was believed that the results obtained by linguistic introspection should correlate with the results obtained using other methods, with the use of the corpus of a particular language or psycholinguistic experiment.

As for intuition, modern American and Western European specialists in cognitive linguistics point to several opposite trends. On the one hand, many researchers consider introspection to be the



best or even the only acceptable research method (Maslennikova, 1999).

However, there is a much smaller but growing trend towards the use of empirical methods used in other cognitive sciences (Sanakuiev, 2022). The main achievement of this latter trend is the combination of a powerful theoretical basis of cognitive linguistics with appropriate empirical methods of analysis (including methods of quantitative analysis of language corpora).

Linguistic analysis should be based on data extracted from several important sources: language systems, questionnaire materials or texts — and verified based on the researcher's intuition. Of course, this method covers a much broader material (Makedonova, 2016). Data obtained from different types of sources explain non-identical sets of features, although some of them are repeated. Also, explication does not mean that they are accidental. First, individual features can form an implicit category and belong, for example, to a certain aspect of the subject (origin, appearance, structure, etc.). Second, those traits that seem random at first glance may be derived from others that are considered basic and therefore have intrinsic motivation.

The key concepts of cognitive linguistics are the concept of information and its processing by the human mind, the concept of knowledge structures and their representation in the consciousness of the individual and language forms (Carston, 2002). Together with other sciences that are part of cognitology, it tries to answer the question of how human consciousness is organized, how man knows the world, what information about the world becomes knowledge, how mental spaces are created.

The meaning of language is extraordinary, it is through language, on the one hand, that mental activity is objectified, and on the other hand, its study is a way of studying cognition, because cognitive and language structures exist in certain relationships. Cognitive linguistics examines how the structures of human knowledge are related to language forms as they are represented in human consciousness.

As an interdisciplinary branch of linguistics, cognitive linguistics combines the knowledge and research from cognitive science, cognitive psychology, neuropsychology, and linguistics. Models and methods of cognitive linguistics are considered as psychologically real, and research

in cognitive linguistics aims to help understand cognition in general and is seen as a road into the human mind. Pragmatic potential is defined as additional information that needs to be decoded (Dobryднева, 2000).

If syntax determines the rules of significance of the sentences of the language and if semantics explains the meaning of words as well as their referential functioning, it remains to account for the actual use of the language by a speaker in a discourse that he pronounces to an interlocutor in order, in a given situation, to solve together a difficulty, a problem. It is precisely the pragmatic approach that we must now adopt. Syntactic and semantic analyses remain abstractions until they are supplemented by a pragmatic interrogation of the actual use of language by interlocutors in specific situations for specific purposes. The pragmatic dimension of language, characterized by the discursive and communicative use of language, may be historically recent, but it is conceptually primary. From then on, pragmatic analysis alone gives full meaning to syntactic and semantic analyses by determining their mode of use (Belozerova, 2015). If pragmatics is the study of meaning-in-context, then cognitive pragmatics can be broadly defined as encompassing the study of the cognitive principles and processes involved in the construal of meaning-in-context. It is reasonable to conduct the study of tendencies of hidden meanings in the cognitive-pragmatic paradigm, as it is the factor of tendencies that introduces the human factor (including the factor of addressing) to the constitutive parameters of pragmatism. On the other hand, disclosure of intentions is a cognitive operation, although mental processes have not been studied by traditional pragmatics.

It is the implicative nature of intending hidden meaning that makes it necessary to uncover implicature, that is, to establish not what is said or written, but what is meant (Sanakuiev, 2022). So, it is important to go beyond the sentence level to understand the communicative functions and the pragmatic potential of utterances.

Moreover, researchers note the dominance of the cognitive vector in modern pragmalinguistics, understood as the cognitive explanation of the processes of utterance recognition (Carston, 2002; Jalilbayli, 2022), and the system for understanding communicative behavior, including implicit communication, is called the ontological component of cognitive pragmatics (Carston, 2002). Therefore, it is recognized that pragmatics as a single scientific paradigm is, in fact, cognitive in all its different kinds.



## Methodology

The aim of this article was to identify the totality of the types of implicit speech and research on the means that actualize it in English-language fiction discourse. So, in this scientific paper the aim was to study the pragmatic potential of speech means for the expression of the hidden meaning, referring to the general scientific research methods, for example: synthesis, analysis, induction, and deduction. The analysis here was a method of scientific research that involved the decomposition of the subject into components. Synthesis was a combination of parts obtained during the analysis. Deduction allowed drawing conclusions about a certain element of set based on knowledge of the general properties of the whole set. Induction went from partial to general, ie on the basis knowledge of some subjects at induction the thought moves from less general positions to more general.

Thus, it can be summarized that the available empirical material and make assumptions about the cause of experimental phenomena were based on the use of induction. Also, the conclusions were theoretically proven, turning them into reliable knowledge with the help of deduction. In addition, the article was based on the principles of systematicity, logic, scientificity and objectivity.

Thus, in this scientific paper the aim was to study the pragmatic potential of speech means referring to the methods of cognitive linguistics. Until recently, it was thought that cognitive linguistics did not have a developed research methodology. Many results in cognitive research were based on the linguistic introspection of the scientist, which many researchers also call simple intuition. Linguistic introspection is a productive method of research that leads to important results. However, empirical and / or experimental confirmation of the obtained theoretical research conclusions is also required. Thus, it was believed that the results obtained by linguistic introspection should correlate with the results obtained using other methods, with the use of the corpus of a particular language or psycholinguistic experiment.

Linguistic analysis was based on data extracted from several important sources: language systems, questionnaire materials or texts — and verified based on the researcher's intuition. Of course, this method covers a much broader material. Data obtained from different types of sources explain non-identical sets of features, although some of them are repeated. Also,

explication does not mean that they are accidental. First, individual features can form an implicit category and belong, for example, to a certain aspect of the subject (origin, appearance, structure, etc.). Second, those traits that seem random at first glance may be derived from others that are considered basic and therefore have intrinsic motivation.

Distributive analysis, a method of language research based on environment (distribution, distribution) of individual units in the text was used. This is a kind of deciphering approach based on the basis studying the compatibility of a language unit with other units, called the environment, or context, of these units. Since the environment of each element is unique, specific, unique, it is possible to study in detail the studied language element.

Based on the analysis of the distribution of language elements, distributive classes were distinguished as if two elements are in the same environment, they belong to the same class. Distinguishing between types of distribution is important for identifying the language units studied. Using this method, a system of phonemes and morphemes of any language, the meaning of polysemous words was established.

## Results and Discussion

The materials of our article are novel of modern Britain writers, who had worked in some circumstances, which must be analyzed.

Jens Rankin wrote almost two dozen novels about the investigations of Detective Rebus, which became the most popular works of the writer, brought him international fame, and firmly established themselves among the national bestsellers. In addition to a sharp criminal plot, the novels about Rebus are characterized by a deep study of the psychological portraits of the characters and an appeal to topical social problems, which is an important element in the linguistic analysis of his works. In the study we used the 17th novel from the series about Detective Rebus – "Exit Music".

"The Spy Who Came in from the Cold" was written in 1963 by British writer John le Carré. It is classical Cold War spy novel. At its publication during the Cold War, the moral presentation of the novel the Cold rendered it a revolutionary espionage novel by showing the intelligence services of both the Eastern and Western nations as engaging in the same expedient amorality in the name of national

security. The author also showed his Britain spy as a morally burnt-out person, who dreamed only about retired option. The mystic spy world of the novel, which was analyzed in the article, portrays love as a complex emotion that can become a disaster for all involved persons. Good is not a real winner and evil is not a permanent loser. These defeatist attitudes were criticized in Britain press (Sandis, 2019).

"The Sandcastle" is a novel written by Irish and Britain writer Iris Murdoch. The novel was published in 1957. That was a story about a middle-aged schoolmaster with political ambitions who met a young artist, came to paint a portrait of former school headmaster. The author showed psychological and literal portraits images of the epoch (Murdoch, 2016).

The texts of these novels show the ways of representing hidden meanings in English-language fiction discourse. For example, the hidden or ambiguous meanings of phrases or expressions used, which are generally inherent in English literature, are clearly visible. Therefore, the material basis of the study is broad, it will facilitate a detailed and thorough analysis.

Discourse — the process and result of conveying meaning, including its generation and perception meta-linguistic activity, basic linguistic principles of modeling artistic discourse. Artistic discourse connects with other types of discourse, but, at the same time, it differs from them. It, like other culturally designated discourses, has latent and actual plans of being/functioning, appears in particular as unfixed improvisation, written works, its realization in a collective or individual reading or acting. These plans define the foundations of artistic communication, which in turn give rise to methods of subjective or objective direction in artistic reality, the speaker's attitude, is embodied in the "author's image", the function and role of the addressees and so on (Durant, 2013). The subject of an artistic message exists in the conventionally real or fictional world of the imagination of the author and its addressee, reproducing the main features of speech structuring as an actual image, which includes elements of cognition, prescription, argumentation, and interpretation. However, the fundamental difference of artistic discourse from domestic and other culturally defined discourses lies, firstly, in its purposeful secondary character relative to the primary genres of speech and, secondly, in its fundamental ability to create a multilevel structure of meanings based on the vaporization of certain mechanisms of definitions.

In the early stages of the study of discourse, scholars considered two basic meanings of the word. One, which was used in studies of linguistic structures that go beyond the sentence, Discourse was practically identified with the concept of text.

American linguist Harris & Harris (1970) was one of the first to use the term discourse, who published an article entitled "Discourse Analysis", which dealt with the language of advertising. It was around the same time that the concept of discourse was formulated by J. Habermas. He understood discourse as communication of a special kind, a specific dialogue, the aim of which is an impartial analysis of reality. The participants of communication (discourse) analyze reality by rejecting existing speech stereotypes. Here discourse is understood rather as a way of acquiring true knowledge. In this interpretation, discourse acts as a tool for knowing reality — a meaningful dialogue with the use of certain techniques.

Artistic discourse is formed and functions in a continuous process of formation, where different forms and kinds of speech form value-marked paradigms based on socially and culturally conditioned principles of selection, fixation, stereotyping, destruction and restructuring of output stereotypes. Ordinary every day or socially and professionally specialized communication situations, all its components play a predominantly typologically appropriate role. When there is a transition to artistic speech, these components acquire a new meaning, which is, first, a sign of transition to another, non-domestic poetic dimension, and, secondly, becomes a carrier of new meanings, not peculiar to it originally.

This approach to linguistic analysis necessarily translates the study of textual phenomena of discourse studying, as the text as a product of the writer's work is not considered in and of itself, but as an ingenious component of discourse, the unity of the message generation process of the message itself (which is the text) and the process of perception of this message (Abisheva, Koldasbaeva, & Ajkenova, 2020).

Obviously, the study of hidden meanings is appropriate and, in fact, indeed possible precisely from these positions, because it involves the cognitive activity of both the author and the reader.

Latent meanings in fiction text/discourse have repeatedly been the subject of research, although not in the cognitive-pragmatic paradigm. An important feature of such meanings is their double cognitive load. They are decoded twice: on the one hand, within the corresponding communicative situation, and on the other hand, by the reader-interpreter, for whom the corresponding communicative act is part of the fiction. The core of these meanings are evaluation and irony (Sanakuiev, 2022), but it is obvious that the establishment of the pragmatic set of intentional factors is yet to come.

The problem of the system and classification of linguistic means of expressing implicit meanings is still unresolved. Researchers usually study a certain group or groups of such means. In this article, such speech means of expressing implicit meanings are analyzed: a specific use of idioms, i.e. hints, additional nuances of meaning.

It should be noted that the studied material shows that there are no clear boundaries between the specific pragmatic loads of each group of the named means. Thus, an idiom can contain a hint, while hints in combination with symbol/symbols and transformed phraseological means can create additional semantic nuances. Also, as it has been shown in the examples, the context that influences the outcome of pragmatic interpretation often helps to discover new emotive meanings.

We understand the specific use of phraseological units as the actualization of phraseological units with semantic and structural transformations in discourse. Since the transferability of the meaning of a phraseological phrase, its discursive determinacy and the ability to be the result of secondary vision in the language are its ontological qualities (Dobrydneva, 2000), the statements with them are always characterized by a complex intentional nature, because they not only inform, but also have the ability of an expressive sign, which leads to their main pragmatic function — the author's ability to affect the reader in a certain way, based on a specific purpose. For the author of the text, the pragmatic qualities of phraseological expressions are of great practical importance and determine their choice when forming a statement in the act of speech communication. The reader perceives two sides of a transformed phraseological unit: usual and modified. Double actualization, which is the co-occurrence of the metaphorical meaning of a phraseological unit and its literal meaning, is used to evoke the reader's interest to the text by creating an imaginative and vivid picture.

The ability of phraseological units with transformations to convey a complex meaning in artistic discourse (Kunin, 2001) creates an additional level of anthropocentrism: in comparison with the semantics of basic phraseological units, phraseological units with transformations always convey a certain additional intentional meaning, which is fully actualized in a broad context. This gives grounds to consider statements with such phraseological units as implicit speech acts. Here is an example of the expression of a hidden meaning by a transformed phraseological expression:

*(1) Tim came up to Mor, took him by the wrist, and turning him about began to lead him quickly back the way he had come. "Tim," said Mor. "Whatever is it? We can't talk now. Look, I must get home. I 'm in an awful fix" (Murdoch, 2016).*

In this case, we observe the insertion of the awful component in the basic phraseological idiom in a fix — in a difficult situation (Baranov, 2006), which gives the utterance a significant emotional coloring. The utterance with the transformable phraseology implicitly points to the situation described in the previous context: Mohr's car broke down during an unsuccessful drive with Rain Carter and he demonstrated his weakness of character and indecisiveness in solving practical problems, which upset both him and Rain. The correctness of this interpretation is indicated by: There's been a horrible muddle today, all my fault (Murdoch, 2016).

So, the semantic effect produced by the modification of phraseological units through lexical and grammatical transformations depends mostly on the contextual clues. Creative modification and the associated play on literal and transferred meanings are always tied to a specific context.

Deciphering the hidden meaning may require a great deal of cognitive effort on the part of the reader, e.g., in the presence of an additional metaphorical transfer. Thus, the title of the novel *The Spy Who Came in From the Cold* is based on the phrase "to come in from the cold, to be included in a group or activity in which one has not previously participated" (Kononenko, 2020, p. 51-60). The metaphorisation accompanies the repeated use of this phrase in a further context, and its glib meaning is emphasized by the parallel use of the antonymous phrase *be out in the cold* — "to be superfluous, to stay out of the game" (Belozeroва, 2015), with the substitution of one of the components: *to come in from ...* → *to be out in...* A telling fragment of the

conversation between the main character, former detective Limas, who has been unexpectedly suspended and forgotten, and his former boss when the Intelligence Centre finally decides to involve the experienced scout again.

(2) *"We have to live without sympathy, don't we? That's impossible, of course. We act it to one another, all this hardness; but we are not like that really. I mean one cannot be out in the cold all the time; one has to come in from the cold... do you see what I mean?" (Le Carre).*

(3) *"I want you to stay out in the cold a little longer" (Le Carre).*

At first glance, the expressions *be out in the cold* and *come in from the cold* appear metaphorical, provided by the figurative meaning of the adjective *cold* — 'hostile, unfriendly' — that the speaker is talking about a return to a friendly community after an absence, but the interjection at the end of the line removes the ambiguity of the context. It becomes clear that the phraseological meaning of the expression is meant: we are talking about a return to spy work. To answer the character, the author uses semantic play precisely in the expression with the phraseological meaning: *be out in the cold* → *stay out in the cold*. The character does not want to go back to his past activity; he would rather live like an ordinary person.

An adequate understanding of the above context requires the reader not only to know the meaning of the phraseology, but also to build a conceptual schema like a cognitive metaphor: *TO STAY OUT TO WORK IS BAD* (a manifestation of an unfriendly attitude).

In addition, the mentioned phraseological pair is actualized seven times in the mentioned discourse, which indicates a significant implicit potential of such authorial use and its unconditional tendency.

A hint is characterized by a wealth of implicit potential. A hint is usually understood as a word or expression that does not reveal something completely, but only creates conditions for speculation; something that reminds one of someone or something (Bilodid, 1974), as something said indirectly but, in a way, that one can understand what is meant (Lavrunenko, 2021). Linguistic studies of the hint cannot be called numerous, including a thorough study of this communicative tactic on the material of English-language discourse. Linguistic works note the unconventional nature of the hint and its

relative prevalence compared to other types of implicit communication, but the phenomenon of the hint itself is analyzed somewhat differently. Some works treat hint as a means of indirect information transmission and at the same time as a technique of implicit speech influence. They treat hint as a category, as an element of metalanguage, so it is closely connected with the meaning of the corresponding lexemes "hint" and "to hint" (Kononenko, 2020, p. 51-60).

Green (2018) suggests a broader understanding of the hint, based on pragmatic and cognitive principles — the relationship between direct and indirect meaning.

In our opinion, the essence of the hint is to indirectly convey some content using the model of the addressee's world — his knowledge of the structure of reality. Moreover, this content appears in the implicit layers of the semantics of the utterance and the text. The phenomenon of a hint remains interesting both for clarifying the essence of this category and for using the concept of a hint as a tool for analyzing the semantics and pragmatics of text and discourse.

Today sociolinguistics changed the complexion of how communication is studied by investigating conversation in context. Researchers are recognized that people do not speak in complete sentences. Attention was turned from studying sentences to studying utterances — the less-bound fragments of sentences that people use to communicate. In recent studies, the speech act of innuendo is considered within the cognitive-communicative paradigm as an implicative speech act, which is realized in person-oriented discourse (Skakun, 2022). Innuendo is a deliberate speech act that capitalizes on the context of the moment. Observing in context how innuendo is used can provide some insight into the speaker's goal when he or she chooses that discourse strategy. The question about the system of classes or types of innuendo in relation to English-language material remains largely unresolved.

It should be noted that one of the most expressive means is an allusion. Modern linguistics understands allusion as a means of speech — a stylistic device associated with the use of folk, literary, historical, or everyday fact in the text, as well as a well-known aphoristic expression, winged word, idiom. The allusion is organically linked to the source where its appearance is recorded. It is a technique that allows briefly, but exhaustively, sometimes by a single word, to point out a person or event peculiarity, etc.,



closely connected with the text, as it associates the important thought of a certain context (Selivanova, 2008). Scientific studies emphasize that allusion is a manifestation of the textual category of intertextuality, a technique of artistic vis-à-vis, which meaningfully enriches textual information, creating numerous associations through allusion to events, facts, characters of other texts; it is a manifestation of continuous dialogue of the text-formation, in particular, artistic creativity (Matveeva et al., 2019). Researchers note that allusion is based on the co-background knowledge of the addressee and the addressee and is used by the addressee to purposefully augment the main content of the message. The traditional role of allusion is a linguistic game, however from the position of cognitive linguistics the phenomenon in question can be considered more deeply, as a means of human cognitive system, with the help of which one type of objects and phenomena is understood and perceived in terms of another type (Makedonova, 2016, p. 54).

The explicit allusions allow the reader to recognize and decrypt it without extensive background knowledge. The implicit allusions require certain knowledge structures. It is emphasized that allusion does not form new concepts but as a means of explicitly or implicitly appealing to an already known concept. This is its conceptual function. Consider the ability of allusions to express hidden meanings by alluding to them.

(4) *"My name is Bernard," he beamed like the Cheshire cat, "and heartiest welcome to the Irish contingency" (Ahern, 2023).*

(5) *A face appeared in the window, a very familiar face, and I immediately stopped laughing, feeling as though I'd seen a ghost. He was young — nineteen by now, if I calculated correctly. He gave me a cheeky grin, waved and disappeared from the window, and appeared at the now open door like the Cheshire cat. So, this was Bobby from Lost and Found that Helena and Wanda had mentioned (Ahern, 2023).*

The above examples use the same literary allusion, the Cheshire cat, in the function of artistic comparison, but it activates different slots of the corresponding concept: in example (4) we have the concept of a smiling (broad), which acts as an implicit characteristic of Bernard, while in example (5) it activates the slot of INCREDIBLE.

In this example, the allusion is an implicit characteristic of the emotional state (fear) of the narrator. However, in both examples there is an allusion of this kind: it refers to a fairy tale character, a non-existent character, and thus implies the unreality of the reality described because the narrator gets into places that do not actually exist. Thus, we see an indirect actualization of the concept of unreality, FALSE.

(6) *"How wonderful. We had some excellent plays in Finbar's Hall," Joan explained. "Do you remember that?" She looked around her friends. "Julius Caesar, Romeo and Juliet, to name but two of Shakespeare's finest works. Bernard was — "Bernard coughed loudly. "Oh, I'm sorry," Joan blushed, "Bernard is a fantastic actor. He played quite convincing Bottom in A Midsummer Night's Dream. No doubt you would like him to be in your agency" (Ahern, 2023).*

Here some allusions (Julius Caesar, Romeo and Juliet, Shakespeare, Bottom in a Midsummer Night's Dream) create an allusion to the professional potential of the character, who rated his art somewhat highly.

It has been justified that allusion is a cognitive structure transferring knowledge structures and generating new meanings. With the development of the anthropocentric paradigm, in the study of linguistic phenomena, in particular, allusions cognitive and cognitive-discursive approaches are becoming increasingly important.

Consider the pragmatic potential of additional nuances of meaning. Nuances of meaning is a type of indirect speech, seen as a hidden phenomenon of pragmalinguistics since nuances of meaning are characterized by the absence of clear structural criteria for distinguishing them (Longman, 2000). The pragmatic notion of nuances of meaning is studied along with the phenomena of "blurring", the vagueness of the peripheral part of the meaning, which leads to a "stretching", an increase in the volume of the concept and allows the use of such a speech unit to nominate a phenomenon for which there is no name in this language at the moment (Maraieva, 2022).

The construction of additional nuances of meaning is seen as a speech tactic of hidden influence of the speaker/writer on the addressee, which is actualized by the speaker and the addressee instantly and subconsciously (Lebedieva & Tymkova, 2023).



In a particular linguistic situation, the addressee (reader) subconsciously accumulates numerous and diverse speech signals of nuances of meaning, thus perceiving the hidden intentions of the speaker/writer. The nuances of meaning are connotative elements in the composition of the content essence (Maslennikova, 1999), but, being realized only in the discourse, they cannot be correlated with the connotative component of the meaning of any individual linguistic unit.

It is interesting to trace the pragma-cognitive role of the use of song allusions (names of musical groups and individual songs) to characterize the main character of the novel *Exit Music* (I. Rankin) John Rebus. In a conversation between the main character, police inspector John Rebus, and a colleague we find.

(7) *'What's the music you're playing?  
'It's called Little Criminals. There's a track on it called 'Jolly Coppers on Parade.  
'Not someone au fait with police then... "  
It's Randy Newman. There's another title of his I like: "You Can't Fool the Fat Man. "  
And would the fat man be himself, by any chance? "  
Maybe I'll keep you guessing. "He let the silence linger for a moment (Rankin, 2018).*

Here we should note the gloomy tone of the lyrics of the songs Rebus names. The analysis of the concepts actualized in the second of the named songs is as follows: My brother's in the armed forces / My sister is in jail (I'm unhappy) / Will you give me fifty dollars / So I can pay her bail? (/ He said, "You Can't Fool the Fat Man / No, you can't fool me / You're just a two-bit grift / And that's all you ever be. The lyrics of the songs are not given in the novel, but they are known enough to activate the associations in the reader's mind that link the concept expressed in the songs to the character who is listening to them. Consequently, these song allusions in the text of the novel act as a semantic and cognitive signal, generating associations and creating an additional semantic nuance that implicitly characterizes the character (John Rebus).

Rebus's later references to musical groups deepen his implicit characterization and amplify the additional semantic nuance:

(8) *"My lucky day", he told himself. He'd finally got around to installing a CD player in the Saab. He drew Gentry's offering from its sleeve and slotted it home, then studied the titles of the songs.  
Meg's Mons.*

*Minstrel in Pain.*

*Reverend Walker Blues.*

*He liked them already (Rankin, 2018).*

The texts of the mentioned songs also actualize the concepts similar to those mentioned above: loneliness, joylessness, hostility, HAPPY. They appear associatively in the reader's consciousness on the contiguity, which is facilitated explicitly by the speech signal he liked them alike.

The analysis of the above examples (7, 8), in our opinion, provides convincing evidence of the considerable discursive potential of additional semantic nuances, as well as the promise of this approach for studying the pragma cognitive potential of this type of implicit speech. It should be noted that additional semantic nuances can be created by various linguistic means in different combinations and the study (and, possibly, classification) of linguistic factors of this kind of implicit speech seems promising.

## Conclusions

In this researching work we analyzed such speech means of expressing implicit meanings as: a specific use of idioms, i.e., hints, additional nuances of meaning.

Summarizing, we found, that the phraseological units with transformations always convey a certain additional intentional meaning. It was noticed that the hidden meaning, e.g., in the presence of an additional metaphorical transfer, may require a great deal of cognitive effort on the part of the reader. It was confirmed that the hint is characterized by a wealth of implicit potential. At the same time the studied material showed that there are no clear boundaries between the specific pragmatic load of each group of the named means — an idiom can contain a hint, while hints in combination with symbol/symbols and transformed phraseological means can create additional semantic nuances.

In result we determined that one of the most expressive means of implicit speech is an allusion. The additional nuances of meaning (semantic nuances) also have considerable discursive potential and for studying of this type of implicit speech the method of pragma cognitive potential is approached. It was understood that additional semantic nuances can be created by various linguistic means in different combinations and the study of linguistic factors of this kind of implicit speech seems promising.

The foregoing gives grounds to draw the following conclusions:

- the further study of speech means and types of implicit speech is a relevant and promising area of linguistic research;
- the use of operations and tactics of pragmatic analysis is appropriate to illuminate the characteristics of implicit speech as a linguistic unit.

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## Information systems for financial and economic security in the face of cyberthreats: study of characteristics in the context of modern administrative and legal mechanism

**Sistemas de información para la seguridad financiera y económica frente a las ciberamenazas: estudio de características en el contexto del moderno mecanismo administrativo-legal**

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### Abstract


The aim of the article was to study the characteristics of the formation of an information system to implement the administrative and legal mechanism to ensure financial and economic security under the influence of cyber threats. The research methodology involved the use of hierarchical and pairwise comparison analysis, as well as the method of expert analysis, with the help of academic documentary sources. As a result of the study, the main cyber threats in the information system of the administrative and legal mechanism for ensuring financial and economic security were identified and ordered according to their level of influence. This order will allow the management apparatus to understand, at least in theory, the hierarchy of importance of existing threats and subsequently use the latter to build information systems. Everything allows to conclude that, by analyzing the obtained results, a methodical approach to the assessment of cyber threats to financial and economic security was formed. However, the

### Resumen


El objetivo del artículo fue estudiar las características de la formación de un sistema de información para implementar el mecanismo administrativo y legal para garantizar la seguridad financiera y económica, bajo la influencia de las ciberamenazas. La metodología de investigación implicó el uso de análisis jerárquico y de comparación por pares, así como el método de análisis de expertos, con ayuda de fuentes documentales de carácter académico. Como resultado del estudio, se identificaron y ordenaron las principales ciberamenazas en el sistema de información del mecanismo administrativo y legal para garantizar la seguridad financiera y económica, de acuerdo con su nivel de influencia. Este orden permitirá que el aparato de gestión comprenda, al menos en teoría, la jerarquía de importancia de las amenazas existentes y, posteriormente, utilice estas últimas para construir sistemas de información. Todo permite concluir que, al analizar los resultados obtenidos, se formó un enfoque metódico para la evaluación de las

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study has its limitations, as for the formation of the above-mentioned information systems, a small number of cyber threats were adopted, which are also characteristic for a particular country like Ukraine.

**Keywords:** Financial and Economic Security, Information Systems, Administrative and Legal Mechanism, Financial Markets, Cyber Threats.

## Introduction

Historically, financial security primarily revolved around the accumulation and preservation of wealth, often in physical forms like gold or property. As economies evolved, so did the concept of financial security. The development of banking systems, stock markets, and various financial instruments allowed for more diversified means of securing and growing wealth. In modern times, financial security also encompasses aspects like insurance, pension plans, and access to credit, which help individuals and businesses manage risk and uncertainty.

Different approaches have been adopted to ensure economic and financial security over time. Governments play a crucial role through policies that regulate financial markets, provide social security, and manage economic cycles. Meanwhile, individual strategies may include savings, investments, and insurance. The digital age has introduced new dimensions to financial security, including cyber security and the management of digital assets. The continuous evolution of these concepts reflects the dynamic nature of economies and the ever-changing challenges and opportunities they present.

One of the fundamental factors of the independence of a sovereign state in modern economic conditions is the state of its financial and economic security. Due to the rapid changes in market conditions in global financial markets and the interconnected system of economic relations in the structure of the world economy, the state of the domestic financial sector is becoming increasingly difficult to control, given the instability of the internal and external environment. In such a situation, there is a need for a comprehensive preventive assessment of external and internal factors that directly or indirectly affect the country's financial sector. The development of the economy can be ensured by expanding relationships between national and

amenazas cibernéticas a la seguridad financiera y económica. Sin embargo, el estudio tiene sus limitaciones, ya que para la formación de los sistemas de información antes mencionados, se adoptó un número reducido de ciberamenazas, que también son características de un país como Ucrania en particular.

**Palabras clave:** Seguridad Financiera y Económica, Sistemas de Información, Mecanismo Administrativo y Legal, Mercados Financieros, Amenazas Cibernéticas.

international financial and credit institutions and integration into the world market.

Financial and economic security is ensuring such development of the financial and economic system and financial relations, as well as processes in the economy, in which the necessary financial conditions are created for the socio-economic and financial stability of the country, maintaining the integrity and unity of the financial system (including monetary, budgetary, credit), tax and currency system), successfully overcoming internal and external threats in the financial sector.

The financial system must have a certain margin of safety in case of unforeseen and extraordinary circumstances, so that government authorities can quickly and timely respond to the emergence of any threats and, if possible, prevent, neutralize or minimize potential socio-economic losses.

In the current conditions of economic development, strengthening of integration and globalization processes, the issue of ensuring the national security of the state comes to the fore. Financial and economic security is its most important component, without which it is almost impossible to solve any of the problems facing the state. Recently, the financial and economic safety of different states has been influenced by a number of external and internal threats: monetary crises, geopolitical situation, the influence of the activities of international organizations, inflationary processes, instability of the legal system, etc.

The lack of financial resources leads to the inability of the financial system to provide the state with financial resources sufficient to perform its internal and external functions and generally poses a threat to national security.



The formation and practical implementation of an effective mechanism for ensuring financial and economic security presupposes, first of all, the identification of factors influencing the state of financial security, external and internal threats, and the study of the interconnectedness of the individual components of this structure, which is complex in internal structure and hierarchical composition.

Cyberthreats in modern society are gaining significant scale. Now, a successful hacker attack can cut off power to an area or country, lead to a bank robbery, or destroy a successful organization.

Based on these definitions, we offer the author's understanding: "cyberthreats" are illegal, punishable actions of subjects of information legal relations that create a danger to the vital interests of an individual, society and the state as a whole, the implementation of which depends on the proper functioning of information, telecommunication and information-telecommunication systems, as well as relations on the creation, collection, receipt, storage, use, distribution, protection, protection of information.

### **Theoretical Framework or literature review**

Financial and economic security is a state of protecting the economic interests of an individual, company or state from internal and external threats, ensuring the stability and sustainability of the financial system, as well as the ability to effectively withstand various types of economic risks. This includes measures to prevent financial crises, ensure the stability of the national currency, and protect against fraud, corruption and other illegal activities.

Cyber threats are potential or actual security threats that arise in the digital space. These could be attacks on computer systems, networks or personal data. Problems of ensuring financial and economic security and countering cyber threats attract the attention of scientists due to the growing relevance of cybersecurity in a world where financial and economic systems are increasingly dependent on digital technologies. This field of study combines not only the technical aspects of information systems security, but also a deep understanding of economic processes, making it multidisciplinary and important for modern research. The topic has also grown in importance in the context of global cyber threats that threaten economic stability and security at the national and international levels.

In the contemporary landscape of financial and economic security, the convergence of administrative, legal, and technological dimensions becomes pivotal in navigating the challenges posed by modern cyberthreats. This literature review delves into key studies that illuminate various aspects of this multifaceted domain.

The legal aspects of reforming public management for financial and economic security in Ukraine are scrutinized by Dragan et al., (2023). This study positions legal considerations as instrumental in shaping effective administrative mechanisms to counter evolving threats, particularly in the context of European integration.

Raghutla and Chittedi (2021) provide an insightful analysis into how financial development fuels economic growth in emerging markets. Their study highlights the critical role of financial policies, market development, and regulatory frameworks in shaping economic resilience. This research underlines the importance of robust financial systems, which are essential for safeguarding economies against various threats, including those of a cyber nature. The findings suggest that a well-developed financial sector is better equipped to handle the complexities and challenges posed by cyberthreats, underlining the symbiotic relationship between financial stability and cybersecurity. Albalawi and Almaiah (2022) delve into the cybersecurity challenges prevalent in IoT environments, shedding light on the vulnerabilities and attack vectors that are increasingly becoming a concern for financial information systems. The study assesses various mitigation techniques, emphasizing their applicability in protecting sensitive financial data. This research is particularly relevant in understanding how IoT, a rapidly growing dimension in financial technology, can be safeguarded against cyber intrusions that threaten financial stability.

Fakiha (2022) examines the effectiveness of forensic firewalls in defending against cyberattacks. The study's focus on the protective capabilities of these firewalls offers valuable insights into their role in safeguarding devices and, by extension, the financial information they contain. Jing et al., (2014) present a comprehensive perspective on the security challenges in the Internet of Things, with a focus on how these challenges impact financial data integrity and privacy. Their findings are crucial in understanding the broader implications of IoT

security for the financial sector, emphasizing the need for robust security protocols and innovative solutions to safeguard financial systems in an increasingly interconnected world.

Rushchyshyn, Medynska, Nikonenko, Kostak, and Ivanova (2021), in their work published in *Business: Theory and Practice*, examine the regulatory and legal components in ensuring a state's financial security. Their analysis is crucial for understanding the legal frameworks and regulatory mechanisms that underpin the financial security of nations, particularly in mitigating and responding to cyberthreats.

The work of Iskayan et al., (2022) highlights the importance of the information environment factor in assessing the economic security of a country. The authors analyze how digital technologies and information systems affect the economic stability and security of nations, pointing out the complexity and interdependence of these factors in the world. On the other hand, Al Azzam's (2019) study focuses on the importance of international cooperation in countering cybercrime. Al Azzam reviews existing international cooperation mechanisms and suggests ways to modernize them to effectively address the global challenges posed by cybercrime. This research shows the shortcomings of current systems and highlights the need for more coordinated and comprehensive approaches.

Benigno et al., (2013) explores financial crises and macro-prudential policies in the *Journal of International Economics*. His research offers insights into how macroeconomic tools and policies can be utilized to prevent or mitigate financial crises, a perspective that is essential when considering the systemic risks posed by cyber threats to financial systems. Syshchuk and Teteruk (2018) focus on the European Union's monetary and financial mechanism of anti-crisis regulation. Their study, provides an in-depth look at how the EU has developed mechanisms to manage financial crises, offering a model that can be considered in the context of managing cyber risks. Jovovic et al., (2017) discuss the concept of sustainable regional development in the *Journal of International Studies*, emphasizing the institutional aspects, policies, and prospects. This research is significant for understanding the broader context in which financial and economic security operates, including the sustainability of regional development in the face of evolving cyberthreats.

Stankevičienė, Sviderskė, and Miečinskienė (2014) in their article in *Business: Theory and Practice* compare country risk, sustainability, and economic safety indices. This comparison is valuable for assessing how different countries manage economic safety and risks, including those related to cybersecurity. Soni et al., (2021), in *Technological Forecasting and Social Change*, explore technological interventions in social business. Their research is pertinent for understanding how technological advancements can be leveraged to enhance financial and economic security while also recognizing the new challenges and risks these technologies bring, especially in cybersecurity. Finally, Alvarez, Di Caprio, and Santos-Arteaga (2016), in their study in *Technological and Economic Development of Economy*, discuss technological assimilation and divergence during times of crisis. This study is relevant for understanding how technology can both contribute to and mitigate the impacts of economic crises, with particular relevance to cybersecurity threats.

The human factors in cyber defense are addressed by Vieane et al., (2016), emphasizing the importance of addressing gaps in cybersecurity through an understanding of human behavior. This perspective adds a crucial layer to the technological aspects of financial and economic security. Gordieiev et al., (2021) propose the concept of using eye-tracking technology to assess and ensure cybersecurity, functional safety, and usability.

Sylkin et al., (2020) contribute to the methodology of forming a model for assessing the level of financial security, providing a structured approach that can guide policymakers and administrators in evaluating and enhancing financial resilience. Kryshtanovych et al., (2023) present an intelligent multi-stage model for countering the impact of disinformation on the cybersecurity system. This forward-looking study recognizes the evolving nature of threats and the importance of adaptive models in safeguarding financial and economic systems.

In synthesis, these studies collectively underscore the intricate interplay of administrative, legal, and technological elements in the pursuit of robust financial and economic security. The literature sets the stage for the current research, which seeks to contribute novel insights into the implementation of an information system tailored to counter modern cyberthreats and fortify the administrative-legal mechanisms safeguarding financial integrity.

## Methodology

The methodological basis of the study is the theoretical and methodological provisions for ensuring the financial and economic security of the state in the context of countering modern cyberthreats.

To fully understand the process of improving the financial and economic security of the state in the context of countering modern cyberthreats, we used the modern methods of hierarchical analysis and pairwise comparison method and also expert analysis method.

In the hierarchical analysis method, the even comparison procedure is applied to pairs of homogeneous elements. Heterogeneous elements are divided into interconnected groups (clusters) containing homogeneous elements. In the hierarchical analysis method, it is possible to create matrices of paired comparisons based on any ratio scales used for the measured properties of the objects being compared. In similar variants, expert assessment is replaced by the ratio of two corresponding dimensions. The resulting scale derived from the paired comparison matrix containing estimates of the actual measurements will be similar to that which can be obtained by normalizing to the unit of the corresponding measurements.

These methods make it possible to systematically and objectively assess the impact of various cyber threats and determine which of them should be paid special attention to when planning measures to ensure financial and economic security. The said methods were used to compare and contrast certain cyber threats in such a way as to ascertain from expert opinion which negative impact is more dominant than the other. For this purpose, there is a point rating scale according to the procedure. If it significantly exceeds, then more points; if not significantly, then less. In total, more than 30 experts from the field of financial and economic security were involved. 20 experts from the field of cybersecurity were also involved. A survey was conducted through the Delphi method.

Research hypothesis: to propose a methodological approach to ordering cyber threats in such a way that it is possible to establish the most significant ones in the context of ensuring financial and economic security, and which ones are not.

## Results and Discussion

The formation and effective implementation of a cybersecurity policy, within the framework of which a set of measures to predict and counter cyber threats is developed, is a necessary condition for the development of a knowledge society. In the context of the globalization of information processes and their integration into various spheres of public life, the leadership of the leading countries of the world pays increased attention to the creation and improvement of effective systems for protecting critical infrastructure from external and internal cyberthreats.

It should be noted that in many leading countries of the world, national cybersecurity systems have already been formed as the most optimal organizational structures that can quickly accumulate the forces and resources of competent government authorities with the involvement of public authorities to counter cyberthreats.

Cyberthreats in modern society are gaining significant scale. Now, a successful hacker attack can cut off power to an area or country, lead to a bank robbery, or destroy a successful organization. In order to carry out correct and effective measures to prevent cyber threats and eliminate their negative consequences, their legitimization is first of all necessary - the development and consolidation of a legislative definition in order to avoid differences in the application of this category, as well as conflicts with other legal acts, determination of their content, uniformity of law enforcement practice.

In the context of our research, for the formation of information systems for the implementation of the administrative and legal mechanism for ensuring financial and economic security under the influence of modern cyberthreats, it is important to highlight the key cyberthreats that have the greatest impact. For better understanding and specification, all threats will refer to a specific country - Ukraine. The reason for choosing this country was that the authors and experts who were chosen for the study live in Ukraine and are specialists in the field of cyberthreats and cyber security in Ukraine. Thus, according to the expert opinion, the experts identified key cyberthreats in the information system of the administrative and legal mechanism for ensuring financial and economic security of Ukraine (Table.1).

**Table 1.**

*Key cyberthreats in the information system of the administrative and legal mechanism for ensuring financial and economic security of Ukraine*

№	The name of the cyber threat	Mnemonic name
1	The activation of cyber terrorism caused by military actions	CT
2	Development of cybercrime in the banking sector	CBS
3	Unsystematic measures of cyber protection of critical information infrastructure	UCP
4	Noncompliance of the state's electronic communications infrastructure, its level of development and security with modern requirements	NEC
5	Insufficient effectiveness of the subjects of the security and defense sector of Ukraine in countering cyberthreats of a military, criminal, terrorist and other nature	ISD
6	Emergence of content cyberthreats	CCT
7	Threats to the integrity of the economic space	UES

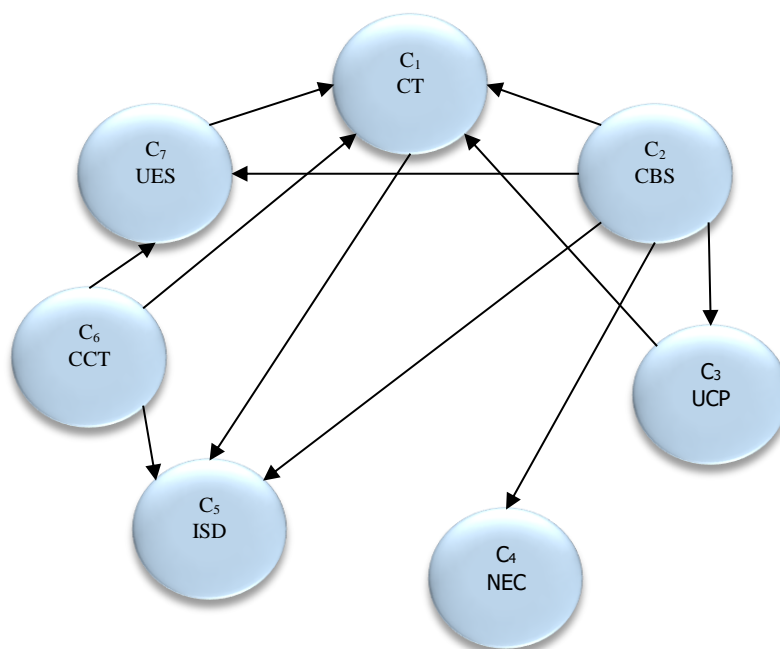
Source: (Formed by authors)

Taking the constructed graph as a basis, we construct a binary dependence matrix A for the set of vertices C1 as follows (1):

$$a_{ij} = \begin{cases} 1, & \text{if criterion (vertex) } I \text{ depends on criterion (vertex) } J \\ 0 & \text{if criterion (vertex) } I \text{ does not depend on criterion (vertex) } J \end{cases}$$

(1)

Graph of connections between key cyberthreats in the information system of the administrative and legal mechanism for ensuring financial and economic security of Ukraine in Figure 1.



**Figure 1.** Graph of connections between key cyberthreats in the information system of the administrative and legal mechanism for ensuring financial and economic security of Ukraine **Formed by authors.**

According to the calculations performed and the generated matrix, the next step will be to create a binary dependency matrix (Table 2).

**Table 2.**  
 Binary dependency matrix

		1	2	3	4	5	6	7
		CT	BP	UCP	NEC	ISD	CCT	UES
		SET AS	SET AS	SET AS	SET AS	SET AS	SET AS	SET AS
1	CT	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER
		:0	:0	:0	:0	:1	:0	:0
		SET AS	SET AS	SET AS	SET AS	SET AS	SET AS	SET AS
2	BP	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER
		:1	:0	:1	:1	:1	:0	:1
		SET AS	SET AS	SET AS	SET AS	SET AS	SET AS	SET AS
3	UCP	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER
		:1	:0	:0	:0	:0	:0	:0
		SET AS	SET AS	SET AS	SET AS	SET AS	SET AS	SET AS
4	NEC	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER
		:1	:0	:0	:0	:0	:0	:0
		SET AS	SET AS	SET AS	SET AS	SET AS	SET AS	SET AS
5	ISD	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER
		:0	:0	:0	:0	:0	:0	:0
		SET AS	SET AS	SET AS	SET AS	SET AS	SET AS	SET AS
6	CCT	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER
		:1	:0	:0	:0	:1	:0	:1
		SET AS	SET AS	SET AS	SET AS	SET AS	SET AS	SET AS
7	UES	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER
		:1	:0	:0	:0	:0	:0	:0

Source: (Formed by authors)

This matrix is constructed in accordance with the relationship proposed below (2):

$$a_{ij} = \begin{cases} 1, & \text{when there is a relationship between cyberthreats} \\ 0 & \text{when there is no connection between cyberthreats} \end{cases} \quad (2)$$

Vertex  $z_j$  is formed from vertex  $C_i$  if in the graph (Fig. 1) there is a path leading from vertex  $C_i$  to vertex  $C_j$ . Such a peak is designated as achievable. Forming a subset of similar vertices through  $S(C_i)$ . Similarly, vertex  $C_i$  is the next corresponding vertex  $C_j$  if it reaches its maximum. Thus, the collection of vertices forms a subset  $P(C_i)$ .

The final intersection of subsets of reachable vertices and predecessor vertices, which corresponds to subset (3):

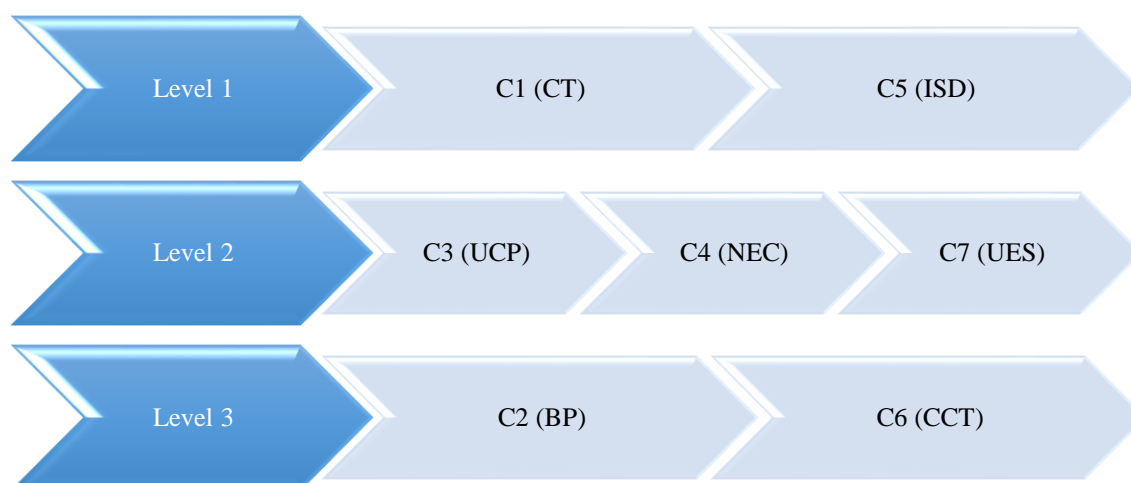
$$R(C_i) = S(z_i) \cap P(z_i) \quad (3)$$

The vertices that do not reach any vertex of the set of remaining  $C1$  determine a certain level of the priority hierarchy of the actions of cyberthreats, the vector of which goes to these vertices. An additional condition is to ensure the equality shown in the formula (4)

$$P(C_i) = R(C_i) \quad (4)$$

Bypassing intermediate calculations, we ultimately obtain hierarchical levels of the impact of cyberthreats in the information system of the administrative and legal mechanism for ensuring financial and economic security of Ukraine (Fig.2).





**Figure 2.** The scheme of the hierarchy of the influence of cyberthreats in the information system of the administrative and legal mechanism for ensuring the financial and economic security of Ukraine.

Source: (developed by the authors)

Thus, we have determined that cyberthreats 2 and 5 have the greatest impact on the formation of information systems of the administrative and legal mechanism for ensuring financial and economic security. Accordingly, in order to formulate the most effective administrative and legal support, it is critical to take into account measures that would counteract or neutralize the impact of these particular cyberthreats. It should be noted that certain cyberthreats are specific to the realities of the Ukrainian financial and economic system, and therefore, when creating similar information systems of the administrative and legal mechanism for other countries, cyberthreats specific to each country should be identified.

## Conclusions

In the sum, in modern conditions, the influence of the global financial and economic system on an individual state is moving to a qualitatively new level. Given the leading role of finance in the modern economy, special attention is paid to management influences through financial mechanisms, using financial levers, financial incentives and financial goals. And globalization precisely creates the conditions for the establishment of special financial power, which, through the ownership of world money and the disposal of the cost of managing financial flows, allows one to influence both the entire global economic space and individual states.

As computers have moved to “resource sharing systems,” cybersecurity issues require significant resources, the development of appropriate strategies, mechanisms to combat cybercrime, and coordination among different market actors.

Approaches to cybersecurity and financial security are no longer technical, as they increasingly embrace legislative and policy issues tailored to the specific skills and practices of users shaped by the diversity of cultures and societies online and around the world. As the Internet has become more pervasive in life and the workplace, there is greater awareness that cybersecurity cannot simply be a response to emerging problems, but must prevent the threat of cybercrime to improve the resilience of any systems.

Modern realities of cybersecurity indicate a number of important problems that prevent the creation of an effective system for countering threats in cyberspace for financial and economic security. Such problems, first of all, include terminological uncertainty, lack of proper coordination of the activities of relevant departments, dependence on foreign-made software and technical products, and difficulties with staffing the relevant structural units. These factors only strengthen the identified cyberthreats and potentiate their manifestation.

The importance of ensuring financial and economic security in the context of protection modern methods of hierarchical analysis and pairwise comparison method against cyberthreats is becoming increasingly significant in the realities of the present world. This situation has led to active interest in the formation of specific information systems for the implementation of administrative and legal mechanisms to ensure financial and economic security. The study has its limitations, since for the formation of the above information systems, a limited number of cyberthreats were adopted,

which are also characteristic of a particular country. In the future, it is planned to expand the list and levels of influence of threats, which will be used to create more complete and integrated information systems for the implementation of the administrative and legal mechanism for ensuring financial and economic security under the influence of modern cyberthreats, both for Ukraine and for other countries.

Given the identified cyberthreats, we recommend that governments and organizations take specific steps to ensure better protection. First, interdepartmental coordination needs to be strengthened to ensure effective sharing of information and resources. Secondly, it is important to reduce dependence on foreign software and technical products by promoting the development of domestic alternatives. Finally, upskilling staff in cybersecurity is key to strengthening defenses against digital threats. The results of our study also point to potential directions for future cybersecurity research. First, it may be interesting to analyze the specific impacts of cyberthreats in different countries and regions, as they may differ depending on local conditions and policies. It is also important to explore new technologies that can help identify and counter cyber threats at an early stage. Finally, developing effective strategies to mitigate the damage from cyberattacks will be an important step in strengthening cybersecurity at the global level.

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## Strategic decisions in healthcare: Impact on goals and enhancing service quality for organizational success

### Стратегічні Рішення в Охороні Здоров'я: Вплив та Цілі на Підвищення Якості Послуг для Успіху Організації

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#### Abstract

This study underscores the crucial imperatives of governments aiming to establish effective social protection systems: prioritizing human capital development, reinforcing social protection mechanisms, and improving the populace's standard of living. The primary objective is to conduct a comprehensive analysis of central healthcare issues and propose strategic solutions for the advancement of healthcare services. The methodology involves a detailed examination and segmentation of the healthcare sector, tailoring enhancements to specific segments. The article critically examines strategic management nuances within the healthcare sector, offering detailed segmentations and proposals for potential improvements. It extends its focus to advanced healthcare systems worldwide, providing valuable insights for assimilating foreign experiences. The study systematically explores the intricacies of strategic action planning and management in both public and corporate healthcare sectors, including

#### Анотація

Це дослідження підкреслює ключові імперативи урядів, спрямованих на створення ефективних систем соціального захисту: надання пріоритету розвитку людського капіталу, зміцнення механізмів соціального захисту та підвищення рівня життя населення. Основна мета дослідження – провести всебічний аналіз центральних проблем охорони здоров'я та запропонувати стратегічні рішення для розвитку медичних послуг. Методологія передбачає детальне вивчення та сегментацію сектору охорони здоров'я, адаптацію вдосконалень до конкретних сегментів. У статті критично розглядаються нюанси стратегічного управління в секторі охорони здоров'я, пропонуються детальні сегментації та пропозиції щодо потенційних покращень. Він поширює свою увагу на передові системи охорони здоров'я в усьому світі, надаючи цінну інформацію для засвоєння іноземного досвіду. Дослідження систематично досліджує тонкощі стратегічного

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transnational corporations. Findings underscore the imperative of continual development and improvement in healthcare service quality, emphasizing the necessity for judicious strategic decisions to sustain the healthcare market's functionality and vitality. This study is relevant for administrative institutions, organizations, governmental bodies, and corporate entities aiming to enhance decision-making processes and operational aspects while prioritizing healthcare quality.

**Keywords:** strategic management, strategic decisions, healthcare, medical services, pharmaceutical market, pharmaceuticals, medicine.

## Introduction

Strategic management within the healthcare domain assumes a pivotal role in the pursuit of strategic decision-making and the attainment of organizational objectives aimed at enhancing healthcare service quality. The effective operation of this sector stands as a primary responsibility for any nation.

In the present context, following the outbreak of the coronavirus pandemic, the quest for optimal strategic solutions to further the development and refinement of healthcare sector strategic management has assumed paramount importance (Osanan et al., 2020).

Many countries across the globe have encountered adverse repercussions and encountered challenges in servicing their populations due to unpreparedness, medication shortages, and logistical inefficiencies. Consequently, devising solutions to these issues and enhancing the quality of medical services assumes primacy in the formulation of a strategic public administration policy. Furthermore, the attraction of investments and the active involvement of business organizations hold the potential to substantially intensify natural competition among these institutions.

The establishment of comprehensive health insurance provisions and the adoption of well-crafted policies, inspired by models seen in European countries, offer a framework for the implementation of strategic healthcare sector management. Equally salient is the utilization of

планування дій та управління як у державному, так і в корпоративному секторах охорони здоров'я, включаючи транснаціональні корпорації. Отримані дані підкреслюють необхідність постійного розвитку та покращення якості медичних послуг, наголошуючи на необхідності прийняття розумних стратегічних рішень для підтримки функціональності та життєздатності ринку охорони здоров'я. Це дослідження є актуальним для адміністративних установ, організацій, державних органів та корпоративних організацій, які мають на меті покращити процеси прийняття рішень та операційні аспекти, віддаючи пріоритет якості медичної допомоги.

**Ключові слова:** стратегічне управління, стратегічні рішення, охорона здоров'я, медичні послуги, фармацевтичний ринок, фармацевтика, медицина.

digital technologies and digital administrative procedures, which hold the potential to alleviate the strain on healthcare facilities, expedite accounting processes, establish supplementary communication channels with citizens, and augment the quality of healthcare services.

Additionally, the imperative of adopting a strategic management approach is underscored by the shortage of highly skilled healthcare professionals. Consequently, educational programs, internships, and international collaborative projects, dedicated to addressing and deliberating specific healthcare sector challenges and development policies, have the potential to invigorate the quality of medical care.

Another pivotal concern pertains to the establishment of indigenous infrastructure for the procurement, production, and utilization of pharmaceuticals, medical supplies, and equipment, among other resources. In nations characterized by a high standard of living and a robust healthcare system, these processes are executed with a focus on transparency and efficiency. Thus, the issues of strategic management in healthcare and the deployment of adept management strategies to realize organizational objectives and enhance healthcare service quality assume paramount significance.



## Theoretical Framework

Strategic management within the healthcare sector assumes a pivotal role in fostering a high standard of living among a nation's populace, while concurrently creating the requisite conditions for its sustenance. The discourse surrounding strategic management is characterized by its complexity, with discussions revolving around the enhancement of healthcare service quality through effective decision-making. This discourse is set in the broader context of ameliorating the functionality of healthcare systems in diverse countries, necessitating refinement.

In the contemporary milieu, Khetrupal & Bhatia (2020) posits that one of the most critical strategic decisions pertains to the global digitalization of administrative processes and the augmentation of electronic record quality. Notably, Cantor et al., (2022) underscores that expediting the pace of digitalization can yield positive impacts on diagnosis and treatment quality, primarily through improvements in software quality, specialized equipment, and the utilization of various medications (Samoylyk & Pohrebnyak, 2020).

Dascalu et al., (2021) emphasizes that modern strategic management practices should encompass a comprehensive analysis of the pharmaceutical market and the prevailing infrastructure. Cassell et al., (2018) opines that infrastructure and logistics assume pivotal roles in shaping the medical market's development, particularly in light of their critical vulnerabilities during the global spread of the coronavirus pandemic. Furthermore, Molento (2021) contends that the establishment of domestic production facilities for raw materials or pharmaceuticals holds strategic significance for a nation, offering potential benefits such as reduced dependence on imported substances and the promotion of domestic business development. As per Szylovec et al., (2020), the involvement of transnational corporations and large domestic enterprises assumes a pivotal role, given their capacity to enforce high-quality standards. Accordingly, legal regulations should be established in the jurisdiction in which these entities operate. According to Sazonenko & Tolstanov (2021), this practice of leveraging domestic infrastructure holds the greatest promise in constructing a comprehensive framework for the strategic advancement of the healthcare sector.

A crucial component for enhancing healthcare services resides in the establishment of pertinent platforms for training, improving internships, and fostering international educational initiatives, among other endeavours. He emphasizes that the utilization of international experience and the exchange of knowledge among specialists constitute indispensable means for progress and the development of medical services. Similarly, Perl et al., (2021) advocates for the significance of legal and regulatory frameworks, positing that sustainable development within the healthcare sector necessitates the formulation of a meticulously devised development strategy.

According to Perl, these frameworks should serve as the cornerstone for fostering rational and purposeful growth. In the contemporary global landscape, as asserted by Olson et al., (2019), it becomes imperative to harness all available tools aimed at enhancing the quality of medical consultation while concurrently alleviating the operational burden on medical institutions and hospitals. The utilization of electronic records and the implementation of effective strategic management strategies present opportunities for reducing bureaucratic complexities. Wang et al., (2021) underscores that the realization of effective strategic management and the establishment of judiciously defined objectives necessitate both internal and external audits. Internal audit practices should be grounded in the analysis of accessible information concerning medical services and pharmaceutical market activities. External audits, according to Wang, ought to be conducted in collaboration with international organizations and relevant governmental authorities. Consequently, scholars contend that the pursuit of formulating a healthcare strategy within the context of quality improvement demands continuous development and refinement.

The primary *objective* of this study is to conduct an in-depth analysis of the intricacies surrounding strategic management within the healthcare sector, with the overarching *aim* of enhancing the decision-making mechanism for the betterment of medical services. The specific goals of this article encompass the examination of the idiosyncrasies inherent to the strategic management of the healthcare sector, the evaluation of its segmentation, an exploration of its prospects for future development, and the systematic addressing of critical issues that have arisen in the aftermath of the global spread of the coronavirus pandemic.

A pivotal facet of this research involves an investigation into contemporary healthcare systems in developed nations and the quest for the most efficacious strategic solutions that can be adapted for use in developing countries. Achieving this overarching objective holds the potential to ameliorate the quality of medical diagnostics, foster accessibility to healthcare services, and institute a transparent mechanism for delivering initial medical assistance. The establishment and sustenance of a high standard of living within the healthcare sector hinge upon effective strategic decision-making and methodical strategic development. Special attention is devoted to identifying means of mitigating the key challenges confronted by the healthcare systems of developed countries and seeking pathways toward their resolution

### Methods and Materials

The conducted research entails a comprehensive analysis of strategic management features, focusing on their consequential impact on healthcare service quality and organizational goal attainment. The research method employed a combination of qualitative and comparative approaches, specifically utilizing search, analytical, comparison, and abstraction methods. The research aimed to investigate the operational peculiarities of healthcare systems in Germany, Sweden, Switzerland, and the United States, utilizing the search method to explore critical facets of the medical market and the role of insurance policies in overseeing and documenting care.

The analytical method was instrumental in characterizing the development and formulation of a strategic framework for managing the progress of the social sector, emphasizing pivotal strategic decisions. This approach aimed to identify key measures for advancing healthcare and improving medical care quality. The comparison method was then applied to analyze fundamental principles governing the operations of the contemporary pharmaceutical market, medical services market, and the healthcare sector. This facilitated the identification of shared strengths and weaknesses inherent in these systems.

The research also extended its focus to the Ukrainian market, exploring prospects for enhancement in the context of wartime circumstances and infrastructure development. The method of abstraction was employed to delineate the fundamental mechanisms underpinning the formation and delivery of

medical services. This comprehensive approach aimed to contribute to the development of a methodological framework for analyzing distinctive aspects of strategic quality management in healthcare, drug safety oversight, and formulating managerial-level proposals for strategic decision-making.

To formally define the type of research, this study can be categorized as a mixed-methods research design, incorporating qualitative approaches such as case studies and comparative analyses. The applied techniques involved literature reviews, case studies, and data analysis using statistical tools. Instruments included survey tools, document analysis, and expert interviews to gather diverse perspectives.

To ensure validity and reliability, a triangulation approach was adopted, combining multiple data sources and methods to corroborate findings. The research design also incorporated member checking, peer review, and external expert validation. Each stage of the research process was meticulously documented, including the selection of countries for analysis, data collection methods, and analytical procedures. This detailed documentation aims to enhance replicability by providing a clear roadmap for future researchers to follow.

The research methodology encompasses a mixed-methods design, employing search, analytical, comparison, and abstraction methods. The use of diverse techniques and instruments, along with rigorous documentation and validation measures, enhances the validity, reliability, and replicability of the research findings.

### Results

The matter of strategic management assumes a pivotal role in overseeing the quality of business operations, the functioning of organizations, and administrative institutions, among others. The employment of effective management methodologies enables the formulation of strategic decisions for subsequent development, the identification of potent levers for transformation, and the delineation of priority areas.

The healthcare sector stands as one of the foremost domains of state policy implementation, given that the provision of social welfare and the maintenance of high-calibre healthcare services significantly impact the development of human capital and society's

ability to operate effectively. Strategic decision-making necessitates a comprehensive evaluation grounded in statistical data concerning the healthcare industry's performance. In the contemporary world, attention is duly directed towards the quality of medical prevention and the role of administrative institutions in providing and safeguarding their efficacy, safety, and reliability. Issues pertaining to the quality of care and the reduction of workloads represent formidable challenges for most healthcare systems. The outbreak of the coronavirus pandemic in 2019-2020 has underscored the urgency of identifying optimal solutions for reform and ensuring their efficiency, particularly in the context of global lockdown measures and the heightened demands placed upon healthcare facilities (Viguria & Casamitjana, 2021).

To enhance the quality of medical procedures, concepts and strategies for healthcare development are meticulously crafted in alignment with established decisions, the development trajectory, and the state's requirements. It is essential to underscore that the strategic plan must encompass considerations of medical rehabilitation quality, existing infrastructure, the proliferation of innovations, and the deployment of mechanisms to ensure specialist training. Within Europe, Sweden, Germany, and Switzerland boast some of the most advanced healthcare systems (Gardner et al., 2019). Common features shared by these nations include the availability of a diverse array of insurance policies, which facilitate the provision of high-calibre healthcare, the implementation of both internal and external audits, and a pronounced emphasis on the development and financial support of social services.

Furthermore, these countries have well-structured systems in place for the ongoing strategic advancement of healthcare, the integration of various digital innovations, and the utilization of environmentally sustainable pharmaceuticals, along with appropriate disposal mechanisms. In particular, the matter of drug production and the establishment of service complexes assumes critical significance, as they can furnish citizens with a multitude of highly

specialized medications that exert a direct impact on the quality of medical care provided.

Notably, the matter of governance and managerial competence should attain a high standard, spanning from commercial medical establishments to state-owned entities. The implementation of effective management systems serves as a foundation for prudent strategic decision-making. The focal point of attention and investment within healthcare should revolve around management, as it is through these means that the establishment of a healthcare system capable of ensuring the sustained quality of medical rehabilitation, while remaining adaptable to emerging challenges, becomes attainable. Strategic healthcare management should be rigorously segmented, with the division into key managerial units affording opportunities for the investigation, assessment, and analysis of the operations of such institutions.

A strategic decision is an outcome of strategic management, which, in today's context, can be effectively realized through the utilization of a myriad of digital technologies, think tanks, statistical analyses, and other resources. Provision and planning at the organizational or business level should be grounded in a comprehensive analysis of the market, empirical data concerning the operations of medical institutions, the particulars of legal regulations governing the healthcare system within the country, and an array of other influencing factors. In the context of state-level healthcare management, it becomes imperative to consider a broader spectrum of factors, while concurrently ensuring that administrative responsibilities are appropriately delegated to local governing bodies and accountable state agencies.

The policy of centralization within the healthcare sector offers numerous advantages, as it fosters an environment conducive to the operation of businesses and organizations and facilitates investment attraction. In summary, the strategic management of social protection within the healthcare sector can be categorically divided into four distinct segments, as elaborated in greater detail in Figure 1.



**Figure 1.** Features of strategic management in the healthcare sector.

Source: compiled by the author.

These domains necessitate the utmost scrutiny and oversight from state regulatory and supervisory bodies, as their proper functioning and determination of future developmental trajectories will significantly contribute to the establishment of a high-quality and secure healthcare system. The matter of medical education and training should be predicated upon the integration of high-calibre innovative technologies that not only facilitate education delivery but also create an array of conducive conditions for educational advancement. Furthermore, substantial emphasis should be directed towards the digitalization of education and the adoption of contemporary, state-of-the-art educational systems, as these measures exert a positive influence on training outcomes. The incorporation of practical training, the implementation of methodologies from countries with advanced healthcare systems, and the provision of internship opportunities, among other factors, collectively serve to ensure efficient management for further development, to be executed by the relevant administrative authorities.

Another salient concern pertains to logistics and infrastructure. Logistics challenges, especially during the global lockdown imposed amidst the spread of the coronavirus pandemic, have underscored the imperative to devise effective strategic solutions for establishing a robust logistics framework within Europe. According to the World Bank, the logistics transportation level for pharmaceuticals in Europe has witnessed a decline of 10-20%, a critical issue amid a global pandemic. Hence, in the pursuit of effective strategic solutions for healthcare sector development, due attention must be directed towards the quality of logistics services. The deployment of contemporary digital and intelligent logistics tools assumes paramount importance, as they exert a direct impact on the quantity and quality of services rendered to

citizens within medical facilities. The matter of infrastructure and domestic production should be accorded the highest priority for any nation. In cases where domestic production is lacking, the efficiency and effectiveness of logistics transportation become paramount (Mensah & Sommers, 2016).). The extant system encompassing contracting, pharmaceutical business regulation, and the establishment of controls represents a complex undertaking. For instance, during times of conflict, as exemplified by Ukraine, it becomes imperative to explore supplementary avenues for fostering domestic pharmaceutical production and service capabilities, given their strategic significance for the nation.

Regulatory, legal, and administrative-organizational governance mechanisms serve as instrumental elements in mitigating bureaucratic complexities while concurrently enhancing the accountability of healthcare institutions and citizens in the provision and receipt of healthcare services. A prime example of a robust healthcare system is the presence of mandatory health insurance for citizens. Notably, the United States, Sweden, and Germany boast the most advanced mandatory insurance systems, which furnish citizens with access to high-quality and cost-effective healthcare while being nearly universally obligatory (Federal Agency for Civic Education, 2017). The existence of a stringent regulatory framework underpinning compulsory health insurance fosters the development of human capital and establishes conditions conducive to maintaining a high standard of living within the population. In the context of Ukraine, to alleviate the strain on the healthcare system and enable it to effectively manage its workload, strategic decisions are imperative (Sustainable Development Goals, 2017). These decisions should primarily encompass reforms of the regulatory framework, the gradual introduction of mandatory health insurance, and

the requisite infrastructure development. Within the domain of administrative and organizational regulation, a paramount concern remains the oversight and auditing of service quality and business operations.

The matter of healthcare quality necessitates an approach rooted in the analysis of available data on the operations of both state and commercial entities. Competent management aimed at attaining lofty organizational objectives should be pursued among commercial entities through the reinforcement of natural competition (Sabetska & Stefanyshyn, 2020). This can be effectively achieved by enticing foreign investments and establishing appropriate business ventures. Concerning state institutions tasked with overseeing healthcare service quality, there should exist a mechanism for quality control and service delivery, as well as a well-defined system for the tracking and management of pharmaceuticals, equipment, and related resources. With the evolution of digital technologies and the potential for integrating

contemporary digital systems, it becomes plausible to enhance the quality of the healthcare sector and fortify the role of diversified organizational management in the advancement of this domain.

Strategic decision-making aimed at the attainment of organizational objectives and the enhancement of healthcare service quality should be grounded in an understanding of healthcare service operations, statistical insights into population health quality, and areas necessitating improvement. The procedure for strategic development and management planning warrants deliberation within the state's executive bodies, featuring lucid rationale and meticulously crafted plans for their execution. Only when these elements are firmly in place can an effective healthcare system fashioned after the European model be established. Table 1 delineates the most critical and challenging facets associated with the development and enhancement of healthcare services through strategic decision-making.

**Table 1.**

*Ways to improve medical services through strategic decisions in the concept of strategic development.*

Strategic development area	Characteristics	Expected effect
Implementation of an electronic healthcare system.	Creation of an electronic registry, use of modern systems for the provision and delivery of medical services, and an operational communication system.	Improving the quality of service, and reducing the burden on medical institutions.
Strengthening pharmaceutical safety.	Establishment of a comprehensive system of quality control of medicines, equipment, and additional audits at the state level.	Improving the quality of healthcare services, reducing mortality and diseases.
Development of the material and technical base and infrastructure.	Development of logistics and supply of specialized equipment and medicines.	Improving the quality of public services and ensuring a high level of medical care.
Reforming the system of training qualified personnel.	Improving the system of training qualified personnel, strengthening international cooperation, introducing control systems – testing, practice, etc.	Availability of highly qualified personnel and professional healthcare.
Structuring the bureaucracy and administrative system.	Developing an effective system for processing citizens' applications, expanding the number of medical institutions, and rationalizing the legal and regulatory framework.	Rational administration stimulates the development of the healthcare sector.
Attracting investments and participating in international healthcare projects.	Strengthening corporate social responsibility, attracting additional foreign direct investment, and engaging businesses in healthcare.	Reducing the burden on medical institutions, ensuring a high level of medical services in the country.
Involvement of internal and external auditors.	Establish an effective system of internal and external audits of the quality of healthcare services.	Eliminate deficiencies in service and medical services and ensure high quality.

Source: compiled by the author

The proposed strategic solutions outlined in Table 1 underscore the prevailing issues regarding the current state of healthcare and its services, demanding substantial enhancements and ongoing vigilance from public

administration. Moreover, addressing the matter of judicious management, both within the state and across various business sectors, is imperative. Such an approach engenders an environment conducive to swifter



implementation. Furthermore, due consideration must be given to the idiosyncrasies of legal regulations, encompassing the enactment of pertinent legislative measures designed to govern social protection and enhance healthcare quality. In contemporary societies, substantial emphasis is accorded to the utilization of digital technologies, not solely within the service sector but also across the realm of public administration. Consequently, the incorporation of such a mechanism can significantly amplify the efficacy of the strategy and expedite its implementation timeline.

These measures can serve as prerequisites for the establishment of a functional healthcare system capable of responding to emerging challenges. Nevertheless, the existing mechanisms for managing and implementing strategic decisions necessitate modernization. Moreover, the attraction of investments and the financing of the social protection sector remain formidable challenges, as the fortification of healthcare reform and the creation of a competitive pharmaceutical, medical, and specialized services industry mandate the presence of highly developed infrastructure, specialized facilities, and well-trained qualified personnel.

Consequently, it becomes imperative to consider the quality of decision-making, development strategies, and related factors. Within Ukraine, especially within the context of ongoing conflict, a strategic development concept extending until 2030 has been adopted. This comprehensive strategy encompasses endeavours aimed at enhancing the quality of medical care through the implementation of international projects, the introduction of innovative solutions, and the widespread adoption of digitalization.

A notable challenge lies in bolstering decentralization efforts and enhancing the quality of strategic management within local governments. In Ukraine, this system remains relatively weak and requires substantial reform while outlining a comprehensive strategic development plan. An influential factor in achieving this objective entails the establishment of medical facilities and the reinforcement of the business sector's role in the healthcare domain (Sokolenk & Lynnyk, 2020).

Corporate social responsibility (CSR) is reasonably developed in Ukraine; however, significant businesses often engage in selective projects or invest in related business sectors. An essential facet of the country's strategic development may involve the pursuit of

mechanisms to incentivize large enterprises to channel their interest toward supporting investments in healthcare, establishing their production facilities, and enhancing the quality of logistics transportation (Yatsenko, 2019). The cultivation of a high level of corporate social responsibility can be facilitated through motivational instruments or the imposition of specific taxes aimed at bolstering the public healthcare system.

Strategic decision-making necessitates not only the presence of qualified medical personnel and specialists but also engagement at the state level. The planning, preparation, and execution of a state strategy aimed at enhancing healthcare service quality should be underpinned by a comprehensive analysis of the prevailing circumstances and the exploration of the most optimal avenues for its realization. Within EU countries, healthcare system reform is conducted in close consultation with relevant organizations and governmental bodies in each nation. This collaborative approach enables the selection of the most effective and rational strategic solutions and provides a framework for delineating future vectors of strategic development within the healthcare sector. Hence, the existence of organizations and activities affiliated with international donor organizations within the healthcare sector needs to precede the formulation and development of strategic decisions aimed at improving healthcare service quality.

Hence, it can be deduced that the matter of strategic management in healthcare encompasses a comprehensive spectrum of managerial domains, encompassing the delegation and administration of functional processes within healthcare services. This intricate framework warrants meticulous analysis of each constituent element of the healthcare system. The impact of strategic decisions on the realization of organizational objectives assumes a pivotal role in securing the sustainable advancement of healthcare service quality. It holds the potential to catalyze the enhancement of the public healthcare system. To gauge the developmental prospects of a nation, it is imperative to draw insights from countries with well-established healthcare systems and high standards of living. Creating conditions conducive to the assimilation of foreign experience becomes paramount in this pursuit.

## Discussion

The study's findings underscore the significance of establishing strategic management, planning, and governance frameworks within the healthcare sector as pivotal factors in enhancing the living standards of the population and elevating the quality of healthcare services. A prospective avenue for research could encompass the analysis of pivotal strategic decisions made at both the governmental and business organizational levels, as these decisions exert a direct influence on development trajectories and the efficacy of management policy implementation. The global landscape boasts a multitude of international organizations and specialized entities dedicated to addressing healthcare-related matters. Furthermore, within the context of the ongoing global pandemic, the restructuring of global health security emerges as a contentious topic warranting considerable attention and examination.

An important avenue for further research lies in the examination of regulatory mechanisms within countries boasting advanced healthcare systems. Administrative and organizational regulation necessitates scrutiny in nations harbouring substantial transnational corporations and prominent pharmaceutical enterprises, as their experiences may offer valuable insights for the development of indigenous healthcare systems.

Furthermore, promising research domains encompass issues such as the establishment of robust logistics systems, domestic pharmaceutical production, or the procurement of medicines. Another notable achievement in healthcare's strategic development pertains to the emphasis placed on constructing and maintaining infrastructure, a venture necessitating significant investments, architectural designs, and planning solutions. Research in this regard holds equal significance. Additionally, investigations in the realm of personnel training, the creation of environments conducive to knowledge exchange with international organizations, and opportunities for internships represent vital areas of scholarly exploration.

A pivotal concern centres on the transition from traditional healthcare management and medical counselling approaches to digital paradigms. The prospect of digitalization holds the potential to attract substantial investments, streamline bureaucratic processes, alleviate the burden on healthcare institutions, and facilitate public

awareness regarding new regulations and service access opportunities.

Within the healthcare sector, digitalization can be envisaged as a vehicle for enhancing the quality of medical care through the incorporation of innovative technologies and specialized tools, which can yield positive impacts on the healthcare industry. The establishment of digital sales and communication channels opens avenues for enhanced citizen service efficiency, reduced operational burdens on medical facilities, and the development of tools for monitoring and recording medical products, medications, and citizen interactions. Consequently, the realm of digitalization within the healthcare sector stands as a promising arena warranting further research endeavours.

In future research, significant emphasis should be placed on the strategic management of both internal and external audit processes, along with the exploration of mechanisms for their effective implementation and execution. Prioritizing the control and safety of medical care should emerge as a strategic focal point within the country, as it can effectively mitigate a myriad of risks associated with service quality, pharmaceutical products, and related aspects. Furthermore, attention should be directed toward the validation, accountability, and legal frameworks governing these matters. Over the strategic long-term horizon, such measures can serve to fortify the competitiveness of the healthcare sector.

## Conclusion

In summary, this study underscores the pivotal role that strategic management plays in the evolution of healthcare, where well-informed decisions yield enduring impacts. Whether within the ambit of state or organizational administration, the utilization of contemporary methods and analytical tools for processing statistical data and available empirical evidence is imperative for enhancing healthcare quality.

The enhancement of healthcare services hinges upon the employment of a spectrum of tools, which, in turn, holds the potential to significantly elevate the population's quality of life and establish a high standard of living. The strategic management of the healthcare sector is characterized by four fundamental segments: logistics and infrastructure, medical education and training, regulatory, legal, administrative, and organizational regulation, as well as the quality of medical services and citizen services. Each of these domains warrants modernization

and refinement tailored to the particular needs of individual nations, thereby laying the groundwork for the provision of high-quality healthcare services.

The effectiveness of strategic decisions in attaining organizational objectives and enhancing the quality of medical services should be rooted in insights gleaned from developed countries and business organizations, which can be adapted and implemented. Such an approach facilitates the implementation of strategic decisions in healthcare development and the cultivation of a highly skilled workforce. The establishment of effective strategic management should encompass not only considerations of quality, efficiency, and the provision of requisite infrastructure but also a concerted effort to inform citizens and conduct specialized initiatives to ensure the seamless operation of such a system.

The primary tenets underpinning the construction of an optimal contemporary healthcare delivery system encompass the accessibility of digital tools and digitalization, coupled with the establishment of accounting mechanisms, and internal and external control systems. These elements constitute pivotal factors in the enhancement of the population's quality of life. The incorporation of these principles serves as a catalyst for the advancement of strategic development within the healthcare sector and affords several competitive advantages in comparison to traditional approaches. Furthermore, the education and training of governmental personnel and senior management within pharmaceutical markets and the healthcare sector bear significant strategic relevance in the quest to ameliorate healthcare services.

In conclusion, this study underscores the pivotal role played by strategic management and the decisions subjected to analysis in the construction of an efficient and high-calibre healthcare system. The presence of deliberate strategic management and well-considered strategic decisions underpin the enduring, stable development of healthcare services, ultimately contributing to the cultivation of a nation's human capital.

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## Evaluation of distance learning in ukrainian higher media education: Perspectives and impact of stakeholders

Оцінка дистанційного навчання в вищій медійній освіті України: Погляди та вплив зацікавлених сторін

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### Abstract

The research focuses on the utilization of computer-oriented educational environments for distance learning, aiming to assess the current landscape, highlighting both the positives and negatives, as well as successful examples and future prospects in higher education. Methodologically, the study involved an analysis of various sources, including statistical and narrative information, and conducted surveys among key stakeholder categories to evaluate their perceptions, effectiveness, and the most productive formats of distance learning. The findings challenge the notion that distance education is only suitable for extreme conditions. Key educational process participants, especially in fields like "Journalism," view well-organized distance education as comparable to traditional

### Анотація

Дослідження зосереджене на використанні освітніх середовищ, орієнтованих на комп'ютери, для дистанційного навчання, з метою оцінки поточного стану, висвітлення як позитивних, так і негативних сторін, а також успішних прикладів і перспектив у вищій освіті. З методологічної точки зору дослідження включало аналіз різних джерел, включаючи статистичну та наративну інформацію, та проведення опитувань серед ключових категорій зацікавлених сторін для оцінки їх сприйняття, ефективності та найпродуктивніших форматів дистанційного навчання. Результати викликають сумніви в думці, що дистанційна освіта підходить лише для екстремальних умов. Основні учасники освітнього процесу, особливо в галузях, таких

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and extramural learning methods. It enhances the computer technology skills of both teachers and students, proves to be the most inclusive educational format, lessens financial burdens, broadens professional development opportunities, aids in the internationalization of education, and serves as a marketing tool for attracting prospective students. However, the study also reveals an inconsistency between student and faculty expectations regarding remote communication formats and the practical ability of specialists to meet these demands.

**Keywords:** media education, distance learning, educational environment, institution of higher education, information and computer technologies, stakeholder.

## Introduction

The global crisis brought about by the Covid-19 pandemic and the martial law caused by the invasion of Ukraine by Russian aggressors forced the educational environment to work in extreme conditions, most often in a remote format. The period of work of educational institutions in extreme conditions will end sooner or later, and a logical question will arise: will this mean the end of distance education? The proposed article is devoted to the question of the expediency of using this form of educational activity in a computer-oriented educational environment. An example can be Borys Grinchenko Kyiv University, which systematically brought the distance education system into the category of priority, thereby creating a competitive advantage over other educational institutions. In the pre-crisis period, a set of measures, in particular the creation of the Digital Campus, made it possible not only to digitize the university but also to improve the distance learning system, made it possible to significantly increase interest in the institution, improve the quantitative and qualitative characteristics of entrants. Modern requirements for the training of specialists require taking into account the interests and active participation of all interested parties: students, employers and scientific and pedagogical workers. The proposed article is designed to show their attitude to distance learning and to determine the prospects of this form of education. **The purpose of the research** is to analyze the distance learning of students in the conditions of a

як "Журналістика", вважають добре організовану дистанційну освіту порівнянню з традиційними та екстрамуральними методами навчання. Вона підвищує навички викладачів та студентів у використанні комп'ютерних освітніх та комунікаційних технологій, є найбільш інклюзивним форматом освіти, зменшує фінансове навантаження на студентів та освітні установи, розширює можливості для професійного розвитку, сприяє інтернаціоналізації освіти та служить маркетинговим інструментом для залучення майбутніх студентів. Однак дослідження також виявляє невідповідність між очікуваннями студентів та викладачів щодо форматів дистанційного спілкування та практичною здатністю спеціалістів задовольнити ці потреби.

**Ключові слова:** медіаосвіта, дистанційне навчання, освітнє середовище, вищий навчальний заклад, інформаційні та комп'ютерні технології, зацікавлені сторони.

computer-oriented educational environment using the example of Borys Grinchenko Kyiv University and to generalize the opinions of stakeholders regarding its effectiveness and prospects.

## Literature Review

The concept of "distance education" has a very broad meaning and many interpretations. The term "distance education" is considered synonymous with the terms "distance learning", "e-learning," and "online learning" and is defined as "a form of learning in which the main elements include the physical separation of teachers and students during learning and the use of various technologies for facilitation of student-teacher and student-student communication" (Berg, & Simonson, (s/f)). In Ukrainian legislation, distance learning is defined as "an individualized process of acquiring knowledge, abilities, skills and ways of cognitive activity of a person, which takes place mainly through the mediated interaction of remote participants in the educational process in a specialized environment that functions on the basis of modern psychological, pedagogical and information-communication technologies" (Order No. 466, 2013). Distance education is seen as plural, encompassing a wide set of technological applications and learning processes, including online learning, computer-based learning, web learning, e-learning, distributed learning, internet learning, cyber learning, virtual learning or

networked learning (Keengwe & Kidd, 2010). Distance learning is studied in contrast to the traditional offline format, in particular, the differences between online and personal (face-to-face) interaction of students are determined (Shu & Gu, 2018), (Stradiotová, Némethová & Štefančík, 2022), the transition from a traditional environment to distance learning during the COVID-19 pandemic (Salta et al., 2022), the conditions for the introduction of blended learning are studied (Shu & Gu, 2018).

The results of the study by Huszti et al., (2022) on distance learning testified to how unexpected and difficult the transition from the classroom to distance education was. Experts were concerned that the rapid transition from face-to-face to online learning could lead to less satisfactory learning outcomes, not only because of the rapid change in the learning environment, but also because online technologies were not mastered by either teachers or students, meaning that these online technologies were used improperly (Ali et al., 2022). Scientists who compared online and offline learning (Aranyi, Tóth, & Veisz, 2022; Salta et al., 2022; Shu, & Gu, 2018), in online learning, they saw a negative trend of decreasing the quality of education: "the education system has been affected by the pandemic" "the study habits of students have changed", "the quality of the educational process fell, despite all the teachers' efforts" (Stradiotová, Némethová, & Štefančík, 2022). Online learning "carries a stigma of lower quality than face-to-face learning" (Hodges et al., 2020), despite research to the contrary. The perception of online learning as a weak option is explained by the fact that it is used only in urgent circumstances and not really planned to take full advantage of its benefits and opportunities. The new model of education envisions only a combination of traditional and distance learning.

Surveys conducted in Ukraine showed that the mass transition to distance learning has become a challenge for most Ukrainian universities: limited access to technological resources, unstable Internet, and inconsistent access to software and technical tools. Nevertheless, the results of the survey confirmed that both teachers and students are satisfied with the rapid transition to distance learning due to COVID-19 (Grynyuk, 2022). Ukrainian scientists Nenko, Kybalna & Snisarenko (2020), having studied the rapid transition to distance learning in higher education institutions, foresee "the development of the concept of distance education and the corporate network of universities" (Nenko, Kybalna & Snisarenko, 2020, p. 17). Knowledge of distance

education and emergency distance learning will be of great importance and will be used in future contingencies such as natural disasters or conflicts. And the experience of Ukraine in the organization of distance education in crisis conditions, gained during quarantine and martial law, can be interesting for the world.

## Methodology

The basis of the research methodology was such scientific methods as surveys, expert assessments, and statistical analysis in combination with general scientific approaches such as analysis, synthesis and generalization. The basis of the theoretical understanding of the introduction of ICT-based distance learning was an empirical study of the training of journalists at Borys Grinchenko Kyiv University. The survey was conducted in 2022 in the form of questionnaires; separate blocks of questions were developed for each category of stakeholder respondents. 26 representatives of the professional publishing environment who practice professional collaborations with students took part in the survey.

## Results and Discussion

The practice of distance learning organization at Borys Grinchenko Kyiv University

The innovativeness of the use of distance education at Borys Grinchenko Kyiv University consists in the simultaneous application of several models of such training as well as in the establishment of a permanent connection in the chain of student - university - production. According to the authors, the use of distance education in the educational process should be reasoned, may apply only to certain disciplines, or may be inadmissible, for example, during the training of doctors or engineers.

Borys Grinchenko Kyiv University has a developed infrastructure, in particular, more than 80 SMART classrooms; an educational cyber training ground; Wi-Fi zones; a TV studio and press center; practical centers, laboratories and workshops; and a resource center for supporting students with disabilities. In 2017, Grinchenko University introduced the New Educational Strategy. Students study in practical centers, the concept of which was developed by the university team in order to improve the quality of graduate training. The basis of the new strategy is education based on research and practical activities. A practical orientation to education is both a hallmark of the university and a logical

response to today's challenges. High-quality digitalization is the effective mechanism that allows you to maintain the involvement of students in practical professional training, maintaining harmony between theoretical, research and practical components.

Traditionally, journalism is considered a rather sensitive professional activity, as it is one of the first to respond to sociopolitical changes and global challenges. Therefore, the period of quarantine restrictions during the Covid-19 pandemic turned out to be quite indicative from the point of view of the representation of professional capacity.

In the period of 2019–2021, the Institute (after reorganization, the Faculty) of Journalism managed to increase the quantitative indicators of applicants' submitted applications and maintain and even increase the interest of young people in studying at this higher education institution. According to the results of the admissions campaigns, the number of submitted applications for the "Journalism" specialty was consistently high: in 2019, more than 3,000, in 2020 – 3,617, in 2021, 3,648 applications. (Kyiv University named after Borys Grinchenko, 2019). In 2022, the Institute of Journalism ranked 2nd in Ukraine in the ranking of higher education institutions by the number of submitted applications for the specialty 061 Journalism. During the period of the admission campaign in

2022, 1,410 applications were received, but this did not affect the admission results (Borys Grinchenko Kyiv University, 2022). In 2023, Borys Grinchenko Kyiv University became the leader in terms of the number of submitted applications for the specialty "Journalism": 1,465 for a bachelor's degree, and second place (260 applications) for a master's degree. In addition, the vast majority of applicants identified the chosen educational programs of the faculty as their highest priority (Borys Grinchenko Kyiv University, 2023)

Attitude of representatives of stakeholders in the educational process toward the distance form of education

Study of the participants in the educational process: students and teachers

The vast majority of survey participants: students of the I-IV courses of the bachelor's degree and the I-II courses of the master's degree, as well as the teaching staff of the Institute (faculty) of journalism – defined the distance learning format (90.4%) as working online with teachers and colleagues. They identified an e-learning course as a support tool. In total, 77.2% of respondents rated distance learning as an effective format that can be used in parallel with face-to-face learning and as a progressive learning format for the future (Table 1).

**Table 1.**  
*Distance learning as an effective format*

Answer option	Percentage of respondents (%)
An effective format that can be used in parallel with face-to-face	52,1
Progressive learning format for the future	25,1
A forced step during quarantine restrictions	20,4
It is difficult to say	2,4

52.1% and 25.1% of the participants of this stage of the research generally indicated the importance and positive effect of the possibility of combining the distance learning format with student work. This indicator is directly correlated with the respondents' opinion that distance learning provides an opportunity to save time for professional development (71.3%). 71.3% of survey participants also prefer the synchronous mode of distance learning. The remote format of students' practice received an ambiguous assessment: 35.9% could not decide, 25.1%

spoke positively, 10.8% negatively, and 26.3% defined it as an interesting experiment. Although the general trend of the responses indicates an interest in a similar format. If we understand "interesting experiment" as a positive experience that the respondents would repeat in the future, then in total, we have 51.4% of positive responses.

The remote format of holding meetings between students and practicing specialists was also rated positively by all survey participants (Table 2).

**Table 2.**  
*Remote format of student meetings with practicing specialists*

Answer option	Percentage of respondents (%)
Useful professional experience	56,3
A necessary element of distance learning	14,4
A format that can sometimes be used	29,3
It is difficult to say	0

According to the survey data, only 7.3% of respondents felt detached from the educational process. According to 47.3% of respondents, the effectiveness of the knowledge acquired through distance education is increasing, while 30.5% indicated a decrease in effectiveness. 54.5% of research participants would prefer a distance education program based on the "distance learning using multimedia programs" model. The fact that distance learning allows you to save time for

professional development was indicated by 71.3% of respondents.

If we look at the list of professional competencies that, according to the respondents, were most developed during distance learning, we will see that distance learning is perceived as capable of developing a wide range of professional competencies necessary for a future journalist (table 3).

**Table 3.**  
*List of professional competences that are most developed during distance learning*

Answer option	Percentage of respondents (%)
Social	13,2
Communicative	13,2
Social and informational	18,6
Cognitive	29,9
Special	22,2
It is difficult to say	2,9

Research of employers-practitioners involved in the educational process.

26 representatives of the professional publishing environment who practice professional collaborations with students took part in the survey. Among them is the top management of publishing houses (directors, deputy directors, editors, and heads of professional public organizations). The age indicator ranges from 20 to 68 years old. 73.1% are women. 57.7% of survey participants under the distance learning format understand the teacher's work with students online. The electronic learning system (ELC) available at the university is considered only an auxiliary tool. The remote format of holding meetings between students and

specialists-practitioners as something that can sometimes be used. 61.5% of respondents expressed the opinion that the effectiveness of the knowledge acquired through distance learning is decreasing. The same number of interviewed practitioners indicated the presence of certain topics in the training of journalists, in particular in the educational program "Publishing and Editing", which, in their opinion, cannot be learned remotely.

To the question of the questionnaire "Should we use the distance learning format after the end of the quarantine", 50% of respondents answered that they would prefer a combination of 25% distance learning and 75% face-to-face learning (table 4).

**Table 4.**  
*Appropriateness of using the distance learning format after the end of the crisis period*

Answer option	Percentage of respondents (%)
Partially: 25% remote and 75% face-to-face	50
Partially: 50% remote and 50% face-to-face	19,2
Yes	15,4
No	11,5
The face-to-face format is more effective for practical classes, and the remote format is much more convenient for obtaining the necessary information	3,8

34.6% of respondents rated the remote format of students' practice as negative, and a significant number of respondents (26.9%) - could not answer (table 5). It should be noted here that there are certain difficulties regarding the

organization of students' internships. Publishing houses often refuse to conduct internships remotely, although their employees work remotely.

**Table 5.**  
*Remote format of student practice*

Answer option	Percentage of respondents (%)
Negatively	34,6
Positively	19,2
What an interesting experiment	19,2
It is difficult to say	26,9

An additional survey conducted showed that employers' mistrust of the results of distance learning is caused, firstly, by ignorance of the possibilities of e-learning (constant access to information, systematic and objective testing of theoretical and practical skills, the ability to organize work in mini-editorial offices, etc.). Distance learning requires the learner to be more responsible for the results and develops independent learning skills, which is an important requirement of the modern world – continuous improvement, on-the-job training, etc. Such a specialist, who is able to quickly adapt and learn, is especially valuable for an employer.

It should also be noted that an interesting feature is that among the interviewees, in general, older practitioners have a negative attitude towards distance education, while younger specialists are more favorable to this form of education. More than 70% of the respondents who believe that the effectiveness of the acquired knowledge under the distance form of education decreases and evaluate the distance format of students' practice as negative are over 58 years old. This fact indicates a certain lack of acceptance of information and computer technologies by representatives of this age group. Since publishers of age 58 and older are active in the professional field today, this situation requires an effective program to include this category of publishers in the use of modern digital technologies. In this case, remote formats of communication with students can be very useful. It is the process of mutual convergence between universities and production organizations, where the presentation of the best practices of such interaction is the most effective element of self-improvement.

## Conclusions

1. The distance learning format in the conditions of a computer-oriented educational environment and the policy of practical orientation in learning are effective marketing tools of higher education institutions (humanities) in attracting future students. This is evidenced both by the results of the study and the results of the demand of applicants and admission campaigns of the Institute (Faculty) of Journalism of the Borys Grinchenko Kyiv University for the quarantine years 2019–2023. Institutions of higher education managed to increase the number of applicants' submitted applications and maintain and even increase the interest of young people in studying at the Faculty of Journalism of the Borys Grinchenko Kyiv University.
2. Due to the implemented digital campus, a complex of certified ELCs and a system of training pedagogical personnel, the distance learning format is considered by the participants of the educational process as an equal form along with face-to-face and extramural types of gaining knowledge and not only as a forced measure during crisis situations. Leaders of education and politics in Ukraine can choose the most effective models of online education that will work successfully in the era after COVID-19 and after the war. The experience of Ukrainian universities in organizing distance learning in quarantine and martial law conditions can be useful in other countries as well.
3. Distance learning is perceived as capable of developing a wide range of professional competencies necessary for a future journalist and improving the skills of teachers and students in using computer-based educational and communication technologies.



4. Distance education expands opportunities for professional development (organization of practice at enterprises in other regions, online meetings with practicing specialists).
5. The survey confirmed the effectiveness of complex and systematic remote information and computer educational tools, which are built by the University.
6. The distance learning format expands the possibilities of internationalization of education and facilitates the organization of international trainings, lectures, and internships.
7. The study showed that there is a certain discrepancy between the demand of the participants of the modern educational process (students and representatives of the teaching staff) and the possibility and willingness to satisfy this demand on the part of the practitioners of the media environment.

This may indicate insufficient professional inclusion of the modern media environment in the process of personnel training and insufficient flexibility in responding to the modern challenges of youth.

8. The study showed the wide research potential of the outlined issues.

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