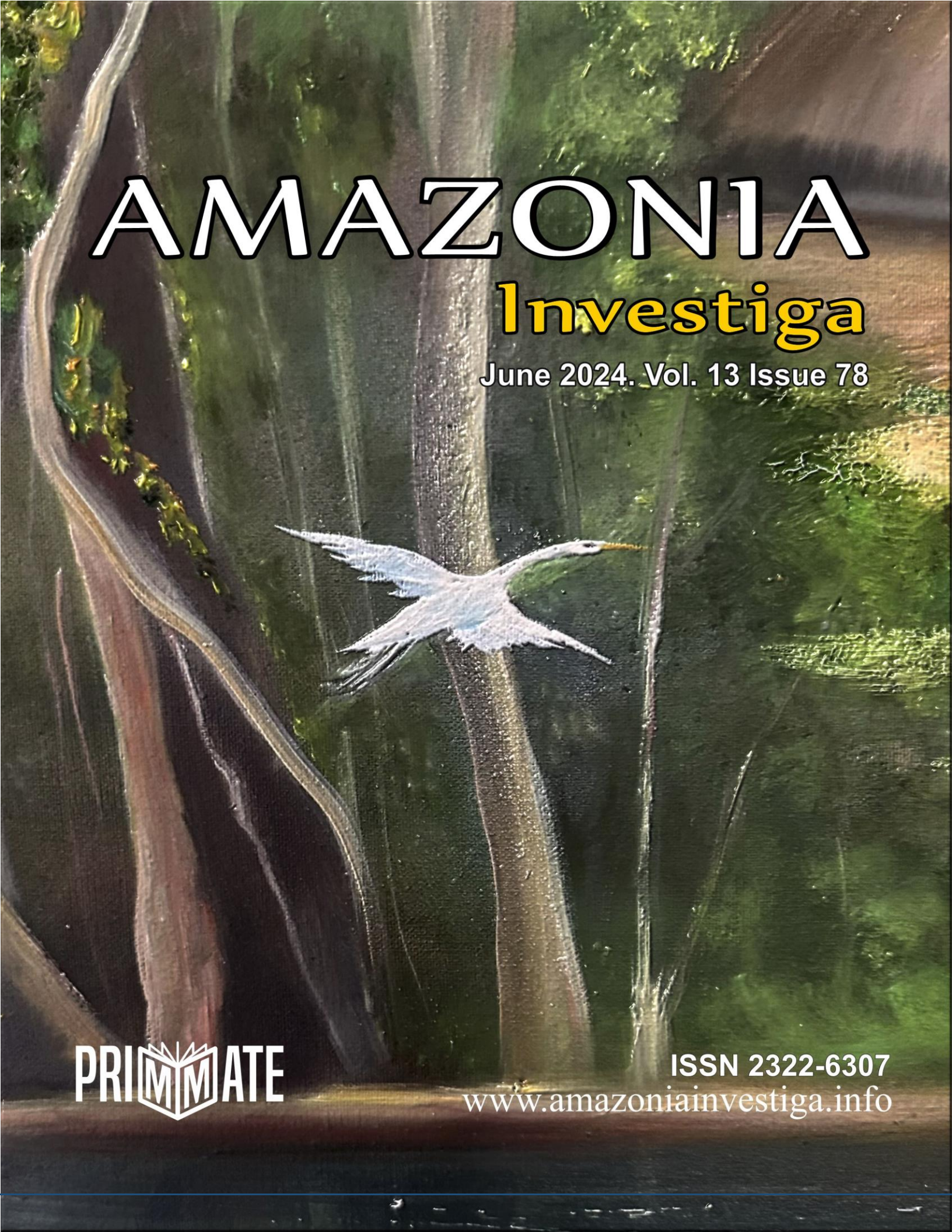


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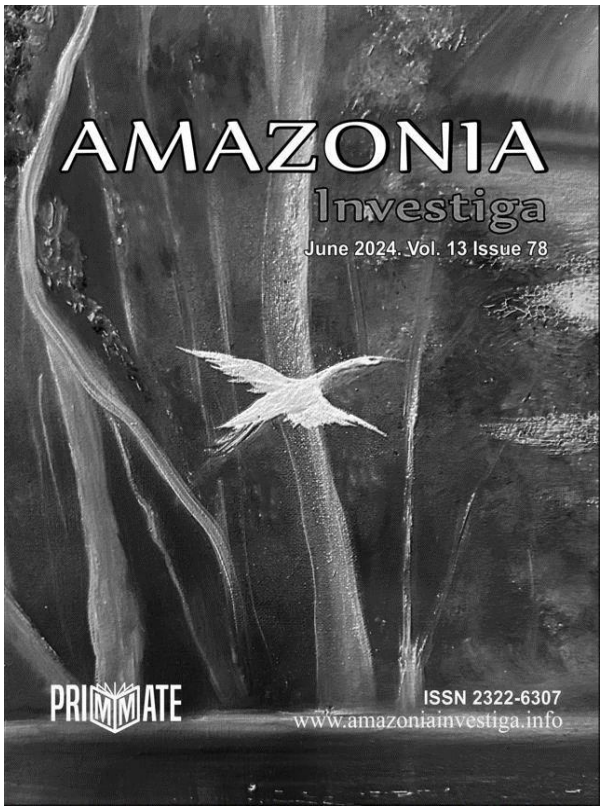
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The art of graphic design in video games: beyond the visual

Video Oyunlarında Grafik Tasarım Sanatı: Görselliğin Ötesinde

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Written by:
Mine Okur[1]
https://orcid.org/0000-0002-1932-7455
Raif Kızıl[2]
https://orcid.org/0000-0001-8747-0352
Elif Atamaz[3]
https://orcid.org/0000-0002-3896-2227

Abstract

In video game development, the significance of graphic design cannot be overstated. This article explores the multifaceted contributions of graphic design to the gaming experience, emphasizing its impact on player immersion, narrative enhancement, and overall game success. Key areas of focus include visual concept creation, user interface design, in-game graphical elements, and branding and marketing materials.

Through comprehensive analysis, this paper highlights the crucial role of graphic design in shaping the aesthetic appeal, functionality, and marketability of video games. Findings reveal that good graphic design is essential for player retention and engagement, with poor graphics often leading to negative experiences. The study also underscores the importance of concept and interface design in influencing purchasing decisions and enhancing visual and immersive quality. Additionally, brand identity and advertising are significant factors in a game's popularity and reach.

The results emphasize the need for collaboration between graphic designers and game developers to create engaging and visually captivating gaming experiences, ensuring all elements—from characters and environments to user interfaces—work together for a seamless player experience.

Keywords: Gaming, Visual Design, Video Game Development, User Interface Design, Environmental Graphic Design.

Özet

Video oyunu geliştirmede grafik tasarımın önemi yadsınamaz. Bu makale, grafik tasarımın oyun deneyimine çok yönlü katkılarını incelemekte ve oyuncuyu oyuna bağlama, anlatı geliştirme ve genel oyun başarısı üzerindeki etkisini vurgulamaktadır. Odaklanılan temel alanlar arasında görsel konsept oluşturma, kullanıcı arayüzü tasarımı, oyun içi grafik öğeler ve markalaşma ve pazarlama materyalleri yer almaktadır.

Bu çalışma, kapsamlı bir analiz yoluyla, grafik tasarımın video oyunlarının estetik çekiciliğini, işlevselliğini ve pazarlanabilirliğini şekillendirmedeki önemli rolünü vurgulamaktadır. Bulgular, iyi bir grafik tasarımın oyuncuların oyunda kalması ve oyuna bağlılığı için gerekli olduğunu, kötü grafiklerin ise genellikle olumsuz deneyimlere yol açtığını ortaya koymaktadır. Çalışma ayrıca konsept ve arayüz tasarımının satın alma kararlarını etkilemedeki ve görsel ve sürükleyici kaliteyi artırmadaki öneminin altını çiziyor. Buna ek olarak, marka kimliği ve reklam, bir oyunun popülerliği ve erişiminde önemli faktörlerdir.

Sonuçlar, karakterler ve ortamlardan kullanıcı arayüzlerine kadar tüm unsurların kusursuz bir oyuncu deneyimi için birlikte çalışmasını sağlayarak ilgi çekici ve görsel olarak büyüleyici oyun deneyimleri yaratmak için grafik tasarımcılar ve oyun geliştiricileri arasındaki işbirliğine duyulan ihtiyacı vurgulamaktadır.

Anahtar Kelimeler: Oyun, Görsel Tasarım, Video Oyunu Geliştirme, Kullanıcı Arayüzü Tasarımı, Çevresel Grafik Tasarımı.

[1] Assist. Prof. Dr., Near East University, Faculty of Fine Arts and Design, Cyprus. WoS Researcher ID: KCL-4190-2024
[2] Dr., Near East University, Faculty of Fine Arts and Design, Cyprus. WoS Researcher ID: X-1081-2018
[3] Assist. Prof. Dr., European University of Lefke, Faculty of Communication Sciences, Cyprus. WoS Researcher ID: ABJ-1993-2022

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Introduction

Video games, increasingly popular with advancing technology, have become significant commodities by integrating art, design, science-technology, and marketing strategies (Okur & Kızıl, 2022). Graphic design plays a crucial role in this integration, impacting player immersion, narrative enhancement, and overall game success. It encompasses visual concepts, user interfaces, in-game graphical elements, and branding materials.

Graphic designers collaborate with various disciplines like typography, photography, and illustration, designing everything from visual identities to marketing materials. Mastery of communication skills, creative thinking, and problem-solving is essential.

The significance of visual elements in video games cannot be overstressed. Well-crafted graphics create a positive first impression and establish the ambiance for a gratifying gaming encounter, while poor design can detrimentally affect the overall perception of the game's caliber. This highlights the importance of prioritizing graphical refinement for an immersive experience.

Effective graphic design significantly enhances a game's navigational aspects, making menus, icons, and controls intuitive and enjoyable. Game aesthetics is an expression of the game experienced as pleasure, emotion, form-giving, etc (Mortensen, 2015). Players merit a fluid gaming experience devoid of undue time expenditure in deciphering operational mechanics. Hence, game designers are compelled to accord primacy to the formulation of easily navigable and aesthetically pleasing game interfaces.

In marketing, graphic design captures the gaming demographic's attention and builds anticipation. Developers must invest in skilled graphic designers to create compelling trailers and engaging content, ensuring visibility in a saturated market. Graphic design is integral to a game's marketing strategy, influencing the potential success or failure of the game.

Research questions / hypothesis

The main scope of this study is to answer the fundamental question of the study provided below.

How does graphic design influence player engagement and immersion in video games?

In order to answer the main question of this research, sub-questions will be examined and answered to expand the scope of the study.

1. What is the relationship between interface design and player satisfaction in video games?
2. How do visual concept designs impact the commercial success of video games?
3. What role does graphic design play in the branding and marketing of video games?
4. How has the evolution of technology influenced the development of graphic design in video games?

Effective graphic design in video games leads to increased player engagement and immersion. A well-designed interface positively affects player satisfaction and usability in video games. Innovative visual concept designs contribute to the commercial success and popularity of video games. Strong graphic design elements in branding and marketing significantly enhance the visibility and appeal of video games. Technological advancements have facilitated more complex and visually striking graphic designs in video games, enhancing the overall gaming experience.

Effective graphic design in video games leads to increased player engagement and immersion in the game. A well-designed interface positively influences player satisfaction and usability in video games. An example of this is 'Super Mario.' Nintendo achieved significant success by bridging generations with the release of 'Super Mario' in 1985. The evolution of Mario character graphics, driven by technological advancements from 1985 to 2017, has undeniably contributed to this success. The evolution of graphics in Mario: the transition from 2D to 3D graphics (Figure 1).

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Figure 1. The Design Evolution of the Mario Character (Atre, 2019)

Strong graphic design elements in branding and marketing significantly increase the visibility and appeal of video games. Technological advancements have facilitated the creation of more complex and visually striking graphic designs in video games, enhancing the overall gaming experience. Innovative visual concept designs have contributed to the commercial success and popularity of video games. Therefore, the reflection of this technological development and process in the 'Super Mario' series can be seen as having a significant impact on the game's commercial success (Figure 2). Over the years, the development of the game's visual designs has reached a large player base.



Figure 2. Super Mario Worldwide Unit Sales (Richter, 2017)

Literature Review

Graphic design plays a crucial role in game design, which requires increasingly complex and visually striking designs. In video games, not only visual analysis but also elements such as sound effects, motion graphics, music, and animation need to be created in a holistic manner, keeping up with technological innovations and following the latest trends. In the last 25 years, where technological advancements have accelerated, graphic design has constantly been evolving and renewing itself with the possibilities and conveniences brought by technology in software and hardware. The reflection of this development in graphic design can be seen in video games, from pixelated graphics in arcade games of the 1980s such as Tetris to 90s Sonic: The Hedgehog to 2000s 3D graphics like Fry Cry 2 to today's record-breaking games such as Elder Ring (Figure 3). As visual quality has improved, visual concept designs have developed from 2D analyses to 3D animations, offering brand new experiences for gamers.

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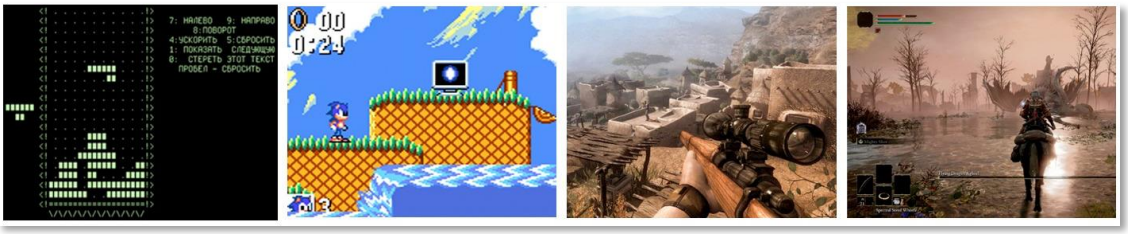


Figure 3. Tetris (Olcay, 2014), Sonic (Games Asylum, 2022), Far Cry 2 (Ubisoft Official Store, n.d.), Elder Ring (Wirecutter, 2022)

While graphic design and video game design may be seen as separate disciplines, they are actually interconnected and mutually beneficial fields. As Kaleci and Tepe stated in their research, most games have similar themes, with a hero overcoming obstacles. The hero beats the game by overcoming these challenges. But what really sets games apart are the environments, characters, and animations. So, focusing on designing these elements well is crucial for making a great game (2017). According to Wu "From the practical side of environment design, graphic design principles such as visual hierarchy, foreground and background relation, center of interests and visual clarity are particularly important because audiences are prone to experience environment design as a holistic experience" (2012). In the game industry, graphic designers are responsible for various tasks throughout the design process, including character and environment design, interface design, and logo design. They also contribute to the overall game development process by providing feedback and ideas. Graphic design plays a crucial role in shaping the visual experience of interactive narratives in video games. Innovations in this field continually enhance storytelling, immersion, and overall player engagement. Similar to programming, video game art has become a specialized field, encompassing roles such as concept artists, storyboard artists, 3D modelers, environmental artists, texture artists, visual effects artists, UI artists, animators, technical artists, and art directors (Rogers, 2014). Each role contributes uniquely to the creation of game characters, environments, cinematics, and visual effects, with the art director overseeing the project's overall artistic vision. Continuous practice and mastering the basics are emphasized regardless of the specific art position of interest. The purpose of this article is to minimize the confusion between these two concepts, define their relationship, clarify their common ground, and emphasize the role and importance of graphic design in video game design by discussing its responsibilities.

The video game development and design process

Video games created by the collaboration of computer engineering with art, design, science and technology have become a dynamic product. They consist of concepts, characters, environments, interfaces, and in-game graphics. A video game can be defined as an entertainment technology that processes the player's commands into digital signals, which are then sent back to the player through the screen. The interface, audio, and tactile capabilities have made competitive and challenging video games more popular (Okur, 2017).

Video game genres can be described as a defining characteristic of the game's overall nature. Initially, games consisted of simple and limited movements and options, but they have now been replaced by more complex structures that provide players with greater movement, freedom, and interaction.

Video game genres can be broadly classified into four categories:

1. Simulation games that imitate physical world activities.
2. Strategy games that require the gathering, processing, interpretation, and access to information through the game interface.
3. Action games that emphasize player performance.
4. Role-playing games that identify the characteristics of the player's avatar.

Video game development and design process involve teams of experts from different disciplines who work together to bring complex game structures to life. This process includes determining the game's place within its universe, defining the rules of play, and guiding the player's participation in the game world. Video game design is a collaborative effort that involves not only game developers, but also experts in design, art, science, and technology. These professionals include the lead designer, software engineers, technical

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directors, programmers, level and mission designers, art directors, graphic designers and artists, sound engineers, and quality assurance team members.

Among the members of the graphic design team, there are several roles, including the art director, visual concept designer, animator, environment and location designer, texture designer, 3D model designer, 2D model designer, interface designer, storyboard designer, character designer, and packaging designer.

To better understand the role of graphic design in the complex and multi-faceted process of video game design, it is possible to categorize it into four main areas:

- Visual concept design: character, environment, and location design.
- Interface design.
- Graphic design used within the game.
- Corporate identity design.

Visual concept design

In the realm of video game design, the landscape has evolved significantly with the rise of television, movies, and video games. Don Seegmiller contends (Seegmiller, 2003), "With the advent of television, movies, and now video games, however, things have changed. The medium is visually describing the characters and environments for us as an audience. While our perceptions will still be unique, those perceptions are now closer together than they ever been".

This visual transformation takes center stage during the crucial phase of video game development known as visual concept design. Once the storyline is crafted, and the game's rules and genre are defined, the subsequent step becomes paramount. This pivotal stage involves the meticulous creation of visuals that bring the game's narrative to life. From 2D or 3D character designs to environment and location concepts tailored to the story and characters, animations, auxiliary elements, and effects—all these components are meticulously designed with a cohesive language. This integration of visual elements not only complements the established rules and genre but also plays a pivotal role in captivating the audience and immersing them in the unique world crafted by the game developers. The production of these elements in digital environments with high-quality drawings is one of the most fundamental issues related to graphic design in the game design process. A well-designed and well-managed concept design gives a positive impression of the overall identity and structure of the game to new players and engages them in the game. A player's visual choices in a game are indicators of whether the player will engage in the game and enjoy an experience. In order to control the experience, the game being used for this study was created by one of the authors (Garver, Adamo & Dib, 2018).

Concept design studies start with rough drafts. Those with high visual appeal, relevance to the subject matter, and feasibility are selected from these drafts and developed and detailed in digital environments. Decisions made after determining the subject matter and genre of the game are changed as little as possible, any small change after this stage may cause project delays and waste of time (Adams, 2014).

The concept designs of the first video games were created with simple drawings and sketches due to the software and hardware conditions of their time. Today, we can see the strong impact of technological advances in software and hardware on concept designs. As we enter the last decade, trends and demands in the video game industry have changed significantly. The reasons for this change are due to general changes in the interests of consumers and stakeholders, rapid hardware and software development opportunities, the emergence of new game platforms, and the development of new business models as a result of these developments and customer orientations (Pashkov, 2021). As a result, visual concept designs created with highly creative and unique expression forms are produced in digital environments with high-quality drawings. An example of this is Lords of The Fallen, an action role-playing game with a successful visual concept and game design. Released in 2023, the game was developed by Hexworks and published by CI Games. The same techniques were used in character designs while creating environment and location designs related to concept design. However, the environment and location designs are not animated. Effects that reflect the characteristics of the environment are used (Novak, 2012) (Figure 4).

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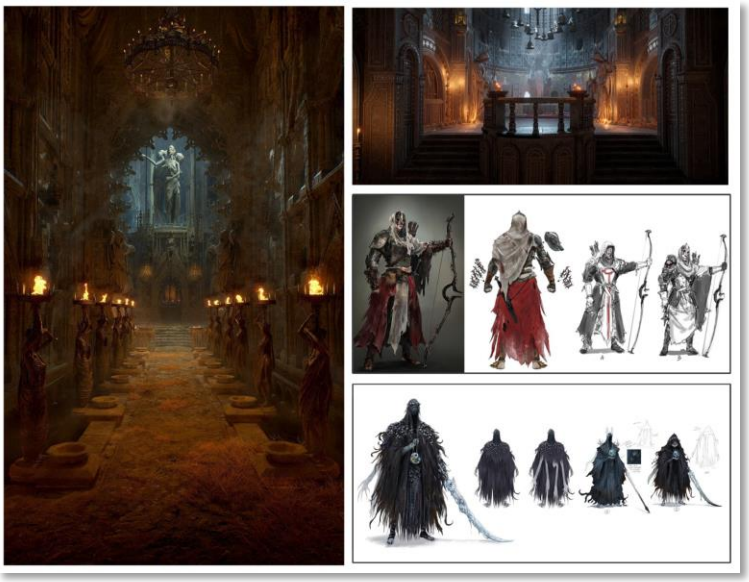


Figure 4. "Lords of the Fallen" game environment and space, character concept designs Freeland (2023)

Released in 2023, 'Sea of Stars', an adventure and RPG game genre, is another example of a game that makes a difference with its concept designs (Figure 5 and 6). Inspired by classics such as Super Mario RPG, Illusion of Gaia, and Chrono Trigger, Sea of Stars won Best Indie Game at The Game Awards 2023, and now developer Sabotage Studio has announced that the RPG has surpassed 4 million players since its release.



Figure 5. Sea of Star game screenshots Sabotage Studio (2023)

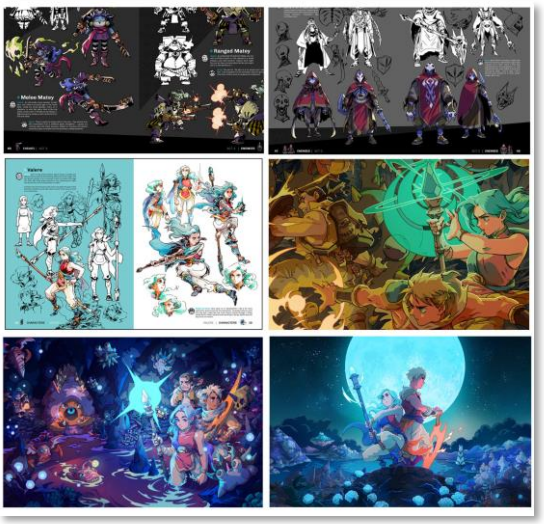


Figure 6. Visual concept sketches for the Sea of Stars game Sabotage Studio (2023)

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During the concept design process, the graphic designer is involved in many creative processes such as 3D and 2D design, illustration, animation, motion graphics effects, and more. According to Mitchell, at every stage of game development from concept design to the finished product, designers should always ask themselves, "Will the developed visual designs be in harmony with the game's appearance and feeling?" (2012). In this sense, creating harmony and coherence among all designs in the general concept design will provide important references for the game's future auxiliary graphics and interface designs. According to Gavira, the creation of a unique universe with distinct characters showcases the role of graphic design in developing a cohesive graphic identity (2023). This involves designing appealing and consistent visual elements that make the game world immersive and engaging.

Interface design

While interface can be defined as the medium that enables interaction between the user and the digital world, interface design is the mastery of how these environments work and look. The graphical user interface is a general term used to represent all icons, windows, buttons, hypertext, and panels that are interacted with through hardware tools such as a mouse, keyboard, monitor, and remote control, instead of memorizing the commands that make up the operating system that controls the machines (Sakman, 2017).

In today's world, there is always an interface that helps us in every type of environment, from computers to mobile phones, digital billboards to ATMs.

In video games, the user interface (UI) is undoubtedly the only element that allows the player to interact with the game. This interaction is the fundamental feature that distinguishes video games from other multimedia products. The player can make decisions while playing the game and is responsible for the progress of the game (Fox, 2005). Properly organized visual components that allow the player to interact with the game tools and settings will enrich the gaming experience, facilitate it, and increase the player's success. Designers are creating intuitive and immersive UI elements that seamlessly integrate with the game world. Dynamic and context-sensitive UI adapts to different narrative situations, reducing clutter and enhancing the player's focus on the story.

Each game usually has multiple user interfaces. When you start a game, the main menu interface, which is the start-up screen, provides the opportunity to switch to other interfaces. Behind every scene or back screen where the course of each game takes place, there is always an interface that helps the player. For example, in a game like Hogwarts Legacy, there will be a Health and Mana bar, Map, Spells and guidance messages on the screen (Figure 7). It is the graphic designer's expertise to place all of these visual elements that guide and inform the players and make it possible to play the game without obstructing the player's main view. The biggest mistake made during the process is to leave the interface design until the end and separate it from the game development process (Keş and Kara, 2015). However, the interface of the game is perceived more as a priority than the gameplay itself, and it should be designed concurrently with the game creation process.



Figure 7. "Hogwarts Legacy" interface design Pixel (2022)

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It is possible to summarize the importance of interface design under three main headings:

1. To increase the efficiency and effective use of the game.
2. To enhance the attractiveness of the game and ensure its preference.
3. To strengthen the brand identity.

Importance of Interface Design for Efficient and Effective Use

Interface design can enhance the efficiency and effectiveness of gameplay. Well-planned menus, toolbars, hyperlinks, and buttons appearing on the screen at the right time, in the right place, and in a hierarchical order can facilitate the player's adaptation to the game and enable them to reach their intended objectives more quickly. The terminology of the auxiliary informative menus required for the player to reach these objectives should be understandable and designed for the task at hand. The most important design element for this purpose is typography.

The user interface (UI) creates the player's experience, making the game visible, audible, and playable. It has an enormous effect on whether the player perceives the game as satisfying or disappointing, elegant or graceless, fun or frustrating (Adams, 2014).

Proper typography is simple, easy to read, and helps users navigate the interface with symbols and icons. Users are not inclined to read every letter and word, but rather quickly scan the text and recognize words by their shape, rather than their individual letters. Therefore, small letters are preferred over capitalized words for most in-game texts (Figure 8).

The choice of typeface can also influence the player's overall mood and emotions during gameplay, providing different meanings and feelings. The font used in Avatar: Frontiers of Pandora (Figure 9) should be different from the font used in Super Mario Bros. Wonder (Figure 10) to match the atmosphere of each game and provide players with a better experience.



Figure 8. "Avatar: Frontiers of Pandora" interface design (Interface in Game, 2022)

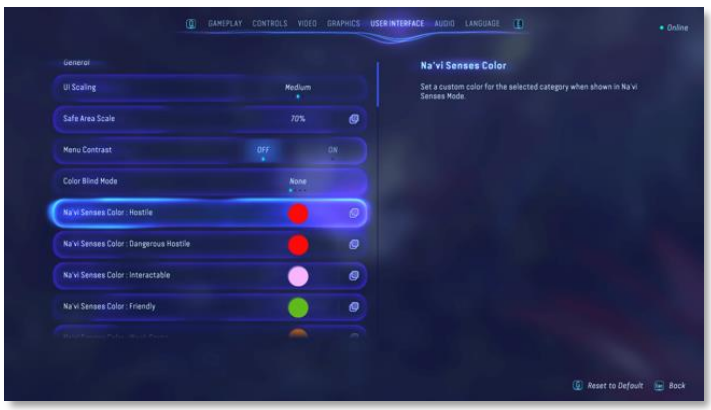


Figure 9. "Avatar: Frontiers of Pandora" interface design (Interface in Game, 2022)

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Figure 10. "Super Mario Bros. Wonder" interface design (Coates Edd, 2024)

Text in games should create contrast with the rest of the video game environment. This can be challenging, especially in colorful worlds or environments with constantly changing brightness and lighting. Graphic designers are the best equipped to use design knowledge to make text visible and improve readability, from the color of the text to the transparency of the background, and through the use of shadows, gradients, and other techniques. In the game Avatar: Frontiers of Pandora, directional signs are easily distinguished and understood from the visuals (Figure 11).



Figure 11. "Avatar: Frontiers of Pandora" interface design (Interface in Game, 2022)

The target audience of the game also influences the choice of typography, just like the visual concept. Large and readable fonts that are fun and engaging should be considered for age groups who cannot read or are still learning, along with other pictograms, shapes, and illustrations, so that children can understand without having to read. Additionally, shape-based rather than text-based explanations may be preferred for users who speak different languages. In Super Mario Bros. Wonder, text elements are minimized as much as possible, and illustrations are used in headings and directions (Figure 12).



Figure 12. "Super Mario Bros. Wonder" interface design (Coates Edd, 2024)

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In the readability of interface design, visual hierarchy is another important criterion. An educated/experienced graphic designer should design the correct hierarchical order of all auxiliary elements on the screen, such as font type, size, color, texture, and layout, in order to achieve a good user experience. Not only the main screen, but also the purpose and positioning of other icons and bars should be understood at a glance, so as to direct the player correctly.

Interface Design and Enhancing Player Engagement in Games

Another important criterion for readability in interface design is visual hierarchy. A trained/experienced graphic designer should design the font, size, color, texture, and layout sequence of all the helper elements on the screen in the correct hierarchical order to achieve a good user experience. Not only the main screen but also the positioning of other icons and bars should be understood at a glance, so that the player can be directed correctly.

Good interface design not only makes gameplay easier but also helps players develop a strong connection with the game. Interface design should be both distinctive and similar to the design layouts of similar games so that those who are new to the game can easily adapt. Interface designs are the first screens encountered by users, and the initial menu design has a significant impact on the player's desire to continue playing the game. It gives the first impressions about the game, meets expectations, and guides the player. The power of design language comes into play when doing all these things. Designing menus for a new game that is unique can be challenging as it requires providing an easily understandable environment and guidance.

Game design is a rare combination of challenge, competition, and interaction, and its fundamental goal is to provide fun to players. However, it is quite difficult to determine what makes a game fun (Birsen and Yıldız, 2018). A failed gamer progressing through a complicated interface in a game will become more stressed and will not be able to enjoy the game, and may even give up. Designs should cover players from all cultures and segments in the game's target audience and be able to respond to their moods.

Every game has a flow plan, and a well-designed game keeps the player within this plan. A player who progresses smoothly within the flow begins to connect with the game. Tasks given in the game flow should have clear feedback that does not leave room for uncertainty about how the action progresses toward goals. Interface design should provide the player with the opportunity to focus on the task and minimize distracting elements. Therefore, the interface design that is compatible with the game's overall concept and helps complete the task will directly affect the player's engagement in the game. For example, the signage and guidance in the game Assassins Creed: Mirage are placed in suitable positions and are of an easily perceivable size without affecting the game's general atmosphere (Figure 13).



Figure 13. "Assassins Creed: Mirage" interface design (Lopez, 2023)

Strengthening Brand Identity through Interface Design

In the following sections of the article, brand identity, which is explained in more detail, is a significant factor in the success of the game. Nowadays, every commercial product, service, and idea must have a brand identity that will determine its place in the market. The originality of the visual elements that make up this identity, such as the logo, color, and typography, and their differentiation from other similar brands are essential. In game design, the visual concept created also appears as a brand in front of the player. Using

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the same visual language as the entire game is an important aspect of interface design the visual consistency between the interface design and other visual elements will strengthen the game's brand identity, establish trust with the player, and help the game stay in their mind. For example, the font selection and design of the icons used in the interface design of the Hogwarts Legacy game are highly compatible with its visual concept and corporate structure (Figure 14).



Figure 14. "Hogwarts Legacy" interface design (Pixel, 2022)

Graphic elements used in games

In addition to their role in interface design, graphic designers significantly contribute to various in-game graphics, enhancing the overall gaming experience. These graphics encompass elements such as environmental details, advertising boards, road signs, letters, notes, and decorative objects, all crucial for adding depth and realism to games, particularly in open-world versions (Figure 15). According to Okur and Aygenç "These are some of the most important elements in Graphic Design that we use in our daily lives, such as warning and direction signs and symbols. Thanks to these, the player is able to perform his actions (2017).

These in-game graphics can take the form of 2D or 3D static or animated images, representing objects, characters, or landscapes. The increasing use of in-game graphics in recent years is driven by their ability to create more realistic and immersive atmospheres within the gaming environment. Designing these graphic details is essential to crafting a captivating and authentic experience for players.



Figure 15. "Assassins Creed: Mirage" interface design (Prima Games, 2023)

Furthermore, according to Ivory graphic designers play a pivotal role in the effectiveness of commercial messages within video games. The integration of advertisements and product placements is seamlessly executed by these designers, ensuring aesthetic consistency and contributing to player immersion. Their expertise in visual storytelling and user experience design amplifies the impact of these elements, making them memorable and creating favorable impressions (2013). Ultimately, the collaboration between graphic

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designers and game developers not only enhances the gaming experience but also positions video games as powerful marketing platforms.

Design and branding of marketing and promotional materials

The video game industry has evolved from a simple form of entertainment to a major industry, with each game becoming a constantly produced and consumed cultural commodity. From a global perspective, the revenue of the digital gaming industry has reached a level that rivals the market share of the film industry (Gül, 2019). In fact, due to the impact of the Covid-19 pandemic, in 2020, the video game industry generated $179.7 billion in revenue, surpassing the film and music industries, which have traditionally dominated the entertainment sector (Pashkov, 2021). Experts predict that the growth of the video game industry, which is currently in its golden age, will continue in the coming years.

The strategic role of graphic design in the marketing process becomes evident. Beyond its responsibility for the visual communication of game studios, graphic design plays a crucial role in shaping the brand identity of each game, as highlighted by Kızıl and Ergün "The advertisements are designed to not only tire the viewers, to be easily perceived, but also to gain aesthetic appreciation and interest. When these features are taken into consideration, it is easier to adopt the product and form the idea of purchasing" (Kızıl & Ergün, 2020). Their research emphasizes the significance of well-designed advertisements in not only capturing viewer attention but also fostering aesthetic appreciation and interest, pivotal factors influencing product adoption and purchasing decisions. This meticulous attention to visual appeal extends to every facet of a game's presentation, including the creation of logos, startup screens, and the establishment of a cohesive visual identity across social media accounts (Figure 16). In essence, the seamless integration of graphic design within the marketing process ensures a comprehensive and visually compelling representation of the game, reinforcing its purpose, values, and principles through a consistent brand identity.



Figure 16. Logo designs of Super Mario Bros. Wonder (Fandom, 2024), Assassins Creed Mirage (Wikimedia Commons, 2022), GTAVI (Neuman, 2023), Lords of the Fallen video games (Creative Uncut, 2024)

When a new game is released, the goal is to get as many people as possible to buy and play the game in the shortest possible time. Graphic designers create the necessary materials for promoting and marketing the game. These include the packaging design of the physical copy of the game, the design of the game page on digital platforms where the digital versions of the game will be reviewed and purchased, as well as posters to be printed or published in various media, and promotional visuals and videos to be shared on social media platforms such as YouTube, Facebook, and Instagram. Additionally, the game's official website, social media accounts, and online visibility are as important as the game's design itself. Simply using screenshots and images from the game is not enough to design these materials, and creative thinking strategies need to be developed, similar to advertising for other brand products.

The poster designs for the game GTA VI can be shown as an example of iconic and original promotional campaigns (Figure 17). The poster consists of digital 2D illustrations of scenes from the game. The title, written in bold characters that reflect the action theme and content of the game, is prominently placed in the center of the poster. Illustration depicts clues to the content that the player can expect from the game. Although GTA VI is actually a 3D game, 2D depictions were preferred instead of real screenshots to create a different image that stands out from other similar games on the market. Graphic designers are the experts who will develop and reveal similar branding and marketing decisions.

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Figure 17. "GTA VI" poster design (Wikipedia, 2023)

Graphic designers are also responsible for designing promotional products such as posters, t-shirts, and stickers that generate revenue outside of the game's sales. Even after the game has been released and reached a certain level of sales, these products continue to generate revenue for the studio for a long time. The trade of these products and the collection of enthusiasts who purchase and collect them is an important step in the branding of the game (Figure 18).



Figure 18. "Zelda: Tears of the Kingdom" Collector's Edition (Nintendo, 2024).

This keeps players interested in the game, while increasing their curiosity about future versions of the game. At the launch event of Diablo IV, the game's fans and loyal followers were brought together in an organization that was designed with designs that were in line with the game's corporate identity. This strengthened the players' commitment to the game, preserved the brand spirit, and developed a sense of belonging among the players (Figure 19).

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Figure 19. "Diablo IV" Launch Event in L.A (Staff, 2023)

Methodology

In the first stage of the method, a comprehensive literature review was conducted to explore the role and importance of graphic design in video games. This review covered topics such as visual concept design, interface design, in-game graphic elements, and branding and marketing materials. The sources of information consulted included academic studies, books, articles, and case studies from reputable journals and publications. The selection criteria for the literature were based on relevance to the topic, recency of publication, and contribution to the understanding of graphic design in the context of video games. Key findings from the literature indicated that effective graphic design significantly enhances player engagement, satisfaction, and overall gaming experience.

In the second stage, an empirical analysis was carried out to assess the impact of graphic design on player engagement and satisfaction. A selection of ten video games known for their exceptional graphic design was chosen for analysis. These games included titles such as "Assassin's Creed: Mirage," "Sea of Stars," and "Super Mario Bros. Wonder." The evaluation criteria used were visual appeal, interface usability, and overall design coherence. Each game was analyzed based on expert reviews and direct gameplay observation. Visual appeal was assessed based on art style, graphical fidelity, and aesthetic consistency. Interface usability was evaluated on ease of navigation, intuitiveness, and user feedback. Design coherence considered the integration of visual elements with gameplay mechanics and narrative.

To complement our literature review and empirical analysis, a survey was conducted to gather firsthand insights on the impact of graphic design in video games. The survey included 22 questions and was distributed to a diverse group of participants, covering various age ranges and gaming experiences. The survey questions were as follows:

1. Age Range
2. Do you think the concept designs of a game affect the quality of the game during development?
3. How do you evaluate the impact of a game's concept designs on your purchasing decision?
4. How do you evaluate the impact of a game's interface design on user experience?
5. How do you find the role of interface design in in-game interactions?
6. How important is it for you that the interface design of a game is user-friendly?
7. How do you evaluate the role of interface design in guiding and conveying information within the game?
8. How do you find the contribution of interface design to the overall aesthetics and atmosphere of the game?
9. How do you evaluate the impact of visual objects used in the game on the gaming experience?
10. How do you find the contribution of visual objects within the game to the believability of the game world?
11. How do you evaluate the role of visual objects within the game in strengthening the game's atmosphere?
12. How do you evaluate the impact of a game's brand identity and advertisements on your purchasing decision?
13. How do you find the first impression given by the brand identity and advertisements of a game?
14. How much do you value the potential of a game's brand identity and advertisements to increase the game's popularity?

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15. How do you find the role of brand identity and advertisements in informing you about the game?
16. How do you evaluate the success of a game's brand identity and advertisements in reaching its target audience?
17. Which graphic design elements influence your decision when buying a game?
18. How important do you think graphic design is to the overall success of a video game?
19. Have you ever decided not to play a video game due to poor graphic design? (e.g., Interface Design, Guide Graphics, etc.)
20. How do you think graphic design affects your perception of a video game's quality?
21. Do you think graphic design provides a positive contribution to storytelling in a video game?
22. Which graphic design elements do you think are the most important in video games?

Results and Evaluation

The video game industry, which is rapidly growing and developing and almost dominating the entertainment sector, is being taken to brand new dimensions with the impact of technology and is meeting with enthusiasts as a result of the professional teamwork of experts in the field. The demand, growth, and development of the gaming world have not only attracted game enthusiasts but also caught the attention of many researchers from education to design, resulting in the opening of departments in universities and the publication of various works. However, amidst such a crowd of information, the definition of video game design can sometimes change, and graphic design can sometimes be seen as being in the same pot as graphic design or sometimes as completely separate. This study was conducted to identify the stages of video game design that directly affect graphic design and to define the tasks of the graphic designer and to highlight its importance in video game design.

In video game design, the place of graphic design was discussed in four main headings: visual concept design, interface design, auxiliary graphic elements, and the creation of corporate identity, in other words, the branding and launching of the game. By exemplifying successful video game designs that earn high profits in the market, become branded, and whose enthusiasts eagerly await the new version, the contributions of the elements of graphic design to the success of the game were evaluated. Graphic designers approach game design with an expert eye in the obligations listed in these four items, using their knowledge, skills, and opinions to not only use their creativity but also to evaluate each issue in detail. In the design of every detail, from the design of visual concept to that of any small graphic element, the contribution of the game is calculated, with the aim of not only attracting attention but also helping the player. The factor that makes the graphic design discipline important today is precisely this; its ability to produce rational and aesthetic solutions to problems. Another feature that makes successful games stand out is that they are designed holistically as if they were designed by a single hand, from the logo to the promotional poster, from character design to environment design, from the selected typography to interface solutions, in every stage of the game. Because the graphic design discipline produces solutions based on the general structure and philosophy of each project. The difference between the ability of an illustrator to demonstrate their talent in character design and the approach of a graphic designer to the subject is very different and this difference is always reflected in the whole game.

Comparison and Analysis

Visual Concept Design

Literature review and survey results consistently highlight the importance of visual concept design in the video game development process. High-quality, creative, and consistent concept designs not only enhance the game's narrative and player immersion but also significantly influence players' purchasing decisions. As advances in technology continue, it will become increasingly important in the gaming industry to recognize the impact of talented graphic designers and detailed digital artwork on game quality. This is supported by findings from both the literature and the survey.

Survey Findings: The survey reinforces the idea that gamers value high-quality visual designs necessary to create an engaging and immersive gaming experience.

Technological Impact: Both the literature and the survey show that technological advances have significantly improved concept design quality. Detailed and creative designs made possible by modern technology are appreciated by gamers, as reflected in their purchasing thoughts.

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Consistency and Quality: The literature's emphasis on the role of graphic designers in ensuring harmony and consistency in visual designs is also supported by survey results showing that players find consistent and high-quality concept designs very important for their gaming experiences and purchasing decisions.

Interface Design

Both the literature review and survey results highlight the important role of interface design in improving the player experience. Properly organized visual components and intuitive user interface elements facilitate interaction and gaming success.

Survey Findings: The literature review highlights the importance of well-planned menus, toolbars, and readable typography, and aligns with survey results highlighting the need for user-friendly designs. Smooth guidance and information transfer are key to helping players understand and enjoy the game.

Brand Identity: Consistent visual elements and a harmonious interface design contribute to strengthening the brand identity, as noted in the literature review. This point is indirectly supported by survey results where participants value designs that increase understanding and enjoyment, contributing to a positive perception of the game's brand.

In-Game Visual Designs

In-game visual designs play a crucial role in strengthening the believability and atmosphere of the game, as stated in both the literature and survey findings. Players feel more connected and involved in a game that uses well-designed visual elements.

Survey Findings: Both the literature review and survey results highlight the importance of in-game visual designs in enhancing the overall gaming experience. Detailed and realistic graphic elements contribute significantly to creating an immersive atmosphere.

Environmental Details: The literature review highlights that in-game graphics, including environmental details and decorative objects, add depth and realism, making the gaming environment more immersive. This is consistent with the survey results in which participants stated that visual objects improved their gaming experience.

Branding and Corporate Identity

Both the literature review and survey results highlight the strategic role of graphic design in shaping brand identity and influencing purchasing decisions.

Survey Findings: Well-designed ads and consistent branding are crucial to capturing the audience's attention and increasing interest.

Brand Components: The literature highlights various components of branding, such as logos, splash screens, and social media presence, which aligns with survey results showing the importance of brand identity in influencing player purchases.

Community Engagement: Creating promotional materials and engaging with the community through launch events and promotional items are key strategies to maintain player interest and loyalty. Survey results support this, showing that strong brand identities and advertising are important for increasing game popularity.

Conclusions

In conclusion, the role of graphic design in video game design is multifaceted and indispensable, encompassing four main areas: visual concept design, interface design, auxiliary graphic elements, and the creation of corporate identity or the branding and launching of the game. By examining successful video game designs that have achieved high profits in the market, become branded, and garnered enthusiastic followings, we can appreciate the significant contributions of graphic design elements to a game's success.

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Graphic designers bring an expert eye to these aspects, using their knowledge, skills, and creativity to evaluate and enhance each detail. Their work is not just about attracting attention; it's about aiding the player and providing rational and aesthetic solutions to problems. What sets successful games apart is their holistic design approach, as if crafted by a single hand, from the logo to the promotional poster, from character design to environment design, and from typography to interface solutions. This cohesive approach is a hallmark of the graphic design discipline, which focuses on solutions that align with the overall structure and philosophy of each project.

The distinction between an illustrator's ability to showcase talent in character design and a graphic designer's approach to the subject is profound, and this difference is always reflected in the entirety of the game. In summary, graphic design plays a crucial role in the video game design process, but it is not synonymous with video game design itself. Instead, video game design is the result of teamwork among expert teams, with graphic designers being an essential part of this collaborative effort. Their contributions are vital in shaping the visual and interactive aspects of video games, ensuring that players are not only engaged but also deeply immersed in the gaming experience.

Future academic research in these areas can provide valuable insights into the evolving role of graphic design in video game development. By focusing on emerging technologies, cross-cultural preferences, psychological impacts, interdisciplinary collaboration, and ethical considerations, researchers can contribute to the advancement of the field. Additionally, exploring accessibility, sustainability, and educational applications can broaden the positive impact of graphic design in the gaming industry and beyond, leading to more innovative, inclusive, and engaging gaming experiences.

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Sustainable Turkish SMEs: challenges and opportunities in adopting green competitive strategies

Sürdürülebilir Türk KOBİ'leri: Yeşil Rekabet Stratejilerinin Benimsenmesindeki Zorluklar ve Fırsatlar

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Written by:
Meri Taksi Deveciyan[1]
https://orcid.org/0000-0001-9206-0315
Sinan Bataklar[2]
https://orcid.org/0000-0001-9276-9236

Abstract

This study investigates the necessity for Turkish small and medium-sized enterprises (SMEs) to develop green competitive advantages and the challenges they face in this process. It examines how SMEs adopt and implement green competition strategies in light of proactive and reactive environmental strategies. The research was conducted using a case study approach, with data collected through interviews and observations with six SMEs from various sectors in Türkiye. The findings reveal that while most SMEs are willing to adopt green competition strategies, they face difficulties such as lack of financial and technical resources, integrating green strategies into their core business, and complying with local and global legislation. This study provides valuable insights for policymakers, academics, and practitioners interested in promoting sustainable practices among SMEs.

Keywords: Green strategies, green competitive advantages, green policies, management, SMEs.

ÖZ

Bu çalışma, Türkiye'deki Küçük ve Orta ölçekli İşletmelerin (KOBİ) yeşil rekabet avantajlarını geliştirmelerinin gerekliliğini ve bu süreçte karşılaştıkları zorlukları ve bu bağlamda, KOBİ'lerin yeşil rekabet stratejilerini, proaktif ve reaktif çevre stratejileri ışığında nasıl benimseyip uyguladıklarını incelemektedir. Bu araştırma, Türkiye'deki çeşitli sektörlerden altı KOBİ ile yapılan görüşmeler ve gözlemler yoluyla toplanan verilerle durum çalışması yaklaşımı kullanılarak gerçekleştirilmiştir. Elde dilen bulgular, çoğu KOBİ'nin yeşil rekabet stratejilerini benimsemeye istekli olmasına rağmen, finansal ve teknik kaynak eksikliği, yeşil stratejileri ana işlerine entegre etme ile yerel ve küresel mevzuata uyum gibi zorluklarla karşılaştıklarını ortaya koymaktadır. Bu çalışma, KOBİ'ler arasında sürdürülebilir uygulamaları teşvik etmekle ilgilenen politika yapıcılara, akademisyenlere ve uygulayıcılara değerli bilgiler sunmaktadır.

Anahtar Kelimeler: Yeşil Stratejiler, Yeşil Rekabet Avantajları, Yeşil Politikalar, Yönetim, KOBİ'ler.

Introduction

Competition determines a company's success or failure (Porter, 1985). To attain competitive goals and benefits, a corporation needs to employ a certain strategy. This approach places more emphasis on achieving success than competing in the business world with different rivals. Moreover, a competitive advantage

[1] Assistant Prof. Dr. Istanbul Kültür University, Faculty of Economics and Administrative Sciences, International Trade and Finance, İstanbul, Turkey. E-mail: m.taksideveciyan@iku.edu.tr WoS Researcher ID: ADA-9632-2022

[2] Instructor at the Department of Foreign Languages at Istanbul Kültür University. He earned a PhD in European Union Studies from Istanbul University, and his research deals mainly with education, education policies, learning environment and multilingualism, Turkey. E-mail: s.bataklar@iku.edu.tr WoS Researcher ID: AAF-7795-2020

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highlights the situation in which other companies are unable to replicate the audacious approach taken to accomplish objectives and advantages (Barney, 1991). According to Barney (1991), this advantage is the main source of a company's capabilities. Hart (1995) notes that environmental and social responsibility is a key capability that ensures appropriate organizational sustainability. Therefore, from the RBV (resource based view) perspective, environmental management should be viewed as a specialty and is a crucial component of company strategy (Hart, 1995). A companies' success or failure is shaped by the influence of its competitors, which requires a specific strategy to achieve its goals and reap its rewards. Among these strategies is Green Competitive Advantage (GCA), first introduced in 2011 and recognized as an important management concept (Bintara et al., 2023).

As global concerns surrounding environmental sustainability and corporate responsibility intensify, SMEs play a pivotal role in contributing to green initiatives and fostering sustainable practices. This paper aims to provide a comprehensive framework for Turkish SMEs seeking to improve their green competitive advantages, thereby positioning themselves as leaders in sustainable business practices. The study examining the current state of environmental consciousness in the global business environment, emphasizing the growing significance of green competitiveness as a key determinant of success. It then delves into what extend SMEs in Türkiye have adopted or prepared to adapt as resource constraints, regulatory environments, and market dynamics.

In the study, initially, the green strategies will be explored by focusing on the importance of environmental management, green competition, green markets and products. In addition, advantages and challenges of adopting green strategies by the Turkish SMEs will be discussed. In the results and discussion parts, the current status of the Turkish SMEs in the context of green competition will be reflected and in the conclusion part, from the data obtained in the study, possible actions to be taken by the SMEs for the sake of efficient adoption of green strategies will be discussed.

Literature Review

Ecological Footprint and Environmental Management

According to William E. Rees, one of the first to introduce the concept of ecological footprint, the strategy of business as usual will harm future generations by perpetuating today's destructive way of life. Ecological footprinting is about demonstrating human dependence on nature and what can be done to ensure that the earth has the capacity to sustain humanity in the future. The ecological footprint approach recognizes that humanity is in a difficult situation, and after revealing these difficulties, it directs human beings towards sustainable living (Wackernagel, & Rees, 1998: 3).

From the perspective of businesses today, the concept of ecological footprint affects the way businesses function. Consumers prefer to be able to track the ecological footprint of products in order to minimize the damage they cause to the environment, and this situation triggers the emergence of green businesses. Another reason for the emergence of green strategies is that green business activities contribute to the competitive advantage of the business. Green businesses successfully manage environmental risks. Businesses that successfully manage environmental risks also reduce their operating costs, reduce the cost of capital, increase their value in the stock market and keep insurance premiums at favorable conditions (Esty, & Winston, 2009: 102).

Azzone et al., (1996) explain the strategic behaviors of enterprises in environmental management by dividing them into three general categories: adaptation, acting in advance and innovative attitude. Businesses that apply the adaptation strategy in environmental management act according to the behavior of competitors or the conditions of the market in which they compete. Businesses that apply the strategy of acting in advance, on the other hand, try to be prepared for changes in environmental conditions with a pro-active approach while responding to external pressures (Hart & Ahuja, 1996). The pro-active environmental management approach can be explained through the examples of "pollution control" and "clean production".

A wide range of tools and approaches can be used to realize these strategies. Some of these tools and approaches include source reduction, using less harmful raw materials, reducing energy use, and environmentally sensitive design (Potrich, Cortimiglia & de Medeiros, 2019). Businesses that apply innovative strategies in environmental management develop new products or new process technologies that

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will lead to changes in management procedures (Hart & Ahuja, 1996). Hart & Ahuja divide the strategic behaviors of businesses in green management into two as pro-active or reactive. With pro-active green strategies, businesses invest in the environment voluntarily and systematically, apart from legal requirements. Reducing waste and preventing pollution at source are examples of these investments. There are different approaches to defining an organization's green strategy as pro-active.

Businesses that go a little above the legal requirements and businesses that are leaders with their sensitivity and investments in environmental issues are also classified as pro-active businesses (Aragón-Correa & Rubio-Lopez, 2007). Reactive environmental strategies, represent a response to environmental pressures that is largely negative in nature. Enterprises that employ such strategies typically implement end-of-pipe technologies to comply with the minimal requirements set by environmental regulatory bodies. This approach aims to minimize the financial investment in environmental protection, thereby reducing the risk of environmental pollution at the lowest possible cost. When addressing stakeholder pressures, reactive environmental strategies primarily focus on meeting regulatory demands imposed by government entities and regulatory agencies (Wang et al., 2020).

Green Competitive Strategies

The concept of green competitive advantage is defined as the conditions that the company has in ecological management or sustainable innovation and can not be imitated by others. It is assumed that green capability has a dynamic structure within the organization and business processes. Building green dynamic capabilities is expected to be reliable and permanent in firms, and smart firms use ecological strategies to shape their green competitiveness (Alam & Islam, 2021). Businesses try to gain competitive advantage with the help of green competitive strategies (Bekk et al., 2016: 1728). Since environmental and sustainability-related promises provide a green competitive advantage, even businesses that do not offer truly environmentally friendly products today are trying to develop a green corporate image and position themselves in this direction. It is thought that Porter's competitive strategies, when applied with a green dimension, will make significant contributions to the competitive advantage of businesses. Porter's competitive strategies of cost leadership, differentiation and focusing will be considered as green competitive strategies in this study, inspired by İlkus (2012).

Green Cost Leadership Strategy

There are certain businesses that compete more successfully in specific industries when they employ the green cost leadership strategy. "Preliminary empirical evidence suggests that eco-efficiency strategies have greater potential to generate competitive advantage in firms that supply industrial markets, face relatively high levels of processing costs, and generate wastes and/or by-products" The majority of businesses in the food and beverage sectors fit into this group. Recycling products is the second way that a green business strategy may be used to accomplish cost leadership. Recycling reduces the amount of raw materials used, which benefits enterprises financially. For instance, in the textile industry, a well-known promotional strategy is to offer clients a discount off the original price when they return worn goods (Orsato, 2006: p. 133).

By cutting expenses as a result of proactive environmental management, a business might obtain a competitive edge. Reducing production inefficiencies, enhancing product design, and avoiding pollution all contribute to lower corporate expenses. A company must reduce waste in its system before putting its cost leadership strategy into action.

Preventing waste and ensuring that the world's resources are used effectively are the goals of green management. By reducing pollutants, expenses can be lowered and efficiency raised. It is believed that pollution is a sign of inefficient use of resources (Molina-Azorín et al., 2009).

According to Christmann (2000), businesses can implement a green cost leadership strategy by increasing their productivity. The reasons for the increase in productivity are the reduction in input costs through better use of inputs or substitutes, savings from recycling and reusing raw materials, and the reduction in waste disposal costs.

According to the research conducted by Christmann in 2000, in the context of green strategies, supporting assets are defined as the assets necessary to implement the best green management activities and to achieve

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competitive advantage as a result. In the study, supporting assets are defined as new production technology, equipment and the ability to make technological innovation. are listed. As a result of the research, it was revealed that businesses' ability to create cost superiority through green management practices only depends on the supporting assets of the businesses (Christmann, 2000).

According to Nguyen (2023), a green cost leadership strategy means reducing costs by controlling carbon-intensive raw materials and increasing the cost of "poor environmental performance".

According to Orsato (2006), green cost leadership strategy can be implemented more successfully by some businesses in some sectors. "Preliminary empirical evidence suggests that businesses in industrial markets have more potential to achieve competitive advantage with the help of eco-efficient strategies. This is because they have higher production costs and generate more waste." Many food and beverage businesses fall into this category. Food and beverage businesses can increase their efficiency if they focus on the production process. According to Doyle & Stern (2006); Green cost leadership refers to the abundance of opportunities for cost reduction through source reduction.

For businesses, although green investments are costly, some businesses have to use a green cost leadership strategy instead of green product differentiation. In some sectors, customers prefer both green and affordable products. For example, customers of businesses operating in the packaging business prefer both affordable and environmentally friendly products. The reason for this situation is that businesses have to reduce their prices due to the high competition in the packaging business. On the other hand, there are legal pressures for packaging materials to be green (Orsato, 2006).

Green Product Differentiation

Green product differentiation refers to offering a wide range of green products based on customers' different levels of green demands. In the banking system, for example, green product differentiation can reduce transition risks while enabling green transformation (Nguyen, 2023). According to Reinhardt (1998), in order for an enterprise to implement a green product differentiation strategy, its product should have green benefits or less cost to the environment when compared to similar products. Alternatively, the business should produce its products or services with processes that cause less problems to the environment compared to the production processes of its competitors.

Changes in production processes and the necessity to develop new technologies to produce a new product or service will increase the production costs of the enterprise and this will be reflected in consumer prices. In this case, the business will be able to charge additional fees for its differentiated products. Through the green product differentiation strategy, the business will be able to sell its products at higher prices and gain additional market share. The reason for this situation is the demand of consumers for green products.

Environmentally conscious customers may bear additional costs to protect the earth. Doyle & Stern (2006), green differentiation refers to product differentiation based on superior eco performance. Moreover businesses use eco-labels to increase their market share by adopting a green product differentiation strategy. Eco-labels are a tool adopted by businesses and government bodies to emphasize the ecological quality of products. Since the production and consumption processes of products cannot generally be understood from their external appearance, consumers resort to eco-labels to obtain this information. These labels provide consumers with information about the environmental impacts and ecological performance of products, allowing them to make more informed choices (Brécard et al., 2009).

Focus on Green Markets

According to Nguyen (2023), focusing on green markets is a strategy built on a combination of green cost leadership and green differentiation. It involves pairing a specific green product with a specific product (Nguyen, 2023). Businesses can reach niche markets by focusing on either cost leadership or green product differentiation provided by green competitive strategy. Today, businesses offer environmentally friendly products and services to consumers in niche markets. This is because most green products or services are newly developed and appeal to consumers from the green consumer segment. To exemplify, the segment of both green and economical cars is called "eco-niche". In the automotive sector, the eco-niche market is developing and competition is increasing. According to Andrews and DeVault, the ability of environmentally friendly products to create a niche market depends on the support of green customers.

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These green customers constitute the minority of consumers who are willing to buy environmentally friendly products. In addition to being early adopters of green products, green consumers are willing to pay additional fees for these products (Yılmaz & Düren, 2010).

Advantages of implementing Green strategies by SMEs

SMEs constantly struggle with a lack of funding, resources, and technology. In order to support sustainable growth, a green competitive advantage is essential. A company's distinct set of circumstances that enable it to take a stand on topics like ecological management or sustainable innovation has been identified as a "green competitive advantage". A successful environmental and sustainability strategy that is uncopiable by rivals is another definition of a "green competitive advantage".

If companies wish to gain a green competitive advantage:

- They must engage in imaginative, creative, and ecologically responsible ventures (Prasanna et al., 2019). Creativity requires creating something new by producing new and original products/services. Also called green creativity, this is a green idea to produce products and services that are still original and pro-environment. It requires a strong will to achieve this. When an organization is creative, the organization will be successful, thus improving company performance and competitive advantage in the long run. Sustainable SME performance is the result of serious and genuine efforts produced by SMEs in a sustainable way that includes business, environmental and social performance. Meanwhile, when a company has above-average competitiveness from a pro-environmental perspective, it indicates that the company already has a green competitive advantage (Setyaningrum et al., 2023).
- These days, businesses and society as a whole are focusing more intently on environmental challenges and attempting to improve waste management and productivity. The growing population has given rise to a number of problems, one of which is garbage management. Waste management has become necessary as resource sustainability has gained popularity (Kerdpitak, Mekkham & Girdwichai, 2019). There is a claim that firms will often be more competitive when they manage their wastes well and redesign their production processes. Companies' emphasis on waste management can have important consequences for SMEs, such as improved financial performance, economic growth, competitive advantage and sustainable development (Derhab, & Elkhwesky, 2023; Kerdpitak, Mekkham & Girdwichai, 2019).

Challenges of implementing Green Strategies by SMEs

Implementing green strategies requires additional resources and skills that are not available to SMEs, and management must allocate significant financial resources (new equipment, training, creation of new skills, etc.) without a specific return in the short/medium term, that is, for economic reasons (Dowie, 1993) is difficult.

SMEs have difficulty in announcing their environmental efforts to external stakeholders, and therefore the company must take a serious investment to implement "green" strategies. In addition, companies may avoid green strategies because most customers are not yet willing to pay a high price for environmentally friendly products/processes (because they are not conscious), but governments expect companies to constantly improve their environmental performance, it is inevitable to attach importance to this issue (Dewhurst, 1993). Töepfer's law can be given as an example. It is the law implemented by the German Government, which stipulates that companies should give importance to environmental protection and recycling. At the same time, thanks to this law, companies established in Germany gain a competitive advantage over those who want to enter the German market. Namely, companies that are willing to enter the German market must attach importance to green strategies and environmental protection. This forces them to invest in these areas in order to enter the market.

Large international businesses, non-governmental organizations and environmentally conscious consumers are working to minimize environmental damage, and for this purpose, practices called green supply chain management come to the fore. Such green strategies enable businesses to make efforts to reduce environmental impacts in their supply chain processes. The general view of companies regarding the concept of green supply chain management is that green strategies will have a cost-increasing effect. At the same time, there is a lack of knowledge and experience in green supply chain management in businesses (Coşkun & Bozyiğit, 2017: 2).

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Methodology

Research Scope and Importance

The study is limited to SMEs based on the main question of how SMEs in Türkiye can develop green competition strategies. A case study was conducted with 6 SMEs from different sectors. Research data was collected by case study method. Case studies focus on a person, group, structure, organization or a case of interest. The findings obtained can be used to understand similar situations (Creswell, 2016).

Population-Sample

A qualitative research focuses on different aspects of the phenomenon under investigation and aims to reach its various members (Merriam, 2018). Sample selection is also carried out to obtain a more holistic picture by including the diversity, richness, differences and anomalies that may exist in a universe (Yin, 2003). For this purpose, maximum diversity sampling was performed. Thus, it was aimed to include different events in the sample by determining the basic dimensions of diversity. This sampling method makes it easier to access a wide range of data (Suri, 2011). SMEs operating in Türkiye were taken into account in the selection of the interviewer sample of the research. Participants are denoted with the abbreviation "SME" and coded as (SME1), (SME 2), (SME 3), (SME 4), (SME 5) and (SME 6).

Data collection and Analysis

Qualitative research uses methods such as interviews, observation and document analysis in which perceptions and events are examined realistically and holistically in their natural environments. Interviewing is an effective method used in qualitative research to understand people's perspectives, experiences, feelings and perceptions. Observation, on the other hand, is based on the assumption that events can be understood by observing (Yıldırım & Şimşek, 2013). Two data collection methods were used in this research: interview and observation. A semi-structured form containing open-ended questions was used in the interviews. Opinions were taken from two experts in arranging the questions and the research questions were prepared in the light of the literature review. The research design was determined as a nested multiple case study among qualitative research methods. Data were collected by semi-structured interview method. The analysis method of the research is descriptive content analysis. In order to check the clarity of the research questions, a pilot application was carried out by face-to-face interviews in two enterprises, and the questionnaire was revised as a result of this application. Meetings are limited to 80 minutes. Observations were carried out in the participants' work environments.

Validity and Reliability

In a qualitative study, validity refers to the ability of the test to measure what it is supposed to measure. Reliability refers to whether the same results are obtained in each case the test is performed. Validity includes reliability, but the reverse is not true in all cases (Goldstein et al., 2011). For validity in research; Strategies of (i) data triangulation, (ii) expert review and (iii) obtaining participant opinion were followed. Data triangulation is the process of verifying data obtained from data sources by at least two different sources. Thus, the weaknesses of the data are compensated by strong data sources (Mays & Pope, 2000). Expert review is one of the ways to ensure the validity and reliability of qualitative research. Review allows reviewing the data and checking whether the findings based on them are valid (Merriam, 2018). Opinions of two experts (Expert 1 and Expert 2) were taken both in coding and theme naming and in evaluating the findings. Participant opinion verification ensures that the comments made by the researcher are checked by reaching the participants and is used to ensure the validity and reliability of the research (Merriam, 2018). In qualitative data analysis, verification of codes refers to examining the findings to confirm them (Miles et al., 2014). Verification ensures that the coding done can be interpreted by different people. It is known as the reliability rate and is calculated with the formula [(Number of codes with consensus / Total number of codes) x 100] (Özsirkinti & Akay, 2019). According to this coding audit, which reflects internal consistency, consensus among coders must be at least 80% (Patton, 2002). Coding audit was conducted by two participants and showed that consensus was over 85%.

Below is the semi-structured questions used in the study:

- What is your company's attitude towards the adoption of sustainable practices?

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- Are You Investing in Green Technology?
- Does your company hold certifications such as ISO 14001 (Environmental Management Systems) or LEED (Leadership in Energy and Environmental Design) to demonstrate commitment to environmental responsibility?
- Are we working with suppliers and partners who share similar sustainability goals? Do they cooperate with environmentally friendly organizations? Have they created a network that promotes common values and practices?
- Do you inform your consumers about the environmentally friendly aspects of your products or services?
- Do you invest in R&D to develop environmentally friendly products or services that meet market demands?
- Are you exploring government programs, grants or incentives designed to support and encourage sustainable practices in your business?
- Do you promote a culture of sustainability among employees? Are employees encouraged to suggest and implement green practices within the organization?
- Do you evaluate the environmental impacts of products throughout their life cycle? Are strategies implemented to minimize this impact, including sustainable sourcing and efficient logistics to reduce carbon footprint?

Results and Discussion

In the table below, the available data about the SMEs' green strategies has been analyzed from various points.

Table 1.
Analysis of Green Strategies in SMEs

	SME 1	SME 2	SME 3	SME 4	SME 5	SME 6
Sustainability practices	Yes, investment on hardware for energy efficiency	Yes, production of textile goods from recycled materials	Yes, renewable energy is used in the production plants	Yes, investment is made on hardware for this purpose	No	Yes, included in the vision and mission statements
Investment on green technologies	Yes, investment on green technologies in alignment with the vision statement	No, only recycling practices	Yes, specifically on water saving systems	Yes, recycled metals and environmentally friendly packaging	No	Yes, continuous improvement and investment
International Green Certificates/ Accreditation	Yes, ISO 140001 Environmental Management System	No	Yes, ISO 140001 Environmental Management System	No	No	No, but included in the strategic plan
Partnership with stakeholders with relevant green strategies	Yes	Yes	Yes	No, it is not easy to allocate investment on sustainable processes	No	Yes, joint projects with relevant institutions
Customer notification about green strategies	Yes, regular notifications via interviews	Yes, social media and product labels	Yes, but not to a great extent	Yes, very sensitive about the origin of diamonds	No	Yes, website and product labels
Research & Development for green strategies	Yes, green innovation is company strategy	Yes, there is design center for this purpose	Yes, there is fierce competition for this purpose	Yes, but very recently	No	Yes, R&D on more efficient production and green packaging techniques

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Awareness about government incentives for green strategies	Yes, there are numerous projects of the company	No	Yes, but not obtained any yet	Yes, but not obtained any yet	No	Yes, made various incentive applications
In-house training for green strategies/ sustainability culture	Yes, it is requirement within the company and stated in the strategic plan	Yes, email notifications and use of labels in the headquarters	Yes, through competitions such as essay competitions	No	No	Yes, there is a training program for this purpose
Awareness of carbon footprint of products	Yes, all through the life cycle of products	No	No	Yes	Yes, very sensitive about government's rules and regulations	Yes, all through the life cycle of products

SME	Sector
SME 1	Automotive
SME 2	Fashion
SME 3	Food
SME 4	Jewelry
SME 5	Clothing
SME 6	Catering

The table has been prepared by the authors.

SMEs are recommended to adopt green competition strategies since in the ever-changing world, the importance of having strategies and solid, decent policies in such a crucial topic as environmental sustainability has become a requirement.

In the interviews with the six SMEs in Türkiye together with the observation process four main themes have been specified regarding the development of green competition requirements, the first of which is the Green Competition Strategies and Competitive Advantage in the implementation process of Green Strategies. SMEs have been adopting green competition strategies such as eco-friendly production processes, use of renewable resources, and energy-efficient machinery. In order for the SMEs to stand out in the market, the strategies are expected to differentiate and have a focus. The strategic benefits are expected to be observed when SMEs invest in sustainable technologies and practices.

In addition, when they can differentiate themselves, attract environmentally-conscious customers, and build a strong brand reputation. This leads to increased customer loyalty, expanded market share, and long-term competitive advantage. However, there is concern of extra costs in the application of green strategies in the case of which governments are expected to implement financial and taxation policies to motivate and lead all institutions in all sectors to internalize green consciousness.

> SME 1 (Automotive)
> *"We can say that we are having a hard time since the competition in the automotive market is very intense and many of the competitors attach importance to green competition strategies."*

Energy efficiency and economic efficiency are two key points regarding the use and development of green competition and strategies. With the reduction of operational costs through energy efficiency and waste management, SMEs obtain competitive advantage and achieve environmental sustainability. Differentiation of products provide companies with a strategic competitive advantage, increase customer loyalty in the long term, expand the market share. However, intensity of competition in different sectors vary. In a sector where both corporations and SMEs exist together, it is not easy for the latter to adopt effective and efficient integration of green strategies.

The awareness of green competition and the process of developing strategies is beneficial for the will of SMEs to differentiate themselves among their rivals in the market by offering niche products that are realized by the commitment to the strategies.

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SME 2 (Fashion)
"We focus on niche products so that we can meet the expectations of the environmentally-conscious consumers."

Since improved corporate environmental performance brings financial benefits to SMEs as potential sources of competitive advantage, SMEs use proactive environmental management, therefore competition is fierce and most of the time challenging for small and medium-sized companies due to the availability of big corporations doing business in the same market. However, environmental practices that are reactive do not require skills or expertise in the application of new environmental processes. Complete presence in the field of environmental technologies by adopting a proactive management help SMEs to cultivate a culture, increase productivity and efficiency that results in financial benefits, being ahead of the possible changes regarding the environmental legislation. Although the participant states that the application of environmental strategies is challenging, in the long run, they provide the SMEs with more advantages.

SME 3 (Food)
"*We, definitely, invest in R&D. Since there is generally very intense competition in our industry, we try to act by seeing green strategies as an element that distinguishes us from our competitors. There are many big players in our industry because we are a supplier to them. Maybe we can do more, but this scope seems sufficient for us right now. After all, everything is cost and we are a commercial enterprise that aims for profit."*

The second theme that is derived from the interviews and observations is the Challenges for the SMEs in Implementing Green Strategies. As expected, there are sector-specific challenges, different industries face unique challenges in adopting green practices. For example, the automotive sector experiences intense competition, while the jewelry sector struggles with integrating recycled materials and obtaining environmental certifications.

SME 4 (Jewelry)
"*We have started investing in Green Technology in the jewelry industry, but it is still very new. We are just discovering sustainable sourcing practices and technologies such as recycled metals and environmentally friendly packaging. After all, our industry is lagging behind. It is not easy to implement every development in our country."*

The possibility of failure to fully implement green competitive strategies may cause SMEs to fall behind in both differentiation and cost leadership strategies. As a result of this, the SMEs' potential to increase sustainability and competitiveness in the long term is limited, which creates the risk of falling behind in the preferences of environmentally conscious customers in the market. Therefore, it is a necessity for SMEs to make more efforts to accelerate their investments in sustainable practices and effectively implement these strategies. As stated above, the awareness of a challenging situation and having the motive to change is highly linked with the importance of policy-making in handling all sorts of challenging issues. In this specific topic, the SMEs need to be backed by solid and decent green policies of governments, which should be easily-accessible and practical.

In the same context, companies face operational and financial barriers due to a lack of resources, insufficient investment in R&D, absence of certifications, and challenges in partnering with sustainable suppliers. These barriers can impede the full realization of green strategies and affect competitive positioning.

SME 5 (Clothing)
"We are still oriented towards gaining a share in our market. but I think we need a little more time. Because it is not easy to survive in the market. We cannot make any investments for all sorts of green sustainability right now. All our investments are made to those who will take us one step further in terms of machinery and equipment. We are having a hard time, I am trying to do something without any support from anyone."

The third theme that is derived from the interviews with the participants from various sectors in the effective and efficient integration of Green Strategies with the SMEs core business. In this sense, the focus and differentiation are the two key paths that are expected to be taken by the SMEs and the participants confirm the fact with their statements. SMEs are leveraging green strategies to focus on specific market segments and differentiate their products.

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SME 5 (Clothing)
"We collect old denim that will be thrown away, and recycle it in production phase. I want to offer recycled denim products in the market as a second-hand product. In textile, trends change very frequently. You may have heard that it is now called fast fashion. However, we are actually a bit against it, we want to offer quality haute couture. We want to offer tailor-made denim products. Of course, we will announce this to our customers when we can convert our production fully environmentally friendly."

The fourth and the final theme is the compliance with the local and global legislation. Compliance of the green practices with the global and governmental legislation is a catalyst for SMEs to adopt green strategies.

SME 6 (Catering)
"When we comply, we aim to gain advantages such as strengthening our supply chain and increasing our reputation, as well as becoming a more environmentally friendly business. Failure to comply may result in disadvantages such as losing customer trust and facing legal sanctions. That's why we work meticulously on compliance."

Conclusions

This study examined the need for Turkish SMEs to develop green competitive advantages and the challenges of this process. In the light of proactive and reactive environmental strategies, how SMEs adopt and implement green competition strategies was evaluated. It was observed that the majority of SMEs in the interviewed sectors were willing to adopt green competition strategies, but they faced various difficulties such as lack of financial and technical resources. It is undeniable fact that SMEs must be proactive in addressing potential risks such as falling behind competitors in green innovations, missing out on government incentives, and failing to meet evolving consumer expectations. To overcome these challenges, firms should enhance their investment in green technologies, improve marketing and communication of their eco-friendly initiatives, foster collaborations with like-minded partners, and obtain relevant environmental certifications. This holistic approach will strengthen their competitive edge and ensure sustainable growth.

SMEs are adopting green competition strategies such as environmentally friendly production processes, use of renewable resources and energy efficient machinery. The adoption of these strategies is a topic frequently emphasized in the literature. To exemplify, Porter & Linde (1995) state that environmental innovations can provide competitive advantage for firms. Similarly, our research shows that SMEs have the potential to increase market share and strengthen customer loyalty by adopting green strategies. However, considering the additional costs of implementing these strategies, it is emphasized in the study that governments should support SMEs with financial and tax incentives.

The challenges that SMEs face when implementing green strategies are also widely discussed in the literature. For example, Revell, Stokes & Chen (2010) note that small businesses face barriers such as financial and lack of information when undertaking environmental initiatives. Similarly, our study found that SMEs face operational and financial obstacles due to lack of resources, inadequate investment in R&D, lack of certifications, and difficulties in partnering with sustainable suppliers. These findings are consistent with existing literature and suggest that SMEs need more support and guidance to fully implement green strategies. One of the significant necessities that has been observed in the context of green strategies is the policy-making of the governments. Although on paper, almost all governments have the ideal framework for all green issues, in practice, it is not as ideal as it seems. Therefore, whatever policy is developed for the sake of green practices by the governments, it should equally and easily accessible for all institutions, from SMEs to corporations. In the lack of this, unfair competition occurs in the market, which is undeniably more challenging for SMEs.

The integration of green strategies into the core business of SMEs is another important finding of the research. Baumann et al. (2002) emphasize that sustainable business models should be created and these models should be aligned with the strategic goals of businesses. In our study, it was found that SMEs tend to use green strategies to focus on specific market segments and differentiate their products. For instance, it has been observed that SMEs operating in the textile sector try to differentiate their products by using recycled materials. This is consistent with existing literature and highlights the importance of SMEs effectively integrating green strategies to gain competitive advantage in the long term.

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The green competition strategies of SMEs in the interviewed sectors are shaped around cost leadership and product differentiation strategies. The findings obtained in the study show that proactive environmental strategies provide long-term competitive advantage to businesses, in line with studies such as Hart & Ahuja (1996) and Aragón-Correa & Rubio-Lopez (2007). The financial difficulties faced by SMEs when implementing green strategies, noted by Dewhurst (1993) and Simon & Dowie (1993), were similarly observed in this study. Studies in the literature generally assume that all sectors attach equal importance to green strategies, but the findings of this study reveal that sectoral differences should not be ignored. According to the study, sectoral differences play an important role in the adoption of green competition strategies. However, the study also has some limitations. For example, the number and diversity of SMEs interviewed may limit the generalizability of the overall results. These limitations can be overcome in future research with a larger sample and interviews with SMEs from different sectors. In addition, mixed method studies that combine both qualitative and quantitative research methods will be useful to academics who want to work in this field, in order to better understand the difficulties faced by SMEs and how they can overcome these difficulties. can be recommended as a facilitator.

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Populist orality in 21st Century latin american socialism: an analysis of political discourse

Oralidad Populista en el Socialismo Latinoamericano del Siglo XXI: Un Análisis del Discurso Político

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Written by:
Carlos Alcívar-Trejo[1]
https://orcid.org/0000-0002-2937-1417
José Albert-Márquez[2]
https://orcid.org/0000-0001-9901-4194
Duniesky Alfonso-Caveda[3]
https://orcid.org/0009-0003-3006-7484
Arnaldo Vergara-Romero[4]
https://orcid.org/0000-0001-8503-3685

Abstract

This article offers a review and reflection on the new forms of orality and transmission of speeches in the context of 21st Century Socialism. It is highlighted that politicians use language daily through speeches in order to convince the recipient of their point of view, which has generated new forms of political organization in South American countries.
The analysis focuses on the importance of political language in creating meanings and in the main political maneuvers, as well as the competition of political actors for the favors of the people in the civic scene. The relevance of discourse theory in understanding social relations and their transformation is highlighted, as well as the influence of populism on society's perception of media systems and their relationship with the "powers that be".
Additionally, the use of political marketing, its impact on the persuasion and manipulation of public opinion, and the influence of ancient rhetoric on contemporary politics are addressed. The technological-cultural struggle between alternative ways of perceiving and arguing reality is mentioned, highlighting the importance of understanding discourse in its textual, situational, and social practice dimensions.

Resumen

El presente artículo ofrece una revisión y reflexión sobre las nuevas formas de oralidad y transmisión de discursos en el contexto del Socialismo del Siglo XXI. Se resalta que los políticos emplean el lenguaje a diario mediante discursos con la finalidad de convencer al receptor de su punto de vista, lo que ha generado nuevas formas de organización política en países sudamericanos.
El análisis se centra en el lenguaje político en la creación de significados y en las principales maniobras políticas, así como en la competencia de los actores políticos por los favores del pueblo. La relevancia de la teoría del discurso en la comprensión de las relaciones sociales y en la transformación de las mismas, así como la influencia del populismo en la percepción de la sociedad sobre los sistemas de medios y su relación con los "poderes fácticos".
El uso del marketing político y su impacto en la persuasión y manipulación de la opinión pública, así como la influencia de la retórica antigua en la política contemporánea. Se menciona la lucha tecnológico-cultural entre modos alternativos de percibir y argumentar la realidad, destacando la importancia de comprender el discurso en sus dimensiones textuales, situacionales y prácticas sociales.

[1] Doctorando en Ciencias Sociales y Jurídicas, Docente de la Facultad de Derecho y Gobernabilidad, Universidad Ecotec, Samborondón-Ecuador. WoS Researcher ID: JWA-2605-2024
[2] Doctor en Ciencias Sociales y Jurídicas, Docente de la Facultad de Derecho y CC.EE. y Empresariales, Universidad de Córdoba, Córdoba-España. WoS Researcher ID: AAA-4356-2019
[3] Doctor en Ciencias Pedagógicas, Docente-Investigador, Universidad Bolivariana del Ecuador, Durán-Ecuador. WoS Researcher ID: EQE-0931-2022
[4] Doctorando en Ciencias Sociales y Jurídicas, Investigador, Universidad de Córdoba, Córdoba-España. WoS Researcher ID: AFZ-6330-2022

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The article offers a comprehensive vision of populist orality in the context of 21st Century Socialism, highlighting its influence on politics, society, and the perception of reality in Latin America.

Keywords: Political ideologies, 21st century democracies, political speeches, good government.

El artículo ofrece una visión integral de la oralidad populista en el contexto del Socialismo del Siglo XXI, destacando su influencia en la política, la sociedad y la percepción de la realidad en América Latina.

Palabras clave: Ideologías políticas, democracias del siglo XXI, discursos políticos, buen gobierno.

Introduction

The permanent tension to which the unity of the polis is subjected is metabolized in the ancient republics, organized around civic equality (but not social equality), as a competition of the political actors in the civic scene for the favors of the people. The discursive universe of the ancient republic is filled with concepts that articulate the visibility of civic competition: the virtue of the great man, glory as a republican prize, the dignity conferred by the people, the ceremonies of triumph staged as the victor's entrance to the city, the massive representation of sacrifice to the gods (Bell, 2004).

In this way and concerning the theory of discourse, it becomes relevant in the theory and practice of politics when “it grants political processes (conceived as conflicts and struggles between antagonistic forces that seek to structure the meaning of society) a fundamental place in the understanding of social relations and how they are transformed” (Howarth, 2005).

In this way, political language gives meaning to the social situation, and the main political maneuvers create these meanings. “People experience language about political events, not events in any other sense; even developments close to us take their meaning from the language that describes them. So political language is political reality; there is no other as far as the meaning of events for actors and spectators is concerned” (Edelman, 1991).

Political discourse is the communicative act with a political representative as the sender and citizens as the receiver. This type of text usually deals with public problems and issues of social interest. There are two types of speech: the purely political, which can be made at any period, and the electoral, which is made during the electoral campaign.

In this way, we can observe how populism raises the need for state interventionism. The i «inclusions that indicate that populism represents the “return” of politics and the State reflect this vision that conceives politics as a transformation tool and uses state mechanisms to implement changes. The State is the essential mechanism for regulating media systems. Populism uses constitutional mechanisms and actions controlled by the Executive Branch to carry out reforms, specifically, restructuring the relations between the State and the market.

The President and his word are indivisible as a political entity. The journalist or biographer can separate them, wondering how and why the Head of State referred to a specific topic. However, the discourse analyst will address the phenomenon in its entirety: the President is in himself a signifier, a condensation of representations in which his word is a central element (Armony, 2021).

As can be seen according to the research proposal, populism and its central phenomena in the history of some countries and their most emblematic governments were characterized as populist: Peronism in Argentina, Varguism in Brazil, Democratic Action in Venezuela, and Cardenismo in Mexico. During the 20th century, Latin American sociology assumed this characterization and gave it a sociological consistency. Populisms were social movements and national governments that contributed to the modernization and formation of nation-states during the first years of the 20th century.

With new information and communication technologies, we can observe how new relationships are built with the visible, which turns perception into a logistical issue. Given the image of the spectacle performed and typical of the audiovisual technologies of the 18th and 19th centuries, the interactive simulation changes the constitutive relationships of the classical image with the real and forces us to review the problems of representation. Instead of consisting of another layer in the cumulative development of history, electronic space implies an abrupt break in the already differentiated psychic framework of human thought.

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This article will address the analysis of the development and evolution of "Political Discourse", with the new trends of orality and the political campaigns that began in ancient Greece with the orality of the philosophers, however, and Hamburger Fernández (2014) nowadays we know that there are technological tools, as well as new trends in Political Marketing, that have changed the styles, but not the nature of attracting followers, which was used by 21st Century Socialism.

Methodology

The content analysis method uses techniques that allow interpreting documents from any type of communication. Its use has been consolidated in the social sciences, as well as the facts described by history about the use, development and new trends of Political Discourse. The objectives of the method vary according to needs.

Hamburger Fernández (2014) describes some intentions such as: recognizing trends, determining psychological states and forms of communication, measuring clarity of communication, describing trends, similarities or differences; identify attitudes, beliefs and interests; and analyze, compare and evaluate content.

The article's main objective is to systematically review the use of orality in 21st Century Socialism and political discourse as a new brand for the Latin American public and its impact. This objective was specified in the following specific objectives: Know the new trends and tools used by orality and the political media towards a new society based on a “competitive market of ideas and new political brands.” from the point of view, according to several authors. Many authors mention the benefits of using political marketing for social organizations (particularly political parties) and democracy (Arce & Munch, 1998; Sánchez Murillo, 2005).

No less important, perhaps, is the manipulation that political marketing can exert, in particular, through media political advertising, since if it is assumed that political advertising does not seek to inform but rather to persuade or seduce the voter, that in the advertising messages, the candidate is privileged over the proposals (since even these serve to form or strengthen the candidate's image).

Thus, for example, Plato's systematic attack against oral forms of transmission of knowledge inaugurated a technological-cultural struggle between alternative ways of perceiving and arguing reality, which achieved its most significant development with the printing press, which was the great homogenizer in this slow and irreversible process of cognitive metamorphosis. However, orality and writing do not exhaust the spectrum of communication technologies and machines.

As we have established, the concept of discourse is used in diverse disciplines and approaches: linguistic, philosophical, literary, and others. From a very generic perspective, in discourse analysis, we can consider three dimensions: the text as an oral or written product, the determined social situation in which it is inserted as a discursive practice, and the social practice that structures areas of knowledge. Moreover, in a more technical sense, discourse analysis “refers to a neutral set of methodological resources that are used to analyze speeches, writings, interviews, conversations, among others” (Howarth, 2005).

Chester & Montgomery (2017) mentions that Political Marketing began in the United States in the mid-20th century as a consequence of the lack of political elites, the generalization of ideology, constitutional changes, the close connection between business and politics, the use of public resources, power, and the absence of differentiated ideology.

Herrero-Nieto (2023) indicates that the growth of Political Marketing is due to the use of mass media to reach the largest possible audience and have the necessary attention so that they receive its messages. Political marketing has evolved with technology; since 1952, 40% of North American homes have had television to inform themselves about significant events. Another factor that favored the growth of political marketing was freedom in commercial advertising, which allowed a more significant advantage in creating or producing campaigns favoring a political party.

In the case of Argentina, we can observe how orality was replicated by Kirchner's speech, reconstructing a political horizon that Alfonsín's speech had weakened in his fight against the aggressive and intolerant nationalism of the military and that Menem had practically evacuated from his enunciation: the

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representation of an extra-national negativity that allows a common identity to be strengthened. Such negativity is not embodied in the clearly defined instances of the past (imperialists, foreign ideologies, among others) but instead assumes the diffuse form of the model (globalization, savage capitalism, corruption, among others) and is connected to the subjectivity of citizens (Armony, 2005). This direct result of the mobilization of 2001 and 2002 has evident echoes in the presidential speech through references to the "people" collective and its national identity.

Results and Discussion

Disputes around the conceptualization of so-called populist phenomena maintain a privileged place for understanding the dynamics of the history of ideas in Latin America. We can observe that, in the case of Latin America, at the end of the 70s the discursive dimension was put at the center of the scene to explain the emergence of Latin American populisms. Arditi (2022), Retamozo (2017), and Waugh et al. (2016), who mention that the controversies within discourse theory are varied, Laclau's definition became the axis of the discussion, for whom populism is a type of political discourse that articulates popular-democratic interpellations as antagonistic to a dominant ideology. As a result, two points that encompass the systemic analysis of the object to be treated and to meet the objective will be analyzed.

Political Discourse as a Source of Orality

Weber (2007) differentiates bureaucratic domination (linked to legal rules and norms) from traditional domination (related to the precepts of the past) and from charismatic domination, which is "oblivious to any type of rules, repudiates the past." and in that sense, it has a revolutionary character" (Weber, 2007).

We can observe what has been pointed out: "Societies are increasingly more dialogic" due to the desire to be open to new, more egalitarian, and inclusive forms of coexistence (Flecha, 2009).

In the dialogic model, the public space is first defined by its content, more precisely, by a principle of selection of the content of the statements that circulate in it: the general interest (or common good). Regarding the dialogic model, the idea of general interest plays, in effect, a discriminatory role in political communication in that it constitutes the requirement for all exchanged statements, referring only to what interests everyone to the same extent: the common interest. The general interest does not designate a specific content everyone agrees on, a minimal common denominator of all political community members. Instead, it is about the definitive idea of a possible agreement in law, towards which an understanding is not reached.

Each community (family, company) is defined by its relative autonomy and its distinction from others. From the point of view of its positive definition in the dialogic model, public space as a communication space is characterized by two supportive features: homogeneity and continuity. Homogeneity means that, in principle, the meaning of what is exchanged in Political communication is the same for everyone. We could not imagine, in this case, particular communications whose meaning would be required for their particular grammatical understanding.

According to what was cited, the critical sociologist Bauman (2005) defines modern society as a liquid. A society where the conditions of action of its members change before the forms can consolidate into habits and a specific routine. Therefore, the winners in this society are the agile, light, and volatile people like commerce and finance. Hedonistic and selfish people who see novelty as good news, precariousness as a value, instability as an impetus, and hybridity as richness.

In such a way, we can analyze that politics and communication are two elements of human life that go hand in hand.

Considering that new technologies, as spaces of socialization, have extended the public sphere, becoming a not inconsiderable support for the social production of meaning from the private to various public spheres, from the local to the global, from media unidirectional mass communication to multiple and increasingly convergent and multimodal technologies).

It is not just a technological transformation (from old to new technologies or their digital convergence), but it occurs in the context of specific trends in complex interaction:

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Technocognitive transformations of contemporary culture, in a process of solid individualization of subjectivity (Beck et al., 1997), which implies both the disintegration of certainties of traditional institutions that shape identity and new expressions of subjectivity, of agency in assembly networks of machinic exchanges that create multiple and differentiated interdependencies (Tirado Serrano, 2001).

A widespread political vacuity of institutions and their respective crisis of legitimacy in most countries in the world, as well as the non-institutional emergence of the political and "minor" forms of politics, or subpolitics (Lazzarato & Rodríguez, 2006).

The emergence of a new form of communication-related to culture and online technology, supported by horizontal communication networks and the emergence of what Castells has called "mass self-communication" (referring to spaces such as blogs wikis)

Unidirectional mass communication and "mass self-communication" in the relationship between power and counterpower in formal politics, insurgent politics, and demonstrations and social movements (Castells, 2007).

The Orality of 21st Century Socialism in Latin America

Auyero (2001) maintains that from the "affective exchange model", political mediators "offer incentives in exchange for votes, but these are of a different type (Auyero, 2001), asserting that "the incentives that party members offer in exchange for votes that are supportive rather than material.

Likewise, Hinkelammert (1998), cited by Illanes (2000), points out that Karl Marx himself already had severe suspicions about capitalism, as he perceived it as a form of wealth creation that threatens entire life, given that it not only intervenes and destroys nature, but it dehumanizes people by forcing them to sell their labor power (the only property they possess) in such a way that, being formally free, it makes them materially enslaved people.

In everyday life, oral communication occupies 80% of human activity time. During this time, we spent 45% listening, 30% speaking, 16% reading, and only 9% writing (Rivers & Temperley, 1978).

However, according to the question referring to the definition or foundation of the term-ideology of "socialism of the 21st century", the sociologist mentioned above (Harnecker, 2010) points out that "Hugo Chávez coined the term to differentiate it from the errors and deviations from the so-called "real socialism" of the 20th century in the Soviet Union and the countries of Eastern Europe. The main lesson of the Chavista project is the need and importance of combining socialism with democracy, not a liberal democracy. However, a participatory and direct democracy" (Harnecker, 2011) and Hamburger Fernández (2014) agree with Harnecker that the expression "socialism of the 21st century" has been used more than anything concerning the process that has been taking place in recent years in the Bolivarian Republic of Venezuela. These authors maintain, "In Venezuela, some things are being demonstrated that refute most of the commonplaces from which the relationships between socialism and democracy were thought in the 20th century."

Following the philosophy of democracy, following Locke, Russell, Stuart Mill, and Popper, a study of how democracy is produced in societies of communicational opulence as a democracy of parties and political marketing; an analysis of rhetoric and sophistry, which involves a critical exposition of political language and simulation; and an epistemological proposal, which includes a model for the analysis of political communication.

The populist mirror and the neoliberal crisis, the ideological project of neoliberalism based on the idea of the rational individual, is in apparent decline (Macas-Acosta et al., 2022; Salvador-Guerra et al., 2023). The most recent experience in Latin America indicates the presence of a set of new social actors with demands that go beyond the idea of the individual and assume positions that rescue collective ideas of participation and political-social organization. In the majority of these movements, the presence of popular social groups is the impulse that has marked their rise and strength, all seeking to reclaim the best of their national past and to find in it an inspiration for a new national project against the predominance of small economic elites and the globalized neoliberal economy. These conditions underlie the crisis of neoliberalism's hegemony.

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In this sense, the conceptualization of populism as antidemocratic is erroneous, given that it is more of a space of democracy, powerfully articulated to the so-called "popular-democratic interpellation" (Laclau, 1978). That is a fight to expand the participation space prevalent in official politics. In this sense, we consider that populism, as Rovira Kaltwasser (2012) points out, can well be considered a type of democratic corrective that gives voice to those groups that do not feel represented by political elites and that forces them to react and change. Political agendas.

In the Venezuelan case, Chávez uses popular mobilization (large concentrations of followers dressed in red) as the symbolic element that is inclusive of the people mobilized for the cause and, therefore, exclusive of those who do not share that self-proclaimed popular identification from which it results in a polarization of society that raises the levels of conflict, denying the possibilities of deliberation and democratic negotiation. Furthermore, if it is about revolutionary potentialities, they are absent in the personalist and voluntarist emphasis of the famous call of the plebiscitary leader, on the one hand, and in the manipulation of citizen expectations from the heights of neo-populist power, on the other. Chávez has known how to handle the legitimate fears of a middle class threatened from all sides, from environmental insecurity to high levels of unemployment, which encourage the growth of an informal economy.

With the two elements raised, it is possible to maintain that the so-called "populism" has become the mirror in which all the pending issues and havoc that neoliberalism has caused in recent years in Latin America are reflected. From our perspective, this explains the fierce attack and disqualification of the movements described in this way.

Germani (1965) distinguishes three moments of populist emergence: the "classical populism" of Perón, Vargas, and Cárdenas, which emerged with the crisis of the agro-export model and industrialization by import substitution. The "neoliberal neopopulism" of Menem, Fujimori, and Collor, a product of the crisis of industrialization due to import substitution, and the rebirth of the "radical populism" of Chávez, Morales, and Correa, which appears together with the crisis of neoliberal models and the resurgence of nationalism and state control in the economy.

Indeed, the institutionalization of democracy needed to forge its myth, its own political culture, essentially built on three elements (Dávila, 2006; Ochoa-Rico et al., 2022): first, the construction of the people as a political subject through the institution of universal suffrage; second, economic nationalism as the foundation of an ultimate rentier vision of the economy; and third, "national unity", democratic consensus, as a necessary condition for defense against tyranny.

For De la Torre (2008), populism is a form of political incorporation (of excluded sectors) that has shown, at the same time, democratizing and authoritarian features.

Remember that this phenomenon constitutes how traditionally excluded sectors access participation. "It is based on speeches and rituals that antagonize society and on a vision of democracy as the plebiscitary acclamation of redeemers rather than on the idealized models of liberal democracy" (De la Torre, 2014)

A central point in the Citizen Revolution project is the use of political communication as an articulating axis and generator of meaning for the actions of the National Government and its political movement.

This aspect, however, according to former minister Costales (2014), has allowed many victories to be achieved at a tactical level but has undermined the political organization in strategic terms.

He explains that political marketing helped him win seven consecutive elections, but this caused the organization to be at the mercy of public opinion polls and the popularity levels of President Rafael Correa. Scholars of 21st-century socialism, understood as the most appropriate and effective path to transform the reality of underdevelopment and dependency in which Latin America lives, agree that it is necessary to build an "authentic democracy" in the region and each of them. Their countries. This democracy would have to be a post-neoliberal democracy.

In her study, full of suggestions for research on charismatic leadership in popular and revolutionary movements in Latin America, Professor Diane Raby has observed how "to understand both Fidel and Chávez, it is necessary to recognize that the historical and ideological roots They are not found in the

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orthodoxy of the left, but in the Latin American populist tradition. This thought is reflected in leaders' speech, style, and content" (Raby, 2006).

Conclusions

The "narratives of power" that coexist in the country's political culture pose serious challenges not only to the effective exercise of modern democracy but also to the criteria for evaluating the democratic quality of governments.

In political communication, the topics discussed increasingly revolve around the candidates' charisma, increasingly banal issues, and increasingly simple arguments. Thus, the effect (and problem) of using political marketing is relative to the proximity between political actors' discourse and society's real problems.

In politics, 21st Century Socialism has used the media's most powerful tools and the reach of solid, consistent discourse with great social acceptance.

It is essential to recognize that some manifestations (not only in Latin America) of this spectacular logic, such as the displacement or substitution of political institutions by mass media or digital media, appear as an effect of the massification of specific technologies.

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ChatGPT in English writing: experiences and perceptions of Saudi EFL students

برنامج شات جي بي تي في الكتابة باللغة الإنجليزية: تجارب وتصورات طلاب اللغة الإنجليزية كلغة أجنبية في السعودية

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Written by:
Awatif Alshammri[1]
https://orcid.org/0000-0002-9538-0573

Abstract

This study explores the experiences and perceptions of Saudi English as a Foreign Language (EFL) students using ChatGPT for language writing tasks. Semi-structured interviews were conducted with five female undergraduate English majors at the University of Hail who utilized ChatGPT. The findings reveal significant advantages, including assistance with content structuring, feedback enhancement, and personalized support. However, concerns were raised regarding potential academic dishonesty, overreliance on the tool, and doubts about the accuracy of ChatGPT-generated references. These insights contribute to a deeper understanding of ChatGPT's role in language education and offer guidance for educators and policymakers on the benefits and challenges of employing AI chatbots to enhance students' writing proficiency. The study concludes with recommendations for further research in this field.

Keywords: artificial intelligence, ChatGPT, language writing, EFL students, chatbots.

الملخص

تستكشف هذه الدراسة تجارب وتصورات الطلاب السعوديين الذين يدرسون اللغة الإنجليزية كلغة أجنبية باستخدام برنامج شات جي بي تي لمهام الكتابة اللغوية. أجريت مقابلات شبه منظمة مع خمس طالبات جامعيات متخصصات في اللغة الإنجليزية في جامعة حائل استخدمن برنامج شات جي بي تي. تكشف النتائج عن مزايا كبيرة، بما في ذلك المساعدة في هيكلة المحتوى، وتعزيز الملاحظات، والدعم الشخصي. ومع ذلك، أثيرت مخاوف بشأن الخداع الأكاديمي المحتمل، والاعتماد المفرط على الأداة، والشكوك حول دقة المراجع التي تم إنشاؤها بواسطة برنامج شات جي بي تي. تساهم هذه الرؤى في فهم أعمق لدور برنامج شات جي بي تي في تعليم اللغة وتقدم إرشادات للمعلمين وصناع السياسات حول فوائد وتحديات استخدام روبوتات الدردشة الذكية لتعزيز كفاءة الطلاب في الكتابة. وتختتم الدراسة بتوصيات لمزيد من البحث في هذا المجال.

الكلمات المفتاحية: الذكاء الاصطناعي، شات جي بي تي، الكتابة اللغوية، طلاب اللغة الإنجليزية كلغة أجنبيه، روبوتات الدردشة.

Introduction

For English-language learners, the development of language skills is fundamentally dependent on academic writing, which necessitates proficiency in organising ideas, maintaining coherence, utilising accurate grammar, and expanding vocabulary (Campbell, 2019). Mastery of writing enables learners to articulate their thoughts effectively, convey ideas with clarity, and achieve academic success across various disciplines (Yoon, 2011). However, providing thorough feedback on student writing presents substantial challenges in terms of time investment, the effort required by evaluation, and inherent subjectivity (Lim & Phua, 2019; Yu & Lee, 2014). Furthermore, time constraints frequently undermine the motivation of English-language learners to allocate ample time and effort to the enhancement of their writing abilities (Lee, 2017).

[1] Assistant Professor, English Department, Faculty of Arts, University of Hai'l, Saudi Arabia. WoS Researcher ID: GRR-7595-2022

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The use of technology in English-language classrooms is widely recognised as an asset for enhancing language learning, especially in higher education (Yang et al., 2023; Zhang & Zou, 2022). Technology provides unparalleled opportunities to interact with the target language through authentic and synergistic resources that significantly aid the development of essential skills in an immersive and meaningful manner (Hassan Taj et al., 2017). Moreover, technology boosts learners' motivation and independence, empowering them to take control of their educational journeys (Song & Song, 2023). In addition to these benefits, incorporating technology into English-language instruction addresses specific challenges associated with language acquisition. This includes offering effective solutions for overcoming the time constraints often encountered during the execution of writing tasks (Knox, 2020; Fathi & Rahimi, 2020).

In recent years, the integration of AI tools and software has precipitated significant advancements in technology-enhanced writing (Marzuki et al., 2023). A prominent development in this domain is the advent of AI-powered chatbots. By leveraging natural-language processing and machine-learning techniques, these chatbots facilitate interactive and personalised language-learning experiences for users (Guo et al., 2022). They possess the capability to adapt to individual proficiency levels, offer real-time feedback, and promote learner autonomy and self-correction (Chen et al., 2021; Xiao & Zhi, 2023). Among these innovative AI tools is ChatGPT, a chatbot developed by OpenAI in November 2022. This sophisticated application can generate complex text compositions and engage users in coherent conversations (Gill & Kaur, 2023). This allows it to enhance automated speech recognition and perform various informative automated tasks efficiently (Rahman & Watanobe, 2023).

Despite the increasing integration of technology, including advanced tools such as ChatGPT, into language-learning processes, a significant research gap exists regarding the impact and effectiveness of such tools from learners' perspectives. While previous studies have examined the influence of AI on enhancing English-language acquisition outcomes (Huang et al., 2023; Sun et al., 2021), and specifically the role of ChatGPT in writing courses (Fitria, 2023; Javaid et al., 2023; Song & Song, 2023; Su et al., 2023; Yan, 2023), there are limited empirical data on students' experiences of utilising this tool for writing tasks (Nugroho et al., 2024). This study seeks to fill the gap by exploring the perceptions and experiences of Saudi EFL learners with respect to the use of ChatGPT for their writing tasks. The study aims to elucidate both the advantages these learners derive from employing this tool and the challenges they encounter in its application. Gaining this understanding is imperative for tailoring ChatGPT's use to the unique needs and obstacles faced by language learners.

Theoretical framework or literature review

Using ChatGPT for Foreign Language Writing

Conventional methods to automating operations within higher education institutions are becoming progressively inadequate in addressing current demands (Sulym et al.,2023). Consequently, artificial intelligence technology has emerged as a predominant solution in recent years, driven by significant advancements in research and development (Xu et al., 2024). A prominent application of AI is the use of chatbots, which utilise sophisticated deep-learning algorithms trained on large datasets to generate human-like responses. AI chatbots are instrumental in advancing education by offering personalized practice opportunities and engaging conversational experiences (Yefymenko et al., 2024). These advancements facilitated OpenAI's introduction of ChatGPT in November 2022 (Bender et al., 2021; Kasneci et al., 2023). Powered by large-scale language models, ChatGPT is designed to produce text that closely emulates human interactions based on the input provided (Bender et al., 2021; Kasneci et al., 2023). Beyond text generation, ChatGPT excels in answering questions and fulfilling various language-related tasks (Kasneci et al., 2023). Its capability to simulate realistic human conversations presents exciting opportunities for language learning, particularly in writing-skills enhancement (Imran & Almusharraf, 2023).

ChatGPT serves as an indispensable writing assistant thanks to its numerous benefits, including enhanced writing efficiency, idea generation, accurate and consistent content creation, and language translation capabilities (Imran & Almusharraf, 2023). Its impact is significant in academic settings where some educators have incorporated ChatGPT into their writing curricula (Barrot, 2023). ChatGPT's extensive capabilities cover various aspects of writing, including pragmatics, semantics, coherence, cohesion, conventions, language style, and format. Additionally, it ensures grammatical precision (Barrot, 2023). ChatGPT supports second-language writers by providing them with rapid feedback on individual needs and reliable help with various tools. The integration of ChatGPT in education enables students to enhance

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critical elements of their prose, including syntactical coherence, structured cohesion, and grammatical accuracy. This can profoundly improve their overall linguistic proficiency (Imran & Almusharraf, 2023).

Numerous studies have examined the impact of ChatGPT on writing courses. In one study (Song & Song, 2023), the implementation of AI-assisted instruction using ChatGPT in an EFL class led to significant improvements in students' academic writing skills and motivation compared to a non-AI-assisted class. Similarly, Su et al. (2023) integrated ChatGPT into an argumentative-writing course, finding that it facilitated the development of outlines, content, language use, and reflective thinking among students. Furthermore, Yan (2023) utilised ChatGPT in writing course to evaluate its effectiveness for students' writing performance. The author found that ChatGPT has substantial potential for application in second language writing pedagogy thanks to an automated workflow designed to enhance writing efficiency. Moreover, Fitria (2023) and Javaid et al. (2023) highlighted the role of ChatGPT as an instructional tool that can guide students with responses akin to those provided by teachers. These studies primarily focused on incorporating ChatGPT into classroom-based writing courses and investigating its efficacy in improving students' writing capabilities.

In contrast, Nugroho et al. (2024) conducted a comprehensive study aimed at assessing students' experiences with ChatGPT as a scaffolding tool for essay writing. They found that learners benefitted in numerous ways from ChatGPT, such as by receiving translation assistance, enhancing writing accuracy and efficiency, generating ideas, and applying knowledge. Despite these advantages, the study also noted concerns among students regarding the generation of inaccurate information and the potential for academic dishonesty. This pivotal study provides valuable insights into students' diverse experiences and perceptions concerning the use of ChatGPT in writing tasks. Furthermore, it underscores the significant impact AI technologies can have on students' learning outcomes, and it emphasises the need to consider student perspectives in the development and implementation of AI-based educational tools.

The literature on the utilisation and potential adoption of ChatGPT for enhancing writing skills in higher education, particularly in the realm of English instruction, remains limited. There is a lack of studies on language learners' experiences and perceptions of the use of ChatGPT to improve their writing performance. This lack can be attributed to the recent invention of ChatGPT. To address this gap, this study aims to answer the following research question:

How do Saudi EFL learners perceive the role of ChatGPT in English writing tasks?

The goal is to offer valuable insights into the effectiveness and practical implications of integrating ChatGPT into language-learning curricula. The findings of this study will contribute significantly to existing knowledge of AI's role in language education. They will offer guidance to educators and policymakers regarding the benefits and challenges associated with the use of AI chatbots for improving students' writing proficiency. Ultimately, this research holds transformative potential for language education because it provides empirical evidence on the usage and prospective adoption of ChatGPT as a tool for enhancing writing.

Methodology

Research Participants

The study was conducted with five female undergraduate students majoring in English at the University of Hail, reflecting the cultural context in Saudi Arabia, where gender segregation is prevalent within educational institutions. Societal norms present challenges for women seeking to engage in discussions with men, resulting in limited interaction within mixed-gender settings. This cultural consideration guided the decision to focus exclusively on female students, enabling a more comprehensive examination of their unique experiences and perspectives. While it is acknowledged that a larger sample size could enhance the generalizability of the findings, this intentional choice for a smaller cohort allows for a more nuanced understanding of the pertinent issues. Such insights are anticipated to be valuable for future research initiatives on this topic. The participants were chosen based on the author's classroom observations and regular interactions, which ensured that they were active users of ChatGPT. It should be highlighted that during the data collection period, the university had not formally endorsed the use of ChatGPT in educational settings. Observationally, it was noted that most students used ChatGPT. The study focused on assessing the participants' experiences and perceptions of ChatGPT 3.5—the free version available at the

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time; hence, all subsequent references to ChatGPT pertain to this version. Before collecting data, ethical approval was obtained from all participants.To safeguard the privacy of the participants, pseudonyms have been used in this study. This measure ensures adherence to ethical standards in research.

Data Collection and Analysis

The data were collected through semi-structured interviews conducted in Arabic, the participants' native language. The interviews were transcribed by trained research assistants. Each session was audio-recorded with the participant's consent and lasted between 25 and 30 minutes. The primary objective of the interviews was to explore the experiences and perceptions of using ChatGPT to enhance writing skills. To delve deeper into the participants' responses, follow-up questions were also asked. Ethical approval for this study was secured from the author's university.

Data analysis employed the qualitative inductive approach described by Yin (2015) and Yuan et al. (2022). Initially, the data were coded to identify instances related to students' usage and opinions of ChatGPT for enhancing their writing quality. For instance, students' comments on utilising ChatGPT for generating ideas, structuring essays, organising thoughts, providing examples and inspiration, vocabulary enhancement, content development, assistance with grammar, and style adaptability were organised with codes such as "idea generation" and "essay structuring." These codes were subsequently consolidated under the theme "assistance with content and structure." Based on the participants' responses, the following four themes emerged: assistance with content and structure, feedback and improvement, support and customisation, and academic dishonesty and overreliance. These themes represent the participants' experiences and perceptions of the role of ChatGPT in English-language writing.

Results

Assistance With Content and Structure

The findings highlight the instrumental role that ChatGPT played in aiding students with the content and structure of their writing tasks. The AI tool supported learners by facilitating idea generation, organising thoughts, and structuring essays effectively. By offering guidance on content development and essay organisation, ChatGPT enabled students to tackle writing tasks with increased confidence and clarity.

For instance, Reem explained that ChatGPT helped her overcome writer's block through its idea-generation and essay-structuring capabilities: "ChatGPT has been indispensable for my writing assignments. When I'm at a loss for what to write about, it helps me brainstorm ideas and outlines the structure of my essays. It's like having a virtual brainstorming partner always available!"

Leen emphasised how ChatGPT aided her in organising her thoughts and crafting well-structured essays, thus alleviating previous challenges:

I used to struggle with organising my thoughts in writing, but ChatGPT changed that. It guides me through essay structuring—from composing strong introductions to developing compelling arguments in body paragraphs—which makes the writing process less daunting and more manageable.

Noor valued ChatGPT's ability to offer illustrative examples and inspiration, which significantly helped her comprehension and application of writing techniques:

ChatGPT serves as my primary resource for identifying examples and drawing inspiration for my writing assignments. Whenever I require insight into the usage of a specific writing technique or need guidance on integrating evidence into my essays, it furnishes clear samples that I can learn from and implement in my own work.

As a nonnative English speaker, Asma found ChatGPT incredibly useful in suggesting vocabulary enhancements and improving the fluency of his expressions:

As someone who is not a native English speaker, I frequently worry about choosing the appropriate words and phrases in my writing. ChatGPT assists in broadening my vocabulary by suggesting synonyms and

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alternative phrasings. It's akin to having a personal language coach who helps me to express myself more fluently.

Huda praised ChatGPT's adaptability in offering assistance for various facets of writing tasks, which made it an invaluable tool:

What stands out about ChatGPT is its versatility in supporting different aspects of writing tasks. Whether I need help with brainstorming ideas, structuring my essay, or refining grammar and style, it's always available. It's like having a multifunctional tool tailored to all my writing needs.

Overall, ChatGPT's support with content development and structural organisation played an important role in assisting the participants with their language-related assignments. It enabled them to generate ideas effectively, organise their thoughts coherently, and produce well-structured essays.

Feedback and Improvement

According to the participants, ChatGPT provides comprehensive feedback on grammar, style, and vocabulary, guiding students through the revision process by identifying errors, suggesting corrections, and fostering improvements. Reem said, "ChatGPT identified several grammar mistakes I had overlooked, and its suggestions enhanced my clarity." Noor recounted a similar experience: "ChatGPT offered detailed feedback on my essay, highlighting grammatical errors and proposing improved vocabulary. It significantly polished my writing." Leen shared her appreciation with the following words: "The feedback was immensely helpful. ChatGPT highlighted grammatical issues and suggested ways to enhance my vocabulary, thus strengthening my essay." Huda noted the tool's capacity for vocabulary enhancement: "I struggled with word choice, but ChatGPT provided synonyms that helped diversify my language and make my essay more engaging." Asma emphasised the thoroughness of the feedback: "ChatGPT gave me clear insights into grammatical mistakes and recommended better vocabulary. It genuinely elevated the quality of my writing." These experiences demonstrate the efficacy of ChatGPT in facilitating revisions and improving the quality of writing.

ChatGPT significantly enhanced students' writing abilities by offering precise and actionable feedback on grammar, style, and vocabulary. The uniformly positive feedback from the participants indicates that ChatGPT simplified the revision process. This led to clearer, more refined, and compelling written work. By identifying specific errors and providing insightful recommendations, ChatGPT helped the participants hone their writing skills and improve their academic performance.

Support and Customisation

ChatGPT's personalised approach to support and mentoring was highly advantageous for the students. By delivering explanations customised to each student's needs and learning preferences, the AI system created an optimal learning environment.

The participants praised ChatGPT's ability to tailor its assistance to their specific requirements. Huda said, "ChatGPT clarified difficult concepts for me and boosted my confidence." Noor commented, "ChatGPT adapted its feedback to my writing style, significantly aiding my improvement." Leen and Asma expressed similar sentiments regarding how personalised feedback from ChatGPT enhanced their writing skills.

Furthermore, Reem noted, "The tailored support I received from ChatGPT greatly enriched my learning experience."

These testimonials highlight ChatGPT's aptitude for providing bespoke support. By adjusting explanations, feedback, and mentoring approaches according to each student's skill level and learning method, ChatGPT promoted a positive and engaging educational journey. This personalised approach not only deepened the participants' understanding of complex topics but also bolstered their confidence and enthusiasm for learning.

In summary, the capacity of ChatGPT to offer customised assistance is crucial to its effectiveness as an educational tool. Its adaptive and supportive methodology creates an environment conducive to personal growth and academic success.

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Academic Dishonesty and Overreliance

The use of ChatGPT was seen as beneficial because the AI system offered content structuring, feedback enhancement, and personalised support. However, there were legitimate concerns regarding the potential for academic dishonesty and excessive reliance on the tool.

The participants were worried that overdependence on ChatGPT could result in plagiarism and underdeveloped writing skills. They recognised that given ChatGPT's power, its overuse could hinder their ability to think critically, conduct original research, and effectively articulate their ideas. There was a risk that students might become too accustomed to having ChatGPT generate content on their behalf rather than dedicating the necessary effort to developing their writing proficiency and analytical capabilities.

Furthermore, some of the participants raised concerns about the accuracy of references provided by ChatGPT. Despite its extensive abilities, the AI system does not always supply reliable citations, potentially leading to misinformation or incorrect attributions. This raised questions about the integrity and credibility of the students' work.

For instance, Leen said,
While ChatGPT is incredibly helpful, I sometimes worry that I might become too dependent on it and not fully develop my writing skills. I have also noticed that ChatGPT occasionally suggests incorrect references, which could harm the accuracy of my work.

Leen emphasised that although ChatGPT can offer valuable suggestions and guidance, it is essential to verify and crosscheck all the referenced information it provides to ensure its reliability.

Similarly, Huda underscored the importance of preserving her work's integrity by not merely duplicating the content generated by the AI system. She expressed her prudence as follows:

I appreciate the help, but I'm always cautious not to copy exactly what ChatGPT suggests. I want to ensure that my work remains original and genuinely mine. Moreover, I have encountered instances where ChatGPT provided incorrect references, which made me realise the importance of double-checking the information I use.

Noor echoed this sentiment, emphasising the need to find a balance: "While ChatGPT can be an excellent resource, it's crucial that I don't become overly reliant on it. My goal is to ensure that my assignments and essays genuinely reflect my personal understanding and insights."

The participants appreciated the various forms of assistance that ChatGPT provided, but they remained alert to the potential dangers of academic dishonesty and dependency. They tried to find a middle ground—leveraging ChatGPT as a tool while preserving both the originality and integrity of their work. Doing so included continuing to hone their writing skills, critical-thinking abilities, and capacity for original research and analysis. In this context, educational institutions should play a key role by offering careful guidance and establishing clear policies to help students navigate this evolving landscape, as well as by upholding academic honesty and achieving personal growth.

Discussion

This study examined Saudi EFL learners' perceptions and experiences of using ChatGPT for English-language writing tasks. The findings indicate that the AI system provides substantial benefits, including content structuring, feedback enhancement, and customised support. Previous studies have found similar results. First, ChatGPT offered valuable aid in content organisation, thus enabling students to brainstorm ideas, arrange their thoughts systematically, and effectively outline their essays. This is consistent with the findings of Rahman & Watanobe (2023), who found that ChatGPT assisted the development of reading and writing skills by offering syntactic and grammatical suggestions that improved writing organisation, vocabulary usage, grammar accuracy, and overall coherence. Furthermore, our results corroborate those of Kasneci et al. (2023), according to whom ChatGPT can emphasise essential phrases, generate summaries and translations, suggest alternative vocabulary choices, and propose improvements in grammar and style. Nugroho et al. (2024) noted benefits such as enhanced translation capabilities and improved writing accuracy and efficiency through idea generation—findings that align with our observations concerning

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enhanced feedback tailored to students' needs. Also noteworthy is Al-Raimi et al.'s (2024) discovery that Omani EFL students held positive views of AI-assisted writing tools; they frequently used these tools for translating words and sentences, addressing spelling errors, and generating new ideas for essays and paragraphs. These findings support our conclusion that ChatGPT empowered the participants by boosting their confidence levels and proficiency when tackling various written assignments. Collectively, these studies underscore the efficacy of ChatGPT and related AI tools for enhancing students' writing performance.

The literature indicates that students receive very positively new technologies, particularly those that provide immediate assistance and tutoring (Cotton et al., 2023; Labadze et al., 2023). ChatGPT and other intelligent chatbots have garnered significant interest due to their capacity for prompt, realistic interactions and instant feedback (Kohnke et al., 2023). These features foster a supportive and engaging learning environment. Furthermore, ChatGPT's capability to deliver responses tailored to individual needs significantly enhances its usefulness as an educational tool. Evidence suggests that this AI system holds substantial promise as an effective learning aid (Strzelecki, 2023), especially thanks to its ability to promote student autonomy. By facilitating self-directed learning and addressing students' specific writing challenges, ChatGPT plays a crucial role in cultivating critical-thinking and problem-solving skills—key components of academic success.

The increased engagement of EFL learners in AI-supported writing activities may account for the observed outcomes. ChatGPT presented learners with viable alternatives for their texts, rendering this method more attractive compared to traditional writing instruction. By generating writing ideas, grammatically correct sentences, and suitable lexical resources, the AI tool facilitated the production of higher-quality texts. This led to heightened learner engagement in writing tasks within the AI-enhanced classroom environment. This elevated engagement probably contributed to the self-perceived improvements in the participants' academic writing skills. These findings align with the study by Utami & Winarni (2023), who also identified significant enhancements in EFL learners' engagement and writing proficiency thanks to the use of AI-powered language learning tools. Similarly, our study found that ChatGPT was of considerable help in structuring content, providing constructive feedback, and offering personalised support. This fostered greater involvement among students and improved the quality of their written work.

Our findings offer comprehensive insights into the impact of AI-assisted writing instruction on EFL learners. The participants' positive perceptions corroborate earlier research, underscoring the importance of real-time feedback as an educational instrument. ChatGPT's automated feedback system proved essential in addressing intricate aspects of writing, including grammar, vocabulary, and overall organisation. This is consistent with the studies of Barrot (2023) and Zhao (2022), who highlighted the pivotal role of immediate feedback in enhancing writing proficiency. In the present study, the instant and personalised feedback from ChatGPT improved students' writing accuracy and efficiency and fostered a supportive learning environment, which confirms previous research.

While the benefits of using ChatGPT for writing instruction are significant, the participants also identified certain challenges regarding the quality of the information provided by the AI system and its potential threat to academic integrity. Specifically, the students noted that the information generated by ChatGPT often lacked appropriate referencing, which made it unsuitable as a standalone source for their writing needs. Scholars have found that AI-generated content can be inaccurate, particularly concerning recent events (Barrot, 2023). This issue is especially problematic for students with limited information-literacy skills, who may be misled by seemingly authoritative but incorrect responses (Bhattacharyya et al., 2023; Al-Emran, 2024). AI-produced content frequently appears convincing, but it may contain inaccuracies, which complicates students' ability to accurately evaluate its credibility. Even when students specifically request the inclusion of up-to-date references, ChatGPT occasionally generates fictitious citations. Previous research indicates that many references supplied by ChatGPT are either inaccurate or fabricated (Bhattacharyya et al., 2023). Consequently, Yan (2023) has advised against the use of ChatGPT for academic writing. Another concern raised is plagiarism. Employing ChatGPT in writing courses could potentially harm students' writing ethics and foster an excessive reliance on the AI model (Huang et al., 2023). Without proper referencing mechanisms in place, there is a risk that ChatGPT may produce plagiarised content (Nugroho et al., 2024).

The findings indicate that a primary concern regarding the use of ChatGPT is its potential to foster academic dishonesty among students. The AI's capability to generate text poses a risk of misuse, including the

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creation of plagiarised information. This would undermine the integrity of student work and impede their learning and development. It is imperative for students to recognise the importance of originality and ethical writing practices and for educators to highlight the consequences of academic dishonesty when integrating ChatGPT into educational settings (Imran & Almusharraf, 2023). Another significant issue is overreliance on ChatGPT. Excessive dependence on this AI system can hinder students' critical-thinking and problem-solving abilities. Resorting too frequently to ChatGPT may impede their capacity to think critically, evaluate information effectively, and form independent judgements. Consequently, it is vital to find a balanced approach to the use of ChatGPT. Students must be encouraged to perceive it as a supportive tool rather than a replacement for their cognitive processes. The implications of these concerns pertain to both students and teachers. It is imperative that the former recognise the constraints of ChatGPT and comprehend that it should not substitute for their intellectual capacities. Educators, for their part, should steer students towards the judicious use of ChatGPT while cultivating a culture of academic integrity (Cotton et al., 2023). They must establish explicit guidelines regarding the responsible application of AI tools, foster critical-thinking abilities, and urge students to corroborate information generated by the AI system using credible sources.

To delve deeper into the theoretical implications, it is crucial to examine the evolving role of educators within an AI-integrated learning environment. Educators must transition from being mere facilitators of knowledge to becoming guides who assist students in navigating the complexities associated with AI tools. This transformation requires a comprehensive reassessment of teacher training programs, emphasizing competencies in digital literacy and ethical use of AI. Additionally, the integration of AI into language education opens up new research opportunities that investigate the interplay between technology and pedagogy. This encourages educators to explore how AI can enhance collaborative learning experiences effectively. Practically speaking, educational institutions should prioritize professional development initiatives aimed at equipping educators with the skills necessary to create interactive and engaging learning environments, while utilizing AI responsibly. It is equally important to cultivate a classroom culture that promotes critical reflection on technology's role in education. By adopting a proactive approach, educators can better prepare students to engage with AI tools ethically and effectively—ensuring that technology becomes an ally in their educational journey rather than a dependency.

Conclusions

This study aimed to investigate the experiences and perceptions of Saudi EFL students regarding the use of ChatGPT for language writing by adopting a qualitative research method. The findings showed that Saudi EFL students gained several advantages from employing ChatGPT in their writing tasks. The AI tool helped them to structure their content, enhanced their feedback, and offered personalised assistance. However, the study also highlighted some concerns among the participants regarding potential academic dishonesty and overreliance on ChatGPT, along with doubts about the accuracy of the references provided by the chatbot. While the results of this study are consistent with previous findings (e.g., Nugroho et al., 2024; Xiao & Zhi, 2023), they significantly enhance the understanding of ChatGPT's application in language learning, particularly in writing tasks. Additionally, this research offers valuable insights into the Saudi context regarding Saudi students' use of ChatGPT for their writing assignments. Notably, there is a lack of existing literature that investigates the experiences and perceptions of Saudi EFL learners concerning the utilization of ChatGPT for language writing tasks.

While this research study has yielded valuable insights into the application of ChatGPT in language writing, it is essential to recognize its limitations. The findings are specific to the Saudi context and may not extend to other contexts. Furthermore, the research was conducted with a limited sample size of only five female students due to cultural considerations, which constrains the generalizability of the results. The qualitative methodology employed, which relied on semi-structured interviews, may not provide sufficient grounds for broad conclusions. Consequently, future investigations could enhance their robustness by incorporating a larger and more diverse sample that includes both male and female participants, as well as adopting a mixed-method approach to explore the role of AI in language learning more comprehensively. Given that the application of ChatGPT for educational purposes remains relatively new, it is recommended that scholars further examine its effects on students' language-learning achievements. Future studies should explore the impact of ChatGPT through practical interventions in experimental research to provide valuable insights into its effectiveness and limitations. Moreover, scholars should focus on effectively integrating ChatGPT into language-learning curricula by considering factors such as frequency of use, duration of the interactions, and appropriate learning tasks. Investigating how ChatGPT can foster learner autonomy and

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self-directed learning—independent problem-solving skills—would also be beneficial. Assessing which specific language skills can be improved by interacting with ChatGPT (e.g., speaking, writing, and listening comprehension) would be very useful for language educators. Understanding how students engage with the AI system to monitor their progress and how they regulate their cognitive processes during these interactions represents another crucial area for enquiry. Finally, it is imperative to address ethical concerns surrounding privacy, data security, and the responsible deployment of ChatGPT in educational settings. Rigorous research into these areas is essential to fully comprehend the advantages and drawbacks of using ChatGPT as a language learning tool.

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Investigating war crimes in de-occupied territories: the role of the National Police of Ukraine

Розслідування воєнних злочинів на деокупованих територіях: роль Національної поліції України

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Written by:
Vyhivskyi Ivan[1]
https://orcid.org/0009-0007-6942-9429
Martyniuk Olena[2]
https://orcid.org/0009-0003-0081-2463
Rossokxa Sergii[3]
https://orcid.org/0000-0001-9453-1440
Shchupakivskyi Roman[4]
https://orcid.org/0000-0002-2036-0332
Strunevych Oleksandra[5]
https://orcid.org/0000-0002-2359-103X

Abstract

The purpose of this article is to examine the specific activities of the National Police of Ukraine in the investigation of war crimes in de-occupied territories, developing a clear algorithm of action and taking into account possible power, heating, and communication outages. The study argues for the creation of a Coordination Headquarters to ensure proper interaction between the bodies and departments involved in recording and investigating war crimes. The article proves that the activities of the National Police of Ukraine bodies and units during the investigation of war crimes in the de-occupied territories are aimed at their prompt, complete, and impartial investigation, so that any perpetrator of such acts is held accountable according to their guilt, and includes several algorithmic actions. The research methodology includes dialectical-materialistic, formal-logical, general scientific, and special methods. The results of the study are significant as they provide a practical guide for the National Police of Ukraine in the investigation of war

Анотація

Метою статті є дослідження особливостей діяльності Національної поліції України при розслідуванні військових злочинів на деокупованих територіях шляхом вироблення чіткого алгоритму дій та врахувавши можливі відключення електроенергії, опалення та зв'язку. У дослідженні йдеться про необхідність створення Координаційного штабу для забезпечення належної взаємодії між органами та відомствами, які займаються фіксацією та розслідуванням військових злочинів. Доведено, що діяльність органів та підрозділів Національної поліції України під час розслідування військових злочинів на деокупованих територіях включає низку алгоритмічних дій та спрямована на їх швидке, повне та неупереджене розслідування з тим, щоб кожен, винний у вчиненні таких діянь, був притягнутий до відповідальності. Методологія дослідження включає діалектико-матеріалістичний, формально-логічний, загальнонауковий і спеціальні методи.

[1] PhD in Law, Doctoral Student of the National Academy of Internal Affairs, Ukraine.
[2] Candidate of Legal Sciences, Senior Researcher of the Scientific Institute of Public Law (Kyiv, Ukraine).
[3] Candidate of Juridical Sciences, Doctoral student at the Research Laboratory on Crime Prevention of the National Academy of Internal Affairs, Ukraine.
[4] Doctor of Law Sciences, Senior Researcher, Senior Research Fellow at the Scientific Institute of Public Law, Ukraine.
[5] Doctor of Law Sciences, Leading Researcher at the Scientific Institute of Public Law, Ukraine.

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crimes in de-occupied territories. The proposed algorithm and practical considerations can help ensure prompt, complete, and impartial investigations, ultimately contributing to the rule of law and justice in times of conflict.

Keywords: National Police of Ukraine, martial law, de-occupation, armed conflict, criminal proceedings, investigation, investigative (search) actions.

Важливість результатів дослідження обумовлена їх практичним значенням для Національної поліції України у розслідуванні військових злочинів на деокупованих територіях. Запропонований алгоритм здатен допомогти у забезпеченні швидкого, повного та неупередженого розслідування, що сприятиме верховенству права та справедливості під час конфлікту.

Ключові слова: Національна поліція України, воєнний стан, деокупація, збройний конфлікт, кримінальне провадження, розслідування, слідчі (розшукові) дії.

Introduction

Ensuring the security of individuals, society and the State against threats of criminal encroachment is the most priority task of all State power institutions in Ukraine, as an individual, his life and health, honor and dignity, integrity and security are recognized as the highest social value in Ukraine. The Basic Law (Law No. 254k/96-VR, 1996) proclaims the inalienable right of every human being to life. No one shall be arbitrarily deprived of life. Everyone has the right to protect his or her life and health, the lives and health of other persons against unlawful encroachments.

In the conditions of martial law, changes in powers, competences, rights and obligations, functions and procedures are related to all public institutions.

The National Police is not an exception: a significant number of changes have been introduced to the regulations governing its activities, which determine the functioning of this body during martial law. Thus, for example, the range of police officers' powers has been significantly expanded: mine clearance of an operational nature has been added to them (detection, neutralization and destruction of explosive objects, which are reasonably recognized to be objects, tools or means of committing administrative or criminal offenses); implementation of technical and forensic support for inspection of the scene of the event, including fire-related and special explosive works based on the facts of the explosions, receipt of reports on the discovery of explosive objects, the threat of an explosion; collecting persons' biometric data of a person; carrying out administrative supervision. In addition, they gained the right to use in their activities such technical means as unmanned aerial vehicles (drones) and special technical means of countering their use; specialized software for analytical processing of photo and video information, including identification of persons and vehicle license plates.

Currently, about 35,000 police officers are serving in regions close to active combat zones and at the front.

Since the beginning of the full-scale war of Russia against Ukraine, the National Police of Ukraine, in addition to the tasks of securing public safety and order, combating crime and protecting human rights and freedoms, as well as the interests of society and the state, has actively participated in the tasks of territorial defense, ensuring and implementing measures of the legal regime of martial law. Thus, 113,421 criminal proceedings on the facts of crimes committed on the territory of Ukraine by servicemen of the armed forces of the Russian Federation and their accomplices were initiated by investigators of the NPU during 24.02.2022 – 21.02.2024. The largest number of criminal proceedings were initiated in Kyiv (23,201), Kherson (18,457), Kharkiv (18,405), Dnipropetrovsk (10,301), Luhansk (5,063), Zaporizhzhia (3,811), Donetsk (3,709) regions and in the city of Kyiv (420) (General Prosecutor's Office, 2024).

At the same time, the provision of State policy in the spheres of national security and defense is the main form of protection of the rights and freedoms of an individual and a citizen becomes particularly important during the operation of the special legal regime of martial law. According to the Military Security Strategy of Ukraine (Order of the President of Ukraine No. 121/2021, 2021), such security is one of the fundamental conditions for realizing the right of the Ukrainian people to self-determination, preserving the State of Ukraine and ensuring its sustainable development based on the highest values of democracy, the rule of law, freedom, dignity, security and prosperity of citizens of all nationalities. Protection of the sovereignty

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and territorial integrity of Ukraine is the most important function of the State, the case of the entire Ukrainian people, including security sector institutions.

Since the beginning of the war, the powers of the police in this area have increased by 80%. They help the relevant services that document war crimes, carry out stabilization measures, work with people, that is, perform those functions that are not inherent to them in peacetime. The breakthrough that the National Police is making in all directions now in full-scale war would take decades in peacetime. During this time, the police investigated more than a hundred thousand war crimes committed by the enemy, identified a huge number of dead persons, conducted an impressive quantity of examinations, mastered new technologies, fought in cyberspace, etc.

New powers require modern approaches and mechanisms for mastering them in order to implement them as timely and efficiently as possible. Therefore, the purpose of our article is to examine the specific activities of the National Police of Ukraine in the investigation of war crimes in de-occupied territories, developing a clear algorithm of action and taking into account possible power, heating, and communication outages.

Methodology

The methodological basis of the research is the dialectical-materialistic and formal-logical methods of scientific knowledge, as well as general scientific and special methods, which allowed to study the problem in the unity of its social content and legal form.

In particular, dialectical method was used to form a holistic view on the features of the investigation of war crimes in the de-occupied territories by the National Police of Ukraine.

Formal and legal method were applied in the analysis of the rules of the current criminal and criminal procedural legislation of Ukraine regulating the specifics of the war crimes investigation.

The methods of formal logic made it possible to examine organizational and practical measures that must be taken for the investigation of war crimes committed in the temporarily occupied territory of the relevant region.

System and structural method is used to allocate a number of algorithmic actions, namely procedural, organizational and practical ones constituting the activities of the National Police of Ukraine bodies and units during the investigation of war crimes in the de-occupied territories.

Documentary and statistical method was useful in studying the data on the facts of crimes committed on the territory of Ukraine by servicemen of the armed forces of the Russian Federation and their accomplices.

Descriptive statistics method made it possible to analyze the figures related to police activities in the de-occupied territories (number of victims, destroyed civilian objects, interrogated persons, etc.)

Analytical method helped to examine the features of such investigative and search activities as the inspection of the scene of crime and interrogation.

Based on the summarization method, conclusions and proposals on the topic of the research were formulated.

Literature Review

Introduction of a legal regime of martial law throughout the territory of Ukraine as a result of the military invasion of the Russian Federation on February 24, 2022 determined a special procedure for the functioning of State authorities, including the police. The introduction of martial law has created a number of new challenges for the police due to conduct of active hostilities, occupation of certain territories of our state, commission of a number of war crimes by the by the occupiers. Taking this into account, special attention should be paid precisely to the prompt and timely provision of high-quality police services to the affected population and timely, prompt and fully investigation of the war crimes on the de-occupied territories.

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In this regard, Tataryn (2022) notes that organization of an investigation, including war crimes, is an activity of authorized actors aimed at creating favorable conditions for pre-trial investigation at each of its stages and ensuring the achievement of the objectives of criminal proceedings. Accordingly, the specified activity is characterized by the features determining its essence: purposeful and dynamic nature; implementation only by authorized entities; is a system of actions to create favorable conditions for investigation; is carried out throughout the entire investigation process (at each of its stages and during individual investigative (search) actions, covert investigative (search) actions, other procedural and non-procedural activities).

The organization of the investigation of war crimes is carried out in the following main directions: 1. Legal support, which lies in improving criminal procedural legislation taking into account the difficulties faced by law enforcement officers during the pre-trial investigation under conditions of martial law. 2. Material and technical support, which lies in increasing the funding of departments. 3. Staffing, which should be implemented in several areas: training, retraining and advanced training. 4. Ensuring cooperation during the investigation of war crimes both at the national and international level.

Teterianyk, Bekh & Odazhnu (2023) point out the feasibility of dividing the war into two phases when analyzing the organization of the investigation: the first is combat, in which it is difficult to establish a connection between recorded crimes and certain individuals; the second is occupational related to crimes committed by the Russian armed forces in the temporarily occupied territories (murders, torture and rape of the civilian population). The authors emphasize that when investigating the second category of cases, the initial efforts of investigative teams are directed to the urgent examination of bodies, establishment of the causes of death, their relationship and the nature of the relationship to the armed conflict.

The investigation of war crimes, state the scholars, is impossible without involving the cyber police, analysts and digital information, including from open sources. With the beginning of the armed conflict, the possibilities of OSINT (Open source intelligence) are widely used in the investigation of criminal proceedings. At the same time, not only law enforcement officers, but also journalists, public organizations, and institutions, whose activity for many years has been focused on carrying out investigations with the help of OSINT, are involved in the search and analysis of information about war crimes from open sources.

At the same time, receiving, fixing and storing the information that may be used as evidence in criminal proceedings has its own clearly defined rules. The Berkeley Protocol (Office of the United Nations High Commissioner for Human Rights, 2022) plays an important role in the processing of data obtained from open sources. It provides guidance on international standards for Internet investigations of alleged violations, on methods and procedures for collecting, analyzing and storing digital information in a professional, legal and ethical manner.

Important guidelines for the investigation of wrongful death and enforced disappearance are contained in the Minnesota Protocol (Office of the United Nations High Commissioner for Human Rights, 2017), which discloses issues of professional ethics, principles of organization and investigation of these facts, as well as defines the specifics of conducting individual investigative (search) actions.

Hloviuk and Teterianyk (2022, p. 65), having analyzing this document, draw attention to the following: “In the report «Human rights violations and abuses and international humanitarian law violations committed in the context of the Ilovaisk events in August 2014» (Office of the United Nations High Commissioner for Human Rights, 2018), attention is paid to the need for law enforcement agencies to ensure that investigations of torture, ill-treatment, extrajudicial executions and conflict-related killings are based on international standards and practices (e.g., the Istanbul Protocol and the Minnesota Protocol)”.

The research by Yunin (2023) deals with the specific activity of the police under martial law and active hostilities, which is not characteristic of the police under peacetime conditions. It is indicated that in the conditions of the introduction of martial law, police officers take part in ensuring public safety and order in special conditions of service – this is activity during curfew and service at checkpoints, in conditions when active hostilities take place (as part of the process of de-occupation of territories). An important component of police activity under martial law is the evacuation of Ukrainian citizens from dangerous territories, the delivery of humanitarian aid to the areas where active hostilities are taking place. A particularly important direction is the activity of recording the facts of war crimes.

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Bezpalova (2022) outlined the priority areas of the police activities in ensuring the rights of citizens during martial law:

1) Recording and qualification of war crimes in Ukraine;
2) Investigation of war crimes under active hostilities;
3) Demining of territories and buildings;
4) Protection of public order and public safety;
5) Detection of cases of illegal acts against children;
6) Use of modern information technologies, systems and means of information protection;
7) Psychological support for the work of the police under martial law and provision of primary psychological assistance to citizens by police officers.

The issue of the war crimes is not new for the scientific community, as the trials of these offenses were very much in the forefront of the news during the years immediately after the end of World War II.

For example, Green (1997) examined the concept of war crimes, crimes against humanity, and command responsibility by studying legal practice both in internationally agreed instruments and in judicial decisions, which clearly indicates that the principle of command responsibility, as well as that of individual liability, is fully recognized in both international and national law.

The Institute for International Criminal Investigations (OSCE, 2013) elaborated the Investigation Manual for War Crimes, Crimes Against Humanity and Genocide in Bosnia and Herzegovina, which is intended to provide an introduction to the broad areas of knowledge, skills, and techniques necessary to conduct field investigations into war crimes, crimes against humanity and genocide.

Levie & Lalgee (2008) investigated the history of the international treatment of war crimes and the conduct of war crimes trials, because much of our current understanding of these offenses and their investigation proceed from the activities taken immediately after World War II, and nowadays the ideas about crimes against humanity continue to evolve.

Sadly, wars and armed conflicts are a global problem of the modern world, during which the international humanitarian law rules are defiantly breached, the legal rights and freedoms of individuals are violated, and social tension in society is significantly increasing. Therefore, law enforcement agencies of Ukraine face the task of conducting proper and impartial investigation of all facts of criminal aggression and the use of prohibited means and methods of warfare. Our investigation will contribute to implementing this task.

Results and Discussion

In situations of armed conflict, security initiatives are an important element in the security architecture. Differentiated approach to the identification of priorities for the State's development allows creating an algorithm for the protection of constitutional rights and interests of citizens, taking into account threats, vulnerabilities and risks to national security. The Concept of Ensuring National Stability (Order of the President of Ukraine No. 479/2021, 2021) states that the reality that is being formed in the conditions of the rapid development of modern technologies changes traditional perceptions of threats as predominant causes of mainly natural, man-made, social or military nature. The latest methods of creating conflicts and crisis situations require an understanding of the nature of their occurrence on the basis of systemic analysis and risk assessment for the most important areas of society and the State, in particular, economic, energy, information, cybernetic, ecological, food, health care, education and culture. This provision stipulates the urgency of developing security projects that will ensure the protection of national security and maintain national stability in the state both during active hostilities and under martial law conditions, and during a certain post-conflict period of time (Nazymko, Ponomarova & Losych, 2024, p. 7).

Since February 24, 2022, Ukraine has faced the armed aggression of the Russian Federation, as a result of which illegal acts are regularly committed against civilians and military personnel, a significant proportion of which are war crimes. The interpretation of the concept of «war crimes» was first proposed in the Rome Statute of the International Criminal Court (Article 8); it presented their list, defined the limits of the permissible law, general principles of the exercise of national and international jurisdiction, as well as the principles of international criminal law (International Criminal Court, 2021). These include gross violations

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of the 1949 Geneva Conventions and other grave breaches listed in the Charter, committed on a large scale during non-international and international armed conflicts (Avdoshyn et al., 2023).

In 2022, a number of changes and additions have been made to the Code of Criminal Procedure, in particular section IX-1 «Special Rules of Pre-Trial Investigation During Martial Law, Emergency or in the Area of Anti-Terrorist Operation» (Law No. 4651-VIб, 2012), which ensured effective criminal prosecution of persons under martial law. Such legislative initiatives also play an important role in the proper functioning of the pre-trial investigation bodies of the National Police of Ukraine.

At the same time, in order to counter the invader, the police have to solve a range of law enforcement and administrative tasks, the effective implementation of which is complicated by many factors (in addition to involving police personnel in repelling Russian aggression), in particular: a significant increase in the number of weapons and ammunition among the country's civilian population; temporary occupation of certain regions of the country; destruction of critical infrastructure facilities, primarily energy; blocking logistics channels; destruction of the housing stock of settlements and industrial facilities; the growth of expenses for military and reconstruction needs; mass movement of refugees; increase in the level of unemployment and, as a result, deterioration of the financial and economic well-being of the population of Ukraine; general social tension and exhaustion, etc. (Husarov, 2023). Despite these difficulties, the police quite successfully fulfill the tasks and functions assigned to it even in war conditions, as evidenced by the following data.

In particular, 3,327 bodies have been identified since the de-occupation, of which in Kiev (1,376), Kharkiv (1,024), Donetsk (392), Chernihiv (242), Kherson (210), Sumy (41), Mykolaiv (27), Luhansk (13) and Zhytomyr (2) regions. 3,242 bodies were examined, most of them in Kyiv (1,376), Kharkiv (940), Donetsk (392), Chernihiv (242), Kherson (208), Sumy (41), and Mykolaiv (27) regions. 3,235 bodies were delivered to the morgue, including those in Kyiv (1,376), Kharkiv (972), Donetsk (365), Chernihiv (242), Kherson (201), Sumy (41), Mykolaiv (27), Luhansk (9), and Zhytomyr (2) regions. NPU investigators interrogated 25,740 local residents on the circumstances of the crimes committed under martial law. Most people were interrogated in Kharkiv (12,675), Kyiv (3,957), Chernihiv (3,731), Kherson (1,916), Mykolaiv (1,931), Sumy (1,061), Donetsk (281), Luhansk (157), and Zhytomyr (31) regions. 40,419 damaged/destroyed civilian objects were inspected in the de-occupied territories, of which in Chernihiv (21,073), Kharkiv (11,634), Kyiv (3,812), Kherson (1,673), Mykolaiv (1,205), Donetsk (483), Sumy (420), Luhansk (91) and Zhytomyr (28) regions (National Police of Ukraine, 2024).

However, official statistics do not fully reflect the scale of war crimes committed, which is due to a number of circumstances: lack of access to the territories temporarily occupied by the Russian Federation, which makes it impossible to establish the facts of war crimes commission, conduct investigative (search) actions (inspection of the scene of the incident, search, interrogation, investigative experiment), identification of persons involved in the commission of war crimes, victims, witnesses and eyewitnesses; systematic shelling of the front-line areas and a high level of danger in the de-occupied territories, associated with the mining of the area, which significantly complicates the conduct of urgent investigative (search) and other procedural actions; lack of an appropriate legal framework regulating the procedure for the interaction of pre-trial investigation bodies with international organizations during the investigation of war crimes; inadequate training of investigators and operational staff due to insufficient practical experience in identifying, documenting and investigating war crimes (Shevchyshyna, 2024).

In this situation, one of the strategic priorities for the country remains the fight against crime under new specific conditions; criminogenic realities require an effective response mechanism by the State, in particular, ensuring coordinated, targeted, joint actions of legislative and law enforcement institutions.

According to Part 2, Art. 1 of the Law of Ukraine «On the National Police» (Law No. 580-VIII, 2015), it is central body of executive power that serves society by ensuring the protection of human rights and freedoms, countering crime, maintaining public safety and order, the activities of which are directed and coordinated by the Cabinet of Ministers of Ukraine through the Minister of Internal Affairs of Ukraine.

Art. 1 of the Law of Ukraine «On the Legal Regime of Martial Law» (Law of Ukraine No. 389-VIII, 2015) states that martial law is a special legal regime introduced in Ukraine or in some of its localities in the event of armed aggression or a threat of attack, a threat to the State independence, its territorial integrity, which in fact is grounds for introducing martial law. This article also states that martial law is imposed to repel

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armed aggression, to eliminate the threat of danger to the state independence of Ukraine, its territorial integrity, which is the purpose of introducing martial law (Shvets & Semenyshyn, 2022, p. 21).

Taking into account the experience of police participation in ensuring law and order during armed aggression against Ukraine, the Verkhovna Rada of Ukraine adopted the Law of Ukraine No. 1702-IX «On the Basics of National Resistance», in which it definied the legal and organizational framework of the national resistance, the basics of its preparation and conduct, tasks and powers of law enforcement forces on the issues of national resistance and amended the Law «On the National Police» in terms of granting additional powers to the police (Article 24). However, the amendments to the Law were adopted in 2021 and do not take into account the realities that arose as a result of full-scale armed aggression, when the police were forced to take an active part in hostilities, protecting the sovereignty and territorial integrity of the country.

Currently, as a result of existing contradictions between international and Ukrainian legislation, where, on the one hand, the police cannot act as a belligerent, and on the other hand, it belongs to the actors involved in the defense of the State, engaging such entities in armed conflict is legitimate on the territory of Ukraine, and accordingly, a police officer participating in a military conflict on his own territory must have the status of a lawful combatant under the Geneva Convention relative to the Treatment of Prisoners of War (United Nations, 1949), the Police Declaration (Parliamentary Assembly of the Council of Europe, 1979).

In order to effectively coordinate the work of the National Police bodies regarding the investigation of war crimes committed in the temporarily occupied territory of the respective region, it is necessary to take a number of organizational and practical measures, in particular:

I. Procedural aspects:

After the liberation of population centers and territory from enemy troops, the regional administration of the Security Service of Ukraine or the Regional Prosecutor's Office starts «basic» criminal proceedings on the grounds of crime provided for in Part 1 – 2, Art. 438 of the Criminal Code of Ukraine (Law No. 2341-III, 2001), based on the facts of war crimes committed within the territory of the united territorial community comprising the respective localities. If necessary, several «basic» criminal proceedings can be initiated within the same united territorial community (for example, in the case of several large settlements with a significant number of detected war crimes, significant territorial remoteness, etc.). If there are already started «basic» criminal proceedings in the regional subdivision of the Security Service of Ukraine on the commission of war crimes in particular de-occupied territories, it is necessary to deal with work in these proceedings (without registration of new ones).

A multidisciplinary investigative team is established for each of these proceedings (i.e. already initiated), primarily of the Security Service of Ukraine and the National Police of Ukraine, which includes investigators of central apparatuses, regional departments (both of these departments), as well as of police territorial units.

The body of pre-trial investigation in such proceedings is the investigative departments of the regional offices of the Security Service of Ukraine; the head of the team of investigators is the investigator of this department. Procedural management is carried out by the regional prosecutor's office; the head of the group of prosecutors is the employee of a specialized division of the regional prosecutor's office or the head of the regional prosecutor's office or the supervising deputy. The group of prosecutors includes employees of regional and local prosecutor's offices. The prosecutors of the Prosecutor General's Office may be included in the group of prosecutors according to the Prosecutor General's decision.

All investigative actions related to recording and investigation of war crimes committed on the territory of the united territorial community are carried out within the framework of the specified «basic» criminal proceedings. In case of registration of additional facts (direct detection of crimes, receipt of statements and reports, etc.) that took place on the territory of the united territorial community in the Unified Register of Pre-trial Investigations (ERDR), the prosecutor shall decide on the necessity of their unification with the corresponding «basic» criminal proceedings in the light of the specific circumstances. Violations of the laws and customs of war are classified under Art. 438 of the Criminal Code of Ukraine.

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If it is necessary to separate pre-trial materials regarding one or more criminal offenses from «basic» criminal proceedings to increase the efficiency of their investigation, including by entrusting the investigation to another pre-trial investigation body, be guided by the requirements of Art. 217 and 36 of the Criminal Code of Ukraine.

II. Organizational aspects:

To ensure the stable work of the Main Departments of the National Police and interregional territorial units, their structural and subordinate (separate) units in the investigation of war crimes, as well as to guarantee public order and security, combat crime, provide high-quality police services, achieve police personnel safety during power, heating and communications outages, the following measures are planned and implemented:

1. ***Preparatory measures of an organizational nature*** (carried out in advance): 1) preparation of a plan of priority actions of personnel during power, heating and communications outages; 2) preparing personnel notification scheme in case of loss of habitual sources of communication due to power outages; 3) identifying the place of assembly of subordinate employees and their way of arrival (if necessary, transportation) to the specified places; 4) calculations of the forces and means necessary to ensure public safety and order, combating crime, in case of power, heating and communications outages (taking into account subordination of the personnel of separate territorial subdivisions of interregional territorial police bodies to the heads of the General Departments of the National Police); 5) determining the number and locations of police units, development of their layout on national and local roads to ensure road traffic safety and provide assistance to citizens during their evacuation in the event of a power outage, as well as taking into account the severity of weather conditions; 6) elaboration of operational plans for the protection of important social, financial, administrative buildings, objects of critical infrastructure, life activities of the population, etc., in case of power outages; performing additional police security force and assets calculations for enhanced security of protected engineering facilities to place physical security at such facilities; 7) obtaining lists of locations of safety points, heating points in from the State Emergency Service, calculating the number of personnel to ensure the protection of public order in their locations, as well as delivering lists of such locations to each police officer who will serve as part of the squad; 8) identifying places (public access areas) for possible placement in the premises of the territorial police units of persons in need of assistance (heating, access to the Internet, etc.); 9) establishing contacts with the representatives of communal services to ensure appropriate cooperation in the event of a power outage or significant complication of weather conditions; 10) submission of a request (if necessary) to the relevant military administrations on the provision of additional forces and means for ensuring public order and security, protection of objects (of territorial defense, volunteer formations of territorial communities, municipal guards, etc.); 11) warning personnel of the need to consider possible options for relocation families from cities to settlements with individual heating and the possibility of cooking for 7–10 days.
2. ***Practical measures*** (in case of power, heating and communication outages): 1) personnel meet on the signal «COMBAT ALARM», and after the briefing and setting tasks is involved as much as possible in public order and security measures, in combating crime by patrolling in public places on the service territory; 2) registration of statements and notifications on the commission of offenses and other events is carried out at the bodies (subdivisions) of the police in the registers of the unified record. When setting up the power supply and resuming work of the Information portal of the National Police of Ukraine, information in the shortest possible time are entered into the information subsystem «Unified accounting» of the Information Portal; 3) in compliance with the previously made calculations, patrol police and patrol police response teams are deployed in accordance with the scheme of their location on the highways of state and local importance in order to ensure the safety of road traffic and provide assistance to citizens during their evacuation from large populated areas considering complicated conditions; 4) protection of critical infrastructure facilities, in the first place – energy supply and vital activities of the population, is strengthened according to previously made calculations; 5) deployment of police at critical junctions and roads; 6) protection of safety points deployed by the State Service of Ukraine for Emergency Situations, as well as by local authorities, is being organized, squads that will be used for this purpose are deployed (patrol routes are approximated); 7) provision is made for maximum involvement of personnel of territorial police bodies (subdivisions) and separate units of

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interregional territorial police bodies to perform tasks to prevent street crime in the conditions of long-term power outage; 8) during the performance of police functions, provision is made for maximum use of loudspeakers to inform citizens about: air alarms in case of announcement of relevant signals by the emergency services (the sound of a siren pre-recorded on the mobile phones of policemen will be relayed through loudspeakers); location of the nearest shelters, heating stations, safety points; police units, which have premises (common access areas) that can be used as heating points; 9) police squads as well as those involved in responding to crimes and offenses are policing exclusively with flashing lights; 10) the uniform of police officers performing their duties in the dark time is equipped with light-accumulating and light-reflecting elements; 11) in case of significant deterioration of weather conditions, the work of police units is organized considering the need to change officers every 2 – 3 hours to provide the necessary time for rest, heating and eating; 12) immediate reporting of all emergency events is ensured through the available communication channels of the DOAZOR duty unit and the Situation Center of the National Police of Ukraine.

To ensure proper interaction between the bodies and departments involved in recording and investigating war crimes in the de-occupied territories of the respective region, a Coordination Headquarters is created, which includes the representatives of these bodies and departments (central and regional level), in particular chief officers of investigators' and prosecutors' groups in «basic» criminal proceedings, heads of relevant units of the prosecutor's office, pre-trial investigation and operational units.

If necessary, the establishment of this headquarters is possible through the establishment by the head of the regional prosecutor's office or by changing the existing inter-agency working group on the investigation of crimes committed in the context of armed conflict. Members of this headquarters ensure proper communication and exchange of information between departments. Operation of the headquarters is possible within a single room, which is determined taking into account logistical features of the territory.

If necessary, the headquarters should include representatives of local military civil administrations, territorial units of the State Emergency Service, expert services (without permanent deployment in the same building).

The work of investigators, prosecutors, operatives and other specialists involved in recording and investigating war crimes starts after the completion of demining measures, as well as filtering measures in de-occupied territories (detection of shadow-aligned group, collaborators, etc.).

As part of the Coordination Headquarters operation, the issue of attracting the necessary, including additional, forces and means to ensure effective work is resolved. Besides, accumulation, timely exchange, systematization and analysis of information on the results of the development of territories and investigation of crimes, planning of further work, etc. is ensured within the framework of the headquarters.

It is necessary to effectively distribute tasks between investigators of different agencies depending on their usual specialization in the course of investigation in «basic» criminal proceeding, in particular, prioritize the following activities in the work of law enforcement agencies:

investigators of the security agencies should focus on recording and investigating: attacks on infrastructure facilities necessary to sustain the civilian population, objects of cultural heritage, nuclear facilities, educational and medical facilities, granaries, as well as attacks on civilian facilities, which caused large-scale destruction and numerous victims among the civilian population; mass theft of food (grain crops, etc.); circumstances of ill-treatment or other illegal actions against prisoners of war; deportation and illegal displacement of the population; operation of the headquarters, commands' offices and command posts of enemy troops, other occupying authorities agencies;
investigators of the National Police should focus attention on recording and investigating: murders; circumstances of mass burials; sexual violence; cruel treatment of the civilian population; operation of places of mass illegal detention of the civilian population, their ill-treatment; facts of disappearance in the occupied territories; illegal deprivation of liberty; looting of property; attacks on civilian objects (except those classified as priorities of the Security Service of Ukraine);
when making a decision to entrust the investigation to the relevant pre-trial investigation bodies within the «basic» criminal proceedings of individual episodes of war crimes discovered in the de-occupied territories

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of the specified region, one should consider, among other things, the number of investigators, their workload, experience and practical skills in investigating different types of crimes;
to resolve issues regarding establishing separate groups for recording and investigating the facts of sexual violence related to the armed conflict.

III. Practical aspects

At the initial stage of the investigation, it is advisable to obtain and process information from the Security Service filtering groups, military personnel for the purpose of establishing and developing the locations of: headquarters, commandant offices and other occupation authorities' agencies; places of deployment and location of enemy artillery units, air defense, other military units of the Russian Federation; places of illegal detention of the civilian population.

At the stage of planning the work of the relevant investigative groups, one should analyze information from the Unified Register of Pre-trial Investigations (ERDR) on the facts of the commission of high-profile crimes under Art. 438 of the Criminal Code of Ukraine (cruel treatment of prisoners of war or civilians, deportation of civilian population to engage them in forced labor, pillage of national treasures on occupied territories, use of methods of the warfare prohibited by international instruments, or any other violations of rules of the warfare stipulated by international treaties).

In this context, it is worth emphasizing the features of the investigative and search activities, in particular, the inspection of the scene and interrogation.

The investigation of criminal offenses is related to the collection of proper, admissible and reliable evidence. The deployment of Russian military aggression in Ukraine actualized the search for additional sources of information about hostilities (Horska et al., 2023, p. 353). The main method of collecting them is conducting investigative (research) actions the most important of which are the inspection and interrogation. Thus, investigative inspection of buildings and structures damaged and destroyed as a result of artillery shelling and bombing, as well as interrogation of victims and witnesses of violent actions on the part of the invader are an integral part of criminal proceedings related to the investigation of war crimes.

Inspection of the scene of war crimes, in particular shelling or explosions, is the most difficult type of investigative inspection, an important and urgent investigative and search activity, which is carried out on the grounds and in the manner provided for in Art. 214, 237, 238 of the Criminal Procedure Code of Ukraine. The purpose of the examination of the facts of shelling or explosions is to record the consequences of the destruction of movable and immovable objects, the terrain, the places of death, the use of the means of warfare prohibited by international law for the further identification of the dead, assessing the damage caused, detection and seizure of items (remnants of projectiles, mines, etc.), in particular prohibited by international law, which led to the loss of life and destruction; safe transfer of such items to designated places for storage as physical evidence, as well as their destruction if necessary.

The tasks of the examination of the facts of shelling or explosions are: recording the violation of the laws and customs of war – identification of the crime scene, date and time, possible means of destruction, their type (examination of left craters and ammunition remnants); verification of the direction of fire (creating a reproduction pattern according to the configuration of the craters and the scattering of the remnants of ammunition); establishing the possible location of the means of destruction (the possible location of the means of fire destruction is determined by the firing direction (2/3 of the maximum firing range), space images of the area are studied).

Among the features of inspection and removal of objects from the site of the shelling, the following can be highlighted: emergency and rescue operations; large survey area and number of traces, in particular fragments of ammunition or explosive devices, mostly small in size; a significant number of fragments of the physical environment, which make it difficult to detect the remains of ammunition or explosive devices; victims in need of medical assistance and evacuation; adverse weather conditions (during inspection in open terrain); coming under repeated fire, possibility of explosions of additional ammunition or explosive devices and flammable substances, collapses, fires and other factors dangerous to human health and life, etc.; preparation of the inspection report outside the scene using photo and video recording materials, schematic plans, drafts and notes created, in particular, using audio and video recording devices at the scene of the incident; observance of security measures during detection, examination, extraction, transportation

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and storage of seized explosive physical evidence (Striltsiv et al., 2018, pp. 16–17; Cherniei et al., 2023, p. 94).

Inspection of the scene of an accident in this category of criminal proceedings begins first of all with measures to locate and neutralize explosive devices and ammunition that did not explode. These measures are carried out exclusively by explosives specialists (employees of the explosives service, the State Emergency Service, sappers of the Armed Forces of Ukraine, etc.). Inspection of the scene of the incident can be performed only after its examination by the indicated employees, reporting on the possibility of initiating an investigative action (compilation of the verification report) and briefing with the members of the investigative-operational group.

Typical conditions for conducting an inspection of the place where war crimes were committed envisage the work of investigators and other authorized actors (prosecutors, specialists) at the sites of destruction of civil and critical infrastructure objects, architectural monuments as a result of artillery and missile attacks, bombardment; looting and destruction of all forms of property; murders, massacres and burials; torture; presence of military personnel and mercenaries of the aggressor country; storage of military equipment and ammunition; causing damage and pollution of the natural environment (Kravchuk &Bondarenko, 2022).

During the investigation of war crimes in the de-occupied territories, interrogation can be conducted with different categories of persons who may have different status – prisoners of war, victims, witnesses, specialists, etc. At the same time, it should be noted that information about the facts of operational interest, as a rule, is the property of a limited circle of individuals who may be interested in hiding this information (Vazhynskyi et al., 2024, p. 79). In this case it is worth determining the purpose of the interrogation, which may be obtaining information about the armed aggression of the Russian Federation/or other states against Ukraine, specific episodes of violations of the laws and customs of war, the involvement of the interrogated person, examining (if available) the materials of the preliminary interrogation, interviewing the person who is planned to be interrogated or other persons, the materials of conducting other investigative (search) or covert investigative (search) actions. Interrogation plan is drawn up and an approximate list of questions is prepared considering the list of questions to be asked during the interrogation, information likely to be known to the person and the status of the person being questioned. It is necessary to prepare the place for the interrogation, determine the method of recording (handwriting, computer printing) and the need to use other objects and documents (topographic maps, photo and video materials, etc.), audio and video recording, predict the number of media for continuous recording; notify the participants of the interrogation in advance (interviewee, lawyer, translator, etc.), consider the expediency of conducting the interrogation by the investigating judge in accordance with Art. 225 of the Criminal Procedure Code of Ukraine, as well as the application of security measures.

Despite the significant number of scientific works devoted to the violation of the international humanitarian law rules during wars and military conflicts, the study of various aspects of the war crimes investigation, the features of investigating war crimes in de-occupied territories and the specific role of the National Police in this process remained out of the attention of scientists. Thus, the proposed scientific provisions and practical recommendations can be used in investigative and judicial practice, in scientific activity and the educational process when preparing the police officers to working on the de-occupied territories.

Conclusions

The activities of the National Police of Ukraine bodies and units during the investigation of war crimes in the de-occupied territories are aimed at ensuring prompt, complete and impartial investigation of war crimes, so that any perpetrator of such acts is held accountable according to his guilt, and includes a number of algorithmic actions, namely:

1) **Procedural** – initiation of criminal proceedings on the grounds of offences provided for in Part 1 and Part 2, Art. 438 of the Criminal Code of Ukraine by the pre-trial investigation body (Security Service of Ukraine, Prosecutor's Office); creation of an interdepartmental investigative group, which includes employees of the Security Service and the National Police; conducting investigative and search activities for the purpose of recording and investigating war crimes;
2) **Organizational** – preparatory (in advance) organizational direction and practical measures (in the event of power, heating and communications cuts) are conducted to ensure the National Police stable operation in the investigation of war crimes; creation of the Coordination Headquarters, which includes

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the senior officers of investigators' and prosecutors' groups, heads of relevant divisions of the prosecutor's office, pre-trial investigation and operative divisions. Accumulation, timely exchange, systematization and analysis of information on the results of developing territories and investigating crimes, planning further work, distribution of investigative (search) tasks between investigators of different agencies etc. is ensured within the headquarters;

3) **Practical** – receiving and processing information from filtering groups for the purpose of establishing and developing locations of: headquarters, commandant offices and other occupation authorities' agencies; deployment locations and locations of enemy artillery units, air defense systems, and other military units of the Russian Federation; places of illegal detention of the civilians; performing investigative and search actions (inspection of the scene of crime, interrogation); ensuring accumulation, systematization and analysis of work results within the Coordination Headquarters.

The outlined algorithm of interaction between law enforcement agencies ensures performing tasks provided for in Art. 2 of the Criminal Procedure Code of Ukraine during the investigation of war crimes in the de-occupied territories.

War is reflected not only in people's lives, but also makes adjustments in all spheres of activity. Since February 24, 2022 the functionality of the National Police of Ukraine has significantly expanded. Evacuation of people, documentation of war crimes, exhumation, demining, maintaining law and order in real conditions of active hostilities are already daily challenges for police officers.

The police are the first structure that enters the de-occupied territories, restores law and order, provides stabilization measures, conducts work with the population, and collects evidence of war crimes committed by russian aggressors and collaborators.

Therefore, the educational process in higher education institutions of the Ministry of Internal Affairs of Ukraine must meet today's challenges and train specialists who can respond them quickly and effectively. The clear algorithm of actions proposed by us, taking into account possible power, heating and communication outages when working in the de-occupied territories, is able to help both in the training of young specialists and to provide practical support to already experienced officers.

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International cooperation in public control of local governments: lessons for Ukraine

Міжнародне співробітництво в органах місцевого самоврядування: уроки для України

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Written by:
Anastasiia Kozin[1]
https://orcid.org/0009-0000-5793-6852
Serhii Kozin[2]
https://orcid.org/0000-0001-7640-4579
Tetiana Kondratiuk[3]
https://orcid.org/0000-0001-9413-1383

Abstract

The purpose of this article is to examine the legal framework and general theoretical aspects of the formation and implementation of state policy regarding public control over local self-government bodies, comparing regulations in Ukraine and European Union member states. The study employs dialectical, synthesis, and theoretical analysis methods to investigate public control in Ukraine, and systemic-structural, formal-logical, and comparative-legal methods to compare public control practices in Ukraine and other countries. The research highlights that international experience is crucial for improving the functioning of local self-government bodies in Ukraine, and public control over their activities is a factor stimulating the improvement of the implementation of their powers. The need for all countries to coordinate and improve the legal framework for effective cooperation at the municipal level is emphasized. The study notes that under martial law in Ukraine, methods of public control over the functioning of local self-government bodies are limited. Based on the analysis of the aforementioned works, forms of international cooperation in the field of public control over the exercise of local power have been determined.

Анотація

Метою статті є дослідження правового регулювання та загальнотеоретичних особливостей формування та реалізації державної політики у сфері здійснення громадського контролю за функціонуванням органів місцевого самоврядування, та співвідношення відповідного регулювання в Україні і країнах-членах Європейського Союзу. Методологія. У ході дослідження особливостей здійснення громадського контролю у визначеній сфері в Україні було використано методи діалектичний, синтезу та теоретичного аналізу; під час співвідношення громадського контролю в Україні та зарубіжних країнах було використано методи системно-структурний, формально-логічний та порівняльно-правовий метод. Результати досліджень. Акцентовано увагу на тому, що міжнародний досвід є необхідною умовою удосконалення функціонування органів місцевого самоврядування в Україні, а чинником стимулювання удосконалення реалізації власних повноважень визначеними органами є громадський контроль за їх діяльністю. Наголошується на необхідності для всіх країн світу координації та вдосконалення правової бази ефективної

[1] PhD in Law, Senior Research Fellow of the Scientific Institute of Public Law., (Kyiv, Ukraine). WoS Researcher ID: KBA-2271-2024
[2] Doctor of Law, Senior Researcher, Leading Researcher of the Department of scientific and legal expertise and legislative work of the Scientific Institute of Public Law, (Kyiv, Ukraine). WoS Researcher ID: JAC-3881-2023
[3] Candidate of Legal Sciences, docent of Department of Agricultural, Land and Environmental Law named after Academician V.Z. Yanchuk, National University of Life and Environmental Sciences of Ukraine (Kyiv, Ukraine). WoS Researcher ID: JNT-4228-2023

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Keywords: public control, policy in the field of local self-government, international municipal cooperation, forms of public control, international agreements in the field of local self-government.

співпраці на муніципальних рівнях. Практичне значення. Зазначається, що в умовах воєнного стану в Україні обмежено способи громадського контролю за функціонуванням органів місцевого самоврядування. На основі аналізу наведених праць визначено форми міжнародного співробітництва у сфері громадського контролю за здійсненням місцевої влади.

Ключові слова: громадський контроль, політика у сфері здійснення місцевого самоврядування, міжнародне муніципальне співробітництво, форми громадського контролю, міжнародні договори у сфері місцевого самоврядування.

Introduction

Recently, the functioning of local self-government bodies has been out of the public's attention due to the state of war, which Ukraine is in. In addition, the attention of the international community, which until recently was focused on reforming local self-government in Ukraine, is now focused on the war as well. Local self-government bodies are not focused on improving the life of administrative-territorial units and are in the mode of carrying out current work, and public projects that were developed to improve the functioning of cities and improve interaction between the public and municipal authorities are in a state of suspension. There is a trend of retrogression of previously introduced reforms in the field of local self-government in Ukraine. Therefore, taking into account the above, it is necessary to determine whether there are common challenges in regulating the interaction of the public and local authorities in the member states of the European Union and to offer Ukraine to borrow effective experience.

International cooperation is a necessary condition for the development of both the sphere of functioning of local self-government bodies and other spheres in the country. At the international level, a number of international agreements have been developed and adopted, which aim to ensure the effective work of local self-government bodies, and, in addition, to ensure international cooperation in the field of local self-government. In view of the above, we need to investigate this issue in connection with the specifics of our research.

One of the main tasks to be solved by science in the specified direction is the actualization of general theoretical features of public control over the exercise of local self-government bodies' own powers, increasing the effectiveness of such control by introducing the latest scientific research and advanced foreign experience into the activities of local self-government bodies. Therefore, it is necessary to focus attention on the general theoretical aspect of this problem. This is explained by the fact that public participation in power functions, in particular, public control, as a rule, is based on the data of scientific generalization, which can be the basis for understanding the essence and features of public control, means, forms and methods of its implementation.

The purpose of this article is to study the legal regulation of international cooperation during the implementation of public control over the functioning of local self-government bodies in Ukraine; identification of common and distinctive features of such public control in the member states of the European Union; study of international agreements in this area. With the help of this analysis, we aim to identify the challenges and opportunities that international cooperation opens up in this area, as well as to offer recommendations for strengthening it and increasing its effectiveness. It is expected that the results of this study will be useful to researchers, legal professionals, workers and local government officials.

This article is consist as follows: introduction, methodology, literature review, results and discussion, conclusion, references.

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Methodology

The methodological basis of the study consists of scientific special and general methods and approaches that provided an objective analysis of the subject of this study. The following methods were used to determine the subject of the research, its purpose and tasks.

The characteristics of public control in Ukraine and foreign countries were analyzed using the dialectical method. After that, it became possible to identify common and general features of the implementation of public control in Ukraine and foreign countries. Using this method, the shortcomings of the implementation of public control over local self-government bodies in Ukraine during the period of the legal regime of martial law were identified and recommendations were formed.

Methods of synthesis and analysis were used for comparison and classification. With the help of these methods, it became possible to investigate scientific views on the problem of public control in Ukraine and foreign countries. Using these methods, effective forms of eliminating the identified problem were determined through the analysis of general reasons that influenced the formation of the problem.

By the method of system-structural analysis, the powers of local self-government bodies are determined, in particular, in terms of interaction with the public during the exercise of municipal power; analyzed which of these powers require revision or other legislative regulation.

Applying the comparative-logical method, the research compares the implementation of public control over the activities of local self-government bodies in Ukraine and foreign countries, and also suggests applying effective foreign experience in Ukraine. Therefore, it should be concluded that during the study of common features of public control over the functioning of local self-government bodies in Ukraine and foreign countries, general scientific and special scientific methods were used, which ensure the reliability of the results and conclusions, namely: the dialectical method, methods of synthesis and analysis, system-structural method and comparative-logical method.

Literature Review

The issue of the development and establishment of public control over the functioning of local self-government bodies is an actual and important factor in improving the functioning of local authorities in communities. The community elects the government and must control its work as the main tool for ensuring the interests of citizens. Usually, little attention is paid to public control in the context of its implementation during the functioning of local self-government bodies, but we are convinced of the need to study this issue.

The question of the formation and development of control over the activities of local self-government bodies has been studied by scientists in many scientific works, but the issue of public control over the functioning of local self-government bodies is one that is constantly developing in the process of decentralization of power, and therefore requires constant research.

To be in a community, or a community, means to have something in common with other people, this interpretation was defined by the Canadian researcher J. Bopp & M. Bopp (2006). She looked at the community through the lens of social relations, where certain norms of behavior, values, traditions and ways of managing the economy were usually developed in a certain group of people. That is, a group of people living in the same territory and having common features of self-government can be called a community.

Ukrainian researcher O. Moroz (2008, p. 4) offers the following list of signs of a "territorial community": common territory of existence (which may include living, working, owning real estate); common territory of existence in solving life issues; psychological self-identification of each member with the community; joint communal property; payment of communal taxes.

Scientists claim (Vasiuk et al., 2020, p. 511) that communities more territorially distant from the center of the community need more and more attention in terms of ensuring rights and legitimate interests in the field of local self-government; in particular, Ukrainian villages also need proper organization of municipal power, provision of municipal services and information about ways and opportunities to control the functioning of local self-government bodies. Besides, effective foreign experience should be used in terms

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of organizing the activities of local self-government bodies, including international standards of control over their operation (Ladychenko et al., 2021).

In addition, foreign scientists emphasize the need to improve the work of local self-government bodies through the use of electronic governance and bringing the community closer to the municipal government (Scholl, 2013).

Hohol & Melnychuk (2022) examined the problems of improving the territorial organization of power as a complex and systematic step towards effective administrative and territorial organization of the state, the formation of full-fledged local government and its primary subject – the community.

We emphasize that the local self-government body is the closest institution to the community, because it implements policy at the local level and needs to adjust the functioning of the community (Lazarova et al., 2022).

Ahafonova & Irkha (2022) analyzed the political and legal conditions of realization of cooperation between communities: inner (between territorial communities) as well as international (between regions and cities abroad). In the context of European integration of Ukraine, the angle of attention of the regions is focused on the issues of attracting foreign investments, donor assistance, grants from EU institutions and joint projects with foreign partners. The authors proved that the factor of russian military aggression has led to the reorientation of the direction of international cooperation of communities from cultural, educational, informational and environmental to humanitarian and infrastructural, which are completely subordinated to the needs of wartime.

The study of the institution of local self-government has a long history and is closely related to the study of democracy at the local level. Because local self-government is the basis of the exercise of people's power on the ground. The local community is the source of local democracy and power in general. In Ukraine, in accordance with Article 140 of the Constitution of Ukraine, local self-government is carried out by the territorial community in accordance with the procedure established by law, both directly and through local self-government bodies: village, settlement, city councils and their executive bodies, that is, through a certain structural and organizational mechanism called system of local self-government (Law of Ukraine No. 254k/96-VR, 1996).

Scientists emphasize (Ladychenko & Gulac, et al., 2021) the effectiveness of foreign experience in coordinating the functioning of municipal authorities by the community.

The most thorough essence of the studied concept of territorial community is laid out in the works of O. Batanov (2008, p. 54), where it is indicated that when constructing its theoretical model, it should be borne in mind that a territorial community is a complex "cumulative" form of social organization, a collection of people (local residents) associated on a public basis within a certain territory and united by various features of a systemic nature (in particular, demographic and territorial (land) ties, legal and political ties, property (economic) and professional ties , linguistic and religious (social and cultural) connection, etc.). This association, which does not exclude a person's right to individuality, separate housing and leisure, consolidates the efforts of many to achieve the result desired by all. In other words, private goals are realized in a public legal form.

Results and Discussion

In accordance with Part 1 of Art. 140 of the Constitution of Ukraine, which defines local self-government, the following types of territorial communities can be distinguished: a territorial community of a village or a voluntary association of residents of several villages into a village community; territorial community of the village; - the territorial community of the city (Law of Ukraine No. 254k/96-VR, 1996).

Territorial communities of neighboring villages can unite into one territorial community, form single bodies of local self-government and elect a single village head. Voluntary unification of territorial communities is carried out by the decision of a local referendum of the respective territorial communities of villages. Such a decision is consent to the formation of joint bodies of local self-government, the formation of a joint budget, and the unification of communal property. Exit from the composition of the village community is

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carried out by the decision of the referendum of the relevant territorial community. It is important that territorial communities have their property rights.

Thus, Article 142 of the Constitution of Ukraine (Law of Ukraine No. 254k/96-VR, 1996) enshrines that the material and financial basis of local self-government is movable and immovable property, revenues of local budgets, other funds, land, natural resources that are owned by territorial communities of villages, towns, cities, districts in cities, and as well as objects of other common property under the management of district and regional councils.

The territorial community as a subject of regulation of the socio-economic development of the territory is endowed with functions that generally coincide with the scope of the functions of the local self-government system: rule-making function (creating charters of territorial communities, adopting normative acts regulating the activities of the community); planning, programming of the development of the administrative territorial unit of the basic level (strategies for the development of territorial communities, programs of socio-economic and cultural development); resource potential management (land, forest, water resources); development of local infrastructure; maintenance and construction of roads, water, gas supply and drainage and improvement of the territory; management of communal property belonging to the territorial community; budgetary and financial function (approving budgets and monitoring their implementation, determining local taxes and fees provided for by law); management of a network of social institutions (establishment, reorganization, liquidation); investment function (attraction of investments - state, private, international in the development of the territory); information function.

Historically, in Ukraine, the community was the main territorial unit, which performed a number of important functions, having its own governing bodies. In accordance with the decisions of community meetings, land was distributed, taxes were imposed on community members, and taxes were paid to the state.

Thus, the community, as the main element of local self-government after the completion of the decentralization reform, received a wide range of powers. A rather important factor was the fact that all sectors of Ukrainian society worked together on the reform. The following worked on the reform: the Office of the President of Ukraine, the Committee of the Verkhovna Rada of Ukraine on State Building, Regional Policy and Local Self-Government, the Ministry of Development of Communities and Territories of Ukraine, the Association of Village, Settlement Councils and United Communities, the Ukrainian Association of District and Oblast Councils, the Association of united territorial communities, the Association of Cities of Ukraine, regional state administrations, district councils, district state administrations, representatives of the "U-LEAD with Europe" program.

After the completion of the reform, territorial communities became the main link of the decentralized administrative-territorial system. Within the boundaries of the territorial community, which has been granted autonomy, the citizens of the country have a real opportunity to build their lives independently, without expecting anyone's help. As defined in the European Charter on Local Self-Government (Council of Europe, 2013) through the community, citizens learn to manage and carry out real management, manage financial affairs. It is in the community that most of the social and economic rights of citizens in a democratic society are realized.

The European successful practice of public control, in particular, of the functioning of local self-government bodies, is evidenced by the presence of a number of international documents that are used by municipal authorities and state authorities during the formation of relations between the state and the public.

The Organization for Security and Co-operation in Europe (2015) noted that effective and sustainable mechanisms for building dialogue, consultation and cooperation between civil society and authorities at all levels are important factors that enable all individuals and social groups to take participation in the democratic decision-making process. In addition, the it was emphasized that in some countries such a model works quite successfully, and the other ones should eliminate any efforts to control public initiatives.

At the same time, the Recommendations of the Committee of Ministers of the Council of Europe to the participating countries on the legal status of public organizations in Europe CM/Rec (2007)14 (Council of Europe, 2007) define the standards of participation of public associations in state and municipal government, in particular, it is established that the contribution of public associations to the affairs of

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society is carried out as through mediation between various segments of society and state authorities, to promoting changes to legislative and state policy, and through monitoring compliance with existing obligations in accordance with national and international law to provide means of achieving, promoting and protecting common interests with others. Public associations should be able to freely engage in research, education and educational activities regarding public discussions, regardless of whether their position is in line with the policy of local self-government bodies or, on the contrary, requires changes.

We propose to define the Code of Good Practice of Public Participation in the Decision-Making Process (Conference of INGOs of the Council of Europe, 2009) as the most relevant to the issue of public control over the functioning of local self-government bodies, because the defined Code enshrines public participation both in unofficial institutions, such as public organizations, associations, public initiatives, and participation in the general processes of development of public policy, which necessarily involves control. The Code suggests using the following principles of public participation in the implementation of local government, control over such activities: participation by collecting and transmitting the views of various members of the public association and interested citizens through the public association in order to influence the process of political decision-making; trust as an honest interaction between political forces and society; responsibility and transparency both on the part of the public association and on the part of state bodies at all stages of activity; independence of the public association, as it is important to recognize public associations as free and independent structures with their own goals, decisions and measures.

Article 25 of the International Covenant on Civil and Political Rights (United Nations, 1966) provides that everyone has the right and the opportunity, without any exceptions or unreasonable restrictions, to participate in the conduct of state and municipal affairs directly or through freely chosen representatives. In addition, the scope of participation includes, in particular, public associations, as well as other interested persons and parties, who should be able to make their own contribution to the development of policy principles and laws that affect or may affect them.

The Human Rights Council resolution 53/13 on civil society space (Human Rights Council, 2023) determines that special attention should be paid, among other measures, to the real and effective participation of citizens in decision-making processes. The resolution also warns countries about the need to recognize the important role of public associations in the observance of human rights, democratic norms and the rule of law, and calls on them to ensure their participation in public discussions of relevant issues.

International legislation in the field of public control and public participation in the functioning of local self-government bodies consists of:

1) Recommendations CM/Rec (2001)19 on the participation of citizens in local public life (Council of Europe, 2002) were the first tool in this area. Contains recommendations for the governments of the participating countries to implement policies that would promote public participation in local public life, and to enable local authorities to apply various participation tools within the framework of the national regulatory and legal framework.
2) Recommendation CM/Rec (2009)2 (Committee of Ministers of the Council of Europe, 2009) to the participating countries on the evaluation, auditing and monitoring, as well as the policy on participation at the local and regional levels enshrines a tool for self-assessment of citizen participation at the local level.
3) The right to participate in the affairs of local authorities was introduced by the Additional Protocol to the European Charter of Local Self-Government (Council of Europe, 2009). The Protocol defines the right to participate in the activities of local authorities, determines the means of its practical implementation, and defines the authorities and territories to which the Protocol applies. Article 1 provides for the introduction of legally binding guarantees regarding the right to participate in local self-government and states that participating countries must provide every citizen in their jurisdiction with the right to participate in the activities of local authorities.

Public participation in the democratic decision-making process is highlighted in two documents of the Council of Europe:

1) Recommendations of the Committee of Ministers on the legal status of non-governmental organisations in Europe (Council of Europe, 2007) note the important contribution that public associations make to the development and implementation of democracy and the provision of human

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rights, in particular by increasing public awareness, participation in the life of civil society, and ensuring transparency and accountability state administration bodies.

The Recommendations also determine that state and semi-state mechanisms at all levels should ensure effective and non-discriminatory public participation in dialogues and consultations regarding development goals and decisions in the field of public policy. Such participation should ensure the possibility of free expression of various opinions of representatives of civil society regarding its functioning. Such participation and cooperation should be facilitated by ensuring appropriate disclosure of official information or providing access to it; it is necessary to consult with the public during the development of primary and secondary legislation that will affect their status, funding or areas of activity.

2) The Code of Good Practice for Public Participation in the Decision-Making Process (Conference of INGOs of the Council of Europe, 2009) defines general principles, recommendations, tools and mechanisms for the active participation of NGOs in the decision-making process based on the actual experience of NGOs throughout Europe. Although not legally binding, this IMO Code on Participation provides detailed guidance on how to develop a participatory approach to decision-making at all levels. In order to facilitate the implementation of the provisions of the Code, the Committee of Ministers approved the Declaration, by which state authorities are invited to pay due attention to the provisions of the Code when taking steps to encourage the participation of NGOs in the decision-making process.

It is worth noting that judicial control is somewhat intertwined with public control over the functioning of local self-government bodies. The relevant interweaving, in particular, consists in the fact that the relevant judicial control can be implemented only in the case of filing a relevant claim with the local self-government body, and not at the initiative of the court. Therefore, it is considered that a citizen who filed such a lawsuit in court is exercising control from the community, and judicial control is only a form of public control over the functioning of local self-government bodies, etc.

Forms and types of public control are enshrined, in particular, in the Law of Ukraine "On the Voluntary Association of Territorial Communities" (Law of Ukraine No. 157-VIII, 2015) with the aim of preventing violations in the sphere of the exercise of powers by local self-government bodies using means of public influence.

The community should have all the opportunities to control and influence the functioning of the local self-government body through peaceful gatherings, public hearings, participation of community representatives in discussions, formation of public councils at state bodies, etc. in order to protect the interests of the community; the realization of this right must be ensured to the community. Public control is an effective way of ensuring the realization of community interests during the functioning of local self-government bodies. Taking this into account, state policy in the specified sphere should be formed.

There is no systematization of legislation in the field of control over the activities of local self-government bodies, as the corresponding control norms are scattered among legislative acts that determine the legal status and powers of each of these bodies separately.

The effectiveness of the functioning of the local self-government body as a whole is achieved through control. All three branches of government in Ukraine provide for control over individual powers of the local self-government body, in particular through parliamentary control, state control and judicial control, but only public control remains an imperfectly defined regulatory mechanism.

Conclusions

Summarizing, we note that control over the activities of local self-government bodies in Ukraine is a necessary condition for maintaining a high level of application of the principle of decentralization of power. Today, the Charter on Local Self-Government is the basis of the legal regulation of this activity. Based on the analysis of the cited works, the methods and forms of the relevant control are determined. It is noted that international experience is a necessary condition for improving the functioning of local self-government bodies in Ukraine, and public control over their activities is a factor stimulating the improvement of the implementation of their own powers by certain bodies. It is concluded that the coordination and improvement of the legal framework of effective cooperation at the municipal levels is an important aspect of the proper functioning of local self-government bodies. In the conditions of martial law

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in Ukraine, it is proposed to restore limited methods of public control over the functioning of local self-government bodies, and forms of international cooperation in the field of public control over the implementation of local government are proposed.

Important directions for further research remain the study of issues of international experience in improving the functioning of local self-government bodies in Ukraine in terms of ensuring public control; improvement of implementation of own powers by certain bodies through the systematization of legislation in this area; and ensuring coordination and improvement of the legal framework for effective cooperation at the municipal levels of the countries.

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Challenges and paradoxes in the regulation of scientific research in the EU: a comprehensive analysis

Виклики та парадокси в регулюванні наукових досліджень в ЄС: комплексний аналіз

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Written by:
Yana Tytska[1]
https://orcid.org/0000-0001-5777-8225

Abstract

This article analyzes the legal regulation of scientific research in European Union law, examining the challenges and paradoxes the EU faces in this area. Through a systematic analysis of normative and programmatic documents, the crucial influence of EU law on shaping international scientific research standards is revealed. The study highlights the evolution of the European Research Area and the fundamental role of the Horizon Europe program in promoting scientific excellence and innovation. The findings have significant implications for EU research policy and its international cooperation in science and technology. The author applies a complex methodology including analysis and synthesis, structural, formal-legal methods, as well as approaches of scientific deduction and induction. The author argues that EU law has a significant impact on the development of international standards for scientific activity. Despite the absence of imperative supranational competence in the field of science, the EU has facilitated the formation of subsidiary mechanisms for funding and supporting scientific activity, leading to the establishment of sustainable institutions and mechanisms within the European Research Area and EU program systems such as "Horizon Europe", which has resulted in a substantial evolution of standards for scientific activity. The author states that this primarily concerns scientific ethics, multiculturalism and non-discrimination, the evolution of views on transnational research, and the formation of a sustainable regime for funding and evaluating scientific projects.

Анотація

У цій статті аналізується правове регулювання наукових досліджень у праві Європейського Союзу, досліджуються виклики та парадокси, з якими стикається ЄС у цій сфері. Шляхом системного аналізу нормативних та програмних документів виявлено вирішальний вплив права ЄС на формування міжнародних стандартів наукових досліджень. Дослідження підкреслює еволюцію Європейського дослідницького простору та фундаментальну роль програми Horizon Europe у просуванні наукової досконалості та інновацій. Отримані результати мають значний вплив на дослідницьку політику ЄС і його міжнародну співпрацю в галузі науки і технологій». У науковій статті автором використаний програмний, герменевтичний, прогнозний, порівняльний та системний аналіз відповідних регламентів та рекомендацій ЄС, як складової сучасної системи права ЄС й та застосоване комплекс методів аналізу та синтезу, структурні, формально-юридичні методи, а також підходи наукової дедукції й індукції. Автором доведено, що право ЄС робить істотний вплив на розвиток міжнародних стандартів наукової діяльності; що, попре відсутність у ЄС імперативної наднаціональної компетенції у сфері науки, сприяло формуванню субсидіарних механізмів фінансування та підтримки наукової діяльності привело до формування сталих інституцій та механізмів Європейського дослідницького простору та систем програм ЄС, таких як «Горизонт Європи», та, відповідно, призвело до істотної еволюції стандартів наукової діяльності. Автор констатує, що насамперед це

[1] Doctor of Legal Sciences, Associate Professor of the Department of State and Legal Disciplines, Faculty of Law and Economics, International Humanitarian University, Ukraine. WoS Researcher ID: GHD-8469-2022

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Keywords: "Horizon Europe", European Commission, European Research Area, scientific ethics, scientific research.

стосується наукової етики, мультикультуралізму та недискримінації, еволюції поглядів на транснаціональні дослідження та формування сталого режиму фінансування та оцінки наукових проектів.

Ключові слова: «Горизонт Європи», Європейська комісія, Європейський дослідницький простір, наукова етика, наукові дослідження.

Introduction

Current issues of international legal cooperation in the dimension of scientific research and scientific inquiry have yet to become the subject of systematic, comprehensive analysis not only within the doctrine of international law, but also in the context of the modern concept of European Union (EU) law.

At the same time, the importance of relevant mechanisms and institutions in the context of the correlation of the contractual model of supranational influence on scientific research and the corresponding programmatic and organizational models of European law, among other things, regarding the regulation of processes, forms, and mechanisms of scientific research in the context of current acts and project work, is undeniable.

Therefore, the subject of the article is the legal regulation of scientific research in the normative and programmatic documents of the EU, and its aim is to identify the features of such legal models in EU law. The article systematically examines the challenges and paradoxes faced by EU law in the context of comprehensive regulation of scientific inquiry as a process, and in outlining the modern balance between scientific inquiry and the practical need for relevant resources.

To achieve this goal, the following main research tasks should be implemented:

- Identify the challenges and paradoxes faced by EU law in the context of regulating scientific inquiry;
- Investigate the issues of maintaining balance in the relevant normative mechanisms of EU competence, national sovereignty, and academic autonomy;
- Outline the role of the European Research Area and the dimension of its normative model of activity;
- Identify the specifics of the "Horizon Europe" program and the role of programmatic regulation in forming relevant EU standards.

The article consists of the following sections:

Theoretical Framework or Literature Review

The issue of regulating scientific inquiry in legal activities has been sporadically addressed by modern Ukrainian researchers such as Babin (2019) and Plotnikov et al. (2022), but comprehensive studies remain lacking. Mentions of this regulation appear in UN system documents (Tytskaya & Babin, 2023; 2024) and in analyses of counteracting Russian aggression (Babin et al., 2019; 2021a; 2021b; 2023). Expert institutions have raised relevant issues with UN Special Rapporteurs, highlighting the right to science and systematic research in international legal contexts (Plotnikov et al., 2022; Chvaliuk et al., 2023). UN Special Rapporteur Professor A. Xanthaki's 2024 report emphasized the importance of international treaties containing science-related provisions and advocated for open science, which encourages collaboration between scientists and the public, enhancing inclusive scientific processes. This open science approach aligns with certain EU documents but has yet to be systematically implemented, even at the doctrinal level.

Methodology

This study aims to develop a high-quality scientific product by addressing specific issues related to the normative, programmatic, and politico-legal regulation of scientific research processes within the context of EU law. To achieve this, a comprehensive, comparative, and systematic analysis of historical, current, and projected EU documents will be conducted, focusing on their role in European and international law.

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The methodology involves:

Utilizing scientific methods of analysis and synthesis to address challenges and paradoxes in EU law regarding scientific inquiry.

Applying structural and comparative methods to study the balance between EU competence, national sovereignty, and academic autonomy.

Employing formal-legal, programmatic, predictive, and hermeneutic methods to analyze the European Research Area's normative model.

Using programmatic and systematic methods, along with scientific deduction and induction, to evaluate the "Horizon Europe" (2024) program and its influence on EU standards.

Primary sources will include authentic texts of founding treaties, secondary EU law acts, and official EU information. The research will systematically search, organize, and compare these sources to reflect the actual state of EU scientific activities, ensuring a comprehensive understanding of the regulatory frameworks and their practical implications.

Results and Discussion

The primary legal structure for scientific activities in the EU is rooted in its foundational treaties, which will be studied in detail in the article. They provide detailed regulations of scientific and technological progress. The focus is on advancements in health, safety, environmental protection, consumer rights, and environmental policy. Specific rules address strengthening the scientific and technological foundation through the creation of a unified research area.

Key findings include:

This research area aims to enable the free movement of researchers, scientific knowledge, and technology, enhancing competitiveness, particularly in industry.

The EU encourages collaboration with non-member countries and international bodies in research, technological development, and demonstration projects.

The research area is supported by various strategic documents, setting priorities and principles for scientific activities.

A significant funding source for research and innovation is a major program with a substantial budget, succeeding a previous similar initiative.

The freedom of scientific research is emphasized, although its application has been limited, with notable judicial interpretations in specific cases.

Conclusion

Influence of EU Law on International Scientific Standards:

EU law significantly impacts international scientific standards through mechanisms that fund and support scientific activities. Institutions like the European Research Area and relevant programs have advanced ethical standards, multiculturalism, non-discrimination, and sustainable funding for scientific projects. These standards are implemented internationally through agreements, crucial for the integration of new member states.

Challenges in EU Scientific Research Law:

A primary challenge in EU scientific research law is balancing EU competence, national sovereignty, and academic autonomy. Generalized norms on scientific activity and academic freedom reflect the EU's largely

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advisory role. The delicate balance between EU interests and national sovereignty is particularly critical in security and defense research, highlighting the need for precise legal regulation.

The European Research Area:

Established by a significant treaty, the European Research Area coordinates EU and member state competencies while promoting academic autonomy. Developed through various initiatives, it now operates under strategic documents emphasizing programmatic regulation.

Programmatic Regulatory Dimension:

Programmatic regulation is vital for implementing EU scientific competencies. Specific regulations define the financial-legal framework, ensuring efficient use of funds in supporting research and innovation activities, extending beyond mere regulatory practice.

Theoretical Framework or Literature Review

Among the works of modern Ukrainian researchers, this issue was mentioned in the works of Babin (2019) and Plotnikov et al. (2022), but comprehensive and monographic studies of these issues have not yet been conducted. Separate mentions of attempts to regulate scientific inquiry in the legal activities of regional supranational structures can be seen in the documents of specialized institutions and other organizations of the UN system (Tytskaya, & Babin, 2023; Tytskaya, & Babin, 2024) and in the analysis of forms of systematic counteraction to Russian aggression (Babin, Chvaliuk, & Plotnikov, 2021a; Babin, Plotnikov, & Prykhodko, 2023; Babin, 2019; Babin, B., Chvaliuk, & Plotnikov, 2021b), but they were extremely fragmentary.

Relevant issues were raised in appeals by expert institutions to UN Special Rapporteurs, who attempted to summarize relevant findings (Plotnikov, Chvaliuk, & Babin, 2022; Chvaliuk, Plotnikov, & Babin, 2023) regarding the right to science and the conduct of systematic scientific research in the international legal dimension and with the involvement of supranational economic associations such as the EU. In this context, UN Special Rapporteur Professor A. Xanthaki in her report A/HRC/55/44 to the UN Human Rights Council in 2024 on the “Right to Participate in Science” emphasized that many international treaties not belonging to the international human rights law system also contain science-related provisions, establishing guarantees regarding information, participation, education and awareness, as well as benefit-sharing and responsibility (Xanthaki, 2024). This statement should be taken into account when studying the component of EU law, which has an obvious international legal dimension, including the founding treaties of the EU.

Therefore, in light of Special Rapporteur A. Xanthaki’s position, her theses on the importance of open science deserve attention, particularly the expanded collaboration between scientists and social subjects outside the scientific community. This collaboration relies on the use of open methods and tools that are part of the research cycle and aims to make the scientific process more inclusive, engaging a broader range of interested public representatives through new forms of cooperation and joint work (Xanthaki, 2024). The UN Special Rapporteur stated that open science lays the foundation for the participation of individual citizens and their communities in the knowledge creation process, enhancing dialogue between scientists, policymakers, practitioners, entrepreneurs, and the public. This provides all participants with a voice in research that addresses their concerns, needs, and aspirations. Similar approaches are observed in certain EU documents.

Moreover, in the framework of the systematic analysis of the work of statutory bodies and specialized EU programs in the concept of regulating scientific activity, the provisions of report A/HRC/55/44 regarding scientific-political interaction become relevant. This interaction is an important way to achieve decision-making participation by involving all relevant stakeholders and providing opportunities for informed public participation and ensuring policy development in line with the precautionary principle when science cannot provide sufficient data (Xanthaki, 2024).

However, these proposals have yet to receive systematic implementation even at the doctrinal level. In the same report A/HRC/55/44, as the current key document on the international legal dimension of scientific activity, the aspects of EU regulatory and programmatic activities in scientific research are hardly highlighted, and even in the proposals, this report does not mention supranational economic integration

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formations. Furthermore, the role of EU law aspects has not been systematically reflected in the works of contemporary authors who have studied aspects of scientific activity in international law, including works by Ackerman (Achermann, & Besson, 2023), S. Besson (2023), Plozza (2023), Shaver (2010; 2015), and others.

Methodology

To develop and process a relevant new and high-quality scientific product and to systematically and fully achieve the goals and objectives of this publication within the relevant scientific discourse, it is necessary to outline specific and special issues of normative, programmatic, and politico-legal regulation of the processes, models, and mechanisms of scientific research in the context of the relevant sources of EU law. To achieve this goal, a comprehensive, comparative, and systematic analysis of existing historical, current, and project documents of the EU as part of the modern system of European legal regulation should be conducted. Simultaneously, a comparative and systematic analysis of acts of European law as an integral and significant factor influencing the formation of the modern comprehensive system of international law should be carried out.

Regarding the phenomenon of challenges and paradoxes faced by EU law in the context of regulating scientific inquiry, an appropriate set of scientific methods of analysis and synthesis should be applied.

To study the issue of maintaining balance in the relevant normative mechanisms of EU competence, national sovereignty, and academic autonomy, structural and comparative methods should primarily be used. In the format of the aspects of the role of the European Research Area and the dimensions of its normative model of activity, formal-legal, programmatic, predictive, and hermeneutic methods were used in their entirety.

Concerning the normative reflection and identification of the specifics of the “Horizon Europe” program and the role of programmatic regulation in forming relevant EU standards, programmatic and systematic methods and approaches of scientific deduction and induction should be established. The key sources for this scientific research should be the authentic texts of the founding treaties and secondary EU law acts, official information on the activities conducted by EU bodies and within EU programs, available on official EU resources. Therefore, a search and systematization of relevant normative sources should be conducted.

In the context of the systematic and multi-vector format of such normative and programmatic sources, it is necessary to carry out a consistent structural search for facts and forms of their reflection on all categories of science and scientific activity. Simultaneously, it is crucial to systematically, comprehensively, and promptly compare the described models of organizational and functional content of the relevant activities of EU structures and subdivisions, individual EU officials, with the actual situation and practical state of affairs in the relevant EU activities and their reflection in available open sources.

Results and Discussion

The EU legal system is based on founding treaties; these two fundamental agreements address aspects of scientific activity, but in slightly different formats. The Treaty on European Union briefly mentions science in part 3 of Article 3, where it states that the Union promotes scientific and technological advance (European Union, 2012a); this can be partly explained by the fact that scientific activity is not allocated to either the exclusive or complementary competence of the EU.

The Treaty on the Functioning of the EU mentions science both in the context of the need to rely on scientific achievements and concerning the EU’s competence in scientific research. Article 114 of the Treaty on the Functioning of the EU stipulates that the European Commission’s proposals to the European Parliament and the Council of the EU regarding health, safety, environmental protection, and consumer rights, in the dimension of the EU internal market, should take into account, in particular, any new developments based on scientific facts (European Union, 2012b).

Additionally, according to Article 191 of the Treaty on the Functioning of the EU, the preparation of the Union’s environmental policy must consider available scientific and technical data. Furthermore, according to Article 338 of this Treaty, EU statistical activities must be carried out with adherence to, among other things, scientific independence (European Union, 2012b).

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However, scientific activity itself is regulated by Chapter 19 of the Treaty on the Functioning of the EU; according to its Article 179, the Union shall have the objective of strengthening its scientific and technological base by creating a European Research Area (ERA) in which researchers, scientific knowledge, and technology freely circulate, and it shall encourage it to become more competitive, particularly in the field of industry, while promoting all the research activities deemed necessary, based on other parts of the treaties concerning EU competencies (European Union, 2012b).

To achieve these tasks, Article 180 of this Treaty mandates the Union to promote cooperation with third countries and international organizations in research, technological development, and demonstration at the EU level. Article 181 adds the need for the coordination of national policies with EU policies concerning research activities, and Article 182 provides for the creation of a multi-annual framework program that defines all EU actions, approved by the European Parliament and the Council of the EU, establishing goals in science and technology (European Union, 2012b).

The format of the program is chosen intentionally, as the EU sets the overall maximum amount and detailed rules for the financial participation of the Union in the framework program and the respective shares in each of the envisaged actions, using material incentives rather than coercion to foster interstate cooperation (European Union, 2012b). In addition to such programs, the European Parliament and the Council of the EU may establish the measures necessary for the implementation of the ERA and adopt decisions concerning additional programs involving only certain Member States, which finance these programs with the possible participation of the Union. According to Article 190 of the described Treaty, at the beginning of each year, the European Commission sends a report to the European Parliament and the Council of the EU, which includes information on research and technological development activities and the dissemination of results over the previous years and the work program for the current year (European Union, 2012b).

The provisions of the EU Charter of Fundamental Rights are also of exceptional importance, which in Article 13 states that the arts and scientific research shall be free of constraint, and that academic freedom shall be respected. Moreover, the preamble to this document notes that in view of social changes, social progress, and scientific and technological development, it is necessary to enhance the protection of fundamental rights, making them more clearly expressed (European Union, 2000a).

Regarding the European Research Area (ERA), it is worth noting the European Commission's considerations, according to which, following the inclusion of the aforementioned provisions into the Treaty on the Functioning of the EU by the Lisbon Treaty and their entry into force in 2007, the European Commission developed the ERA Roadmap and the National ERA Action Plans for 2015-2020. In 2019, the ERA was updated through the adoption of the Pact for Research and Innovation in Europe and the Council of the EU's conclusions on the future governance of the ERA by the Council, according to the first ERA Policy Agenda for 2022-2025 (European Commission, 2024).

The ERA itself was formalized by the Council's Resolution of June 15, 2000, 2000/C205/01, which proposed that the European Commission present further proposals on the topics covered by the ERA (European Union, 2000b). Subsequently, the Council's conclusions of December 11, 2012, acknowledged the necessity of investing 3% of the EU's GDP in research and development by 2020. In these conclusions, the Council stated that open competition at the national level is crucial to getting the maximum return on public money invested in research (European Council, 2012)

The ERA Roadmap for 2015-2020 was defined by the European Commission as a living document that provides guidance to Member States in structuring the implementation of the ERA at the national level and is not an end in itself; it was declared that it will be regularly updated, adapted, and improved (European Council, 2020).

The ERA Roadmap established six priorities: "Effective National Research Systems"; "Jointly Addressing Grand Challenges" and "Optimal Use of Public Investments in Research Infrastructure"; "Open Labour Market for Researchers"; "Gender Equality and Gender Mainstreaming in Research"; "Optimal Circulation and Transfer of Scientific Knowledge"; and "International Cooperation". Special attention was given to "research infrastructure", which "is at the heart of the knowledge triangle of research, education, and innovation" (European Council, 2010a).

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Additionally, in May 2010, the Council of the EU, in its conclusions, initiated six initiatives within the framework of ERA development, namely "Climate Knowledge for Europe", "Healthy and Productive Seas and Oceans", "More Years, Better Lives – The Potential and Challenges of Demographic Change", "The Microbial Challenge – An Emerging Threat to Human Health", "Urban Europe – Global Challenges, Local Solutions", and "Water Challenges for a Changing World" (European Council, 2010b). In October 2010, the Council of the EU adopted three more joint programs to develop the ERA, specifically the initiatives "Agriculture, Food Security, and Climate Change", "Cultural Heritage and Global Change – A New Challenge for Europe", and "Healthy Diet for a Healthy Life" (European Council, 2010b).

The Pact for Research and Innovation in Europe was adopted by the Council of the EU's recommendation 2021/2122 of November 26, 2021 (European Union, 2021). This Pact, which specifies the EU's position on the ERA, declared that over the past two decades, the implementation of the ERA has contributed to significant achievements in areas such as research infrastructures, open science, transnational and international cooperation, gender balance in research activities, joint programming, research careers and researcher mobility, as well as structural reforms.

The Pact states that international cooperation through the ERA should take into account the priorities of the EU's external relations, based on multilateralism and balanced mutual openness, and should promote a level playing field and reciprocity, based on fundamental values and shared framework conditions, which is of exceptional importance in the context of Ukraine's European integration aspirations. Among other things, the Pact describes the values and principles of research and innovation in the EU and emphasizes that regarding the ethics and integrity of scientific research, they should be conducted without undue interference and highlights the responsibility of EU states to protect researchers from biases and methodological shortcuts, as well as counter the spread of pseudoscience and misinformation (European Union, 2021).

The Pact also sets out priority areas for joint actions in the EU regarding scientific activities; in this context, to deepen the functioning internal market for knowledge in the EU, it prescribes seeking the introduction of open access to scientific publications and research data, their multilingualism, and further development and integration of the basic digital infrastructure and services in the scientific field (European Union, 2021).

Thus, the role of the Pact is not limited to a coordinating function in the context of establishing common principles and values of the EU regarding scientific activities; this document has a significant programmatic function, and within its framework, the further evolution of the ERA and the strengthening of its implementation efficiency and regulatory content takes place.

In January 2024, the European Commission launched a new ERA Policy Platform, as a specialized one-stop shop providing a comprehensive overview of current ERA policies, activities, and achievements; this Policy Platform became part of the new governance structure of the ERA and the Pact for Research and Innovation; it aims to provide up-to-date information on the status of ERA Policy implementation and on the joint actions of EU structures in this direction (European Research Area, 2024). In the context of the ERA, the new EU White Paper on expanding support for research activities using dual-use technologies is also of significant importance (Research and innovation, 2024).

In addition to regulating scientific activities within the ERA framework, EU documents pay considerable attention to scientific research within the framework of the "Horizon Europe" program, the EU's key program for funding research and innovation with a budget of 95.5 billion euros. In 2018, the European Commission proposed an ambitious research and innovation program to replace the previous "Horizon 2020", which operated from 2014 and had a budget of 80 billion euros; in March and April 2019, the European Parliament and the Council of the EU reached a preliminary agreement on "Horizon Europe" and achieved a political agreement on December 11, 2020, and began adopting EU legal acts (Horizon Europe, 2024).

The key EU document concerning "Horizon Europe" is Regulation (EU) 2021/695 of the European Parliament and the Council of the EU of April 28, 2021, establishing this Framework Program for Research and Innovation, which, among other things, repealed Regulations (EU) No 1290/2013 and (EU) No 1291/2013 regarding "Horizon 2020" activities. Regulation 2021/695 set the goal of "Horizon Europe" to "ensure scientific, technological, economic, environmental, and societal impact" concerning "maximizing

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the added value of EU investments in research and innovation" (European Parliament and of the Council, 2021).

Regulation 2021/695 prescribes that the "Horizon Europe" program supports research work integrated with "adherence to relevant provisions within the framework of the World Trade Organization", and research concepts, including experimental development, within the Program should "be used in accordance with the Frascati Manual developed by the Organization for Economic Co-operation and Development, while the concept of innovation should be used in accordance with the Oslo Manual, developed by the same Organization (European Parliament and of the Council, 2021).

Regulation 2021/695 emphasizes that throughout the entire Program, administrative simplification should be continually pursued, particularly reducing the administrative burden for beneficiaries, and provides that the existing system of reimbursing actual personnel costs should be further simplified, and the types of funding and implementation methods should be chosen based on their ability to achieve the specific objectives of the actions and results, taking into account, in particular, the control costs, administrative burden, and expected risk of non-compliance (European Parliament and of the Council, 2021).

Regulation 2021/695 mandates compliance with the EU Charter of Fundamental Rights during the Program's implementation, taking into account Article 13 on the freedom of scientific research, promoting respect for academic freedom in all countries benefiting from its funds, and reducing the use of animals in research and testing with the goal of ultimately replacing their use. For this purpose, the document requires following the positions of the European Group on Ethics in Science and New Technologies, the EU Agency for Fundamental Rights, and the European Data Protection Supervisor during the Program's implementation (European Parliament and of the Council, 2021).

It is important to add that Regulation 2021/695 provides in Article 2 a series of definitions in the field of scientific research. According to this document, "research infrastructure" means facilities that provide resources and services for research communities to conduct research and foster innovation in their fields, including associated human resources, major equipment or sets of instruments; knowledge-based facilities such as collections, archives, or scientific data infrastructures; computing systems, communication networks, and any other infrastructure of a unique nature and open to external users, necessary to achieve excellence in research activities. The Regulation clarifies that research infrastructure may, where appropriate, be used beyond research, for example, for education or public services.

The Regulation describes the Program's goals, which include the development and promotion of scientific excellence, support for the creation and dissemination of high-quality new fundamental and applied knowledge, skills, technologies, and solutions, support for training and mobility of researchers, among others. This includes the establishment of the European Innovation Council, which shall operate according to the principles of clear added value, autonomy, capacity for risk, efficiency, transparency, and accountability (European Parliament and of the Council, 2021).

According to Regulation 2021/695, responsible management of research data must be ensured according to the principles of findability, accessibility, interoperability, and reusability, with attention to long-term data preservation. Additionally, the Regulation 2021/695 details aspects of ownership of research results produced under the Program and the issues of their utilization and access (European Parliament and of the Council, 2021).

To assess the effectiveness of the Program's funding, Regulation 2021/695 provides in Article 49 for the appointment of independent external experts, who shall be identified and selected on the basis of calls for expressions of interest from individuals and through calls to relevant organizations such as research agencies, research institutions, universities, standardization organizations, civil society organizations, or enterprises to establish a database of candidates (European Parliament and of the Council, 2021).

According to Article 52 of Regulation 2021/695, the Programs evaluation should be conducted in a timely manner to inform the decision-making process regarding the Program, the next Framework Program, and other initiatives related to research and innovation. It is stipulated that the interim evaluation of the Program shall be conducted with the assistance of independent experts selected through a transparent process as soon as sufficient information on the Program's implementation is available, but no later than four years after the start of its implementation (European Parliament and of the Council, 2021).

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As reported by the European Commission in 2022 concerning the dissemination and exploitation strategy for "Horizon Europe", these activities should occur within an integrated system, offering individual support services and providing tools aimed at enhancing the visibility and recognition of successful results. Additionally, the strategy should shape the European Commission's framework for collecting and utilizing the program's outcomes (Publications Office of the European Union, 2022).

It should be noted that the EU Community Research and Development Information Service (CORDIS) is crucial for implementing the European Research Area (ERA) and "Horizon Europe". CORDIS is the primary source of European Commission project results funded by EU research and innovation framework programs. It maintains a structured, publicly accessible repository of all project information managed by the Commission, including project factsheets, participants, reports, results, and links to open-access publications. CORDIS is managed by the Publications Office of the EU on behalf of the European Commission's Directorate-General for Research and Innovation.

However, the Directorate-General for Research and Innovation is not the only executive body of the EU with competence in scientific activities. The relevant mandate also extends to the European Commission's Directorate-General for Climate Action, Directorate-General for Communications Networks, Content and Technology, Directorate-General for Defence Industry and Space, Directorate-General for Digital Services, Directorate-General for Education, Youth, Sport, and Culture, European Climate, Infrastructure and Environment Executive Agency, and European Education and Culture Executive Agency.

Furthermore, Article 13 of the Charter of Fundamental Rights of the EU, "Freedom of the Arts and Sciences", has not significantly developed in the practices of the EU Court andtheadministrativeactivitiesoftheEuropeanCommissionconcerningguaranteesagainstrestrictionsonscientificresearchorrespectforacademicfreedom. The only existing ruling where Article 13 was used to protect academic freedom was in the case C-66/18 "European Commission v. Hungary" on October 6, 2020, which concerned national regulation of university activities.

In this case, the EU Court annulled Hungary's 2017 law prohibiting foreign higher education institutions outside the European Economic Area from conducting teaching activities in Hungary that lead to qualifications, and required such activities to be authorized based on specific international agreements with Hungary. Even in this single case, the EU Court primarily referred not to Article 13 of the Charter of Fundamental Rights of the EU but to Hungary's violation of Article XVII of the General Agreement on Trade in Services, annexed to the Agreement Establishing the World Trade Organization.

This cautious application of Article 13 of the Charter is explained by Toggenburg (2020), who notes that the relevant powers of the EU in the fields of arts and sciences are modest and defined by the principle of subsidiarity. Additionally, the text of Article 13 is quite controversial, as it is unclear to what extent national authorities may impact academic freedom, which "should only be respected". However, this researcher reasonably adds that the role of science extends beyond freedom of speech and the right to education, being crucial for a vibrant democracy. In the context of the Charter, academic freedom encompasses more than just the freedom to hold opinions within the university; as noted in case C-66/18, such freedom includes not only autonomous research and teaching free from state interference but also their institutional and organizational frameworks (Court of Justice of the European Union, 2020).

Further Scientific Research

The regulation of scientific activity and cooperation in EU law is crucial for understanding relevant international standards and for Ukraine's European integration. The ongoing evolution of normative models in EU law and their relevant doctrinal reflections should be the subject of thorough additional scientific research. These transformations of relevant universal international standards should form the basis for subsequent scientific investigations.

The further goal of such research should be the methods and forms of implementing the standards for organizing scientific activity embodied in EU programmatic documents in the context of Ukraine's agreements with the EU, Ukraine's participation in EU programs, and the general dimension of Ukraine's European integration. This is significant for the development of Ukrainian national legislation. However, the study of programmatic legal regulation as a phenomenon of relevant legal, organizational, and financial models remains highly fragmented.

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Next research perspectives gain importance considering the existing limitations and the wide variability of identified bilateral programs and agreements between Ukraine and European countries concerning scientific cooperation, including interagency agreements. The research must consider the current conservatism in scientific studies of EU law and the outdated nature of Ukrainian legislation regarding interaction with foreign academic institutions and the supranational dimension of scientific research.

The need for systematization and intensification of research and expert work in academic freedom and mobility is further emphasized by the expansion of project activities of relevant EU structures and institutions in Ukraine and the institutional strengthening of EU programs and projects in Ukraine. These programs, funded by EU funds, are becoming system-forming phenomena for the organization of Ukrainian science and research activities as a whole.

In contemporary complex conditions, there is a special need for systematic counteraction to the destructive manifestations and provocations of the aggressor state and other violators of international law, which are observed in European scientific structures, including the misuse of mechanisms for organizing scientific cooperation, as exemplified by provocations in the European Space Agency. Therefore, the issue of further improving the environmental protection mechanisms of the EU and its member states to effectively counter such provocations becomes particularly important. Additionally, the further evolution of doctrinal reflection on the state of affairs regarding European scientific standards can influence the development of new universal international agreements on the systematic regulation of scientific research.

Practical Implications and Ukraine's European Integration

The practical implications of the study's findings on the EU's legal framework for scientific activities underscore the importance of international cooperation and adherence to scientific independence, particularly in the context of the European Research Area (ERA). The ERA's objectives to strengthen the EU's scientific and technological base are achieved through coordinated national policies, multi-annual framework programs, and adherence to ethical and methodological standards. These frameworks not only facilitate the free circulation of researchers and knowledge but also enhance competitiveness, especially in industrial fields.

For Ukraine, the implications are significant as it continues its journey towards European integration. The alignment with EU scientific standards and participation in programs like Horizon Europe can propel Ukraine's research capabilities and technological advancements. Ukraine's integration into the ERA implies greater access to resources, funding, and collaborative opportunities, which are crucial for its scientific and technological development.

Ukraine's European integration in the research context has seen several milestones. The Association Agreement between Ukraine and the EU, effective since 2017, includes provisions on scientific cooperation. Furthermore, Ukraine's participation in Horizon 2020 and its successor, Horizon Europe, highlights the practical steps being taken towards integration. The increased focus on research and innovation is evident in the joint initiatives and projects funded by these programs, fostering scientific excellence and innovation in Ukraine.

Moreover, the ERA's emphasis on international cooperation aligns with Ukraine's strategic goals. The Pact for Research and Innovation in Europe, with its focus on multilateralism and balanced mutual openness, provides a robust framework for Ukraine to deepen its scientific ties with the EU. This integration supports Ukraine's ambition to enhance its research infrastructure, promote gender equality in research, and address grand societal challenges through joint efforts.

As Ukraine advances in its European integration, it must align its national research policies with EU standards, ensuring compliance with the principles of scientific independence, ethical research, and open access to scientific publications. These steps will not only bolster Ukraine's scientific community but also contribute to the broader European research landscape, fostering innovation and addressing common challenges collaboratively.

Thus, the practical implications of the EU's legal framework for scientific activities extend beyond the regulatory scope, offering a roadmap for countries like Ukraine to integrate seamlessly into the European scientific ecosystem. This integration promises enhanced research capabilities, increased funding

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opportunities, and a collaborative approach to scientific and technological advancements, ultimately contributing to Ukraine's sustainable development and its position within the European Union.

Limitations of the Study

While the study provides a comprehensive analysis of the EU's legal framework for scientific activities, it does have several limitations that could be addressed in future research:

Lack of Empirical Data on Implementation: The study primarily focuses on the legislative and programmatic frameworks established by the EU. However, there is a significant lack of empirical data on the practical implementation of these standards across different Member States and their impact on scientific activities. Future research could benefit from case studies or empirical analyses that evaluate how these standards are being adopted and enforced on the ground.

Variable Adoption Among Member States: The study does not sufficiently address the variability in the adoption and implementation of EU scientific standards among different Member States. The degree to which countries comply with and benefit from these standards can vary significantly, and this variability can influence the overall effectiveness of the EU's scientific policies. Detailed comparative studies could provide deeper insights into these discrepancies.

Impact on Non-EU Countries: While the study briefly touches upon Ukraine's integration into the European Research Area, it does not fully explore the implications for non-EU countries involved in EU scientific programs. Further research could analyze the specific challenges and opportunities faced by these countries, especially in terms of aligning their national policies with EU standards and maximizing the benefits of participation in EU programs.

Interdisciplinary and Cross-Sectoral Collaboration: The study could expand on the role of interdisciplinary and cross-sectoral collaboration within the EU's scientific framework. While it mentions various directorates and executive agencies, more detailed analysis of how these entities collaborate and coordinate efforts could enhance the understanding of the EU's holistic approach to scientific research and innovation. Evolving Legal and Policy Landscape: The study captures the EU’s legal and policy landscape up to early 2024. However, given the dynamic nature of EU policies, continuous updates are essential. Future research should include ongoing developments, new policy initiatives, and their impacts on the scientific community within and outside the EU.

Evaluation of EU Programs: Although the study outlines the objectives and regulatory frameworks of programs like Horizon Europe, it lacks a critical evaluation of their outcomes. Future studies should focus on assessing the success of these programs in achieving their goals, identifying any gaps or areas for improvement, and providing recommendations for enhancing their effectiveness.

Technological and Digital Infrastructure: The study touches on the importance of digital infrastructure in scientific research but does not delve deeply into the specifics. More detailed research on the development, integration, and challenges of digital and technological infrastructure within the EU could provide valuable insights into the practical aspects of scientific collaboration.

By addressing these limitations, future research can provide a more nuanced and comprehensive understanding of the EU's legal framework for scientific activities and its practical implications, not only within the EU but also for countries like Ukraine that are aligning with European standards.

Conclusion

EU Law and International Scientific Standards:

EU law significantly influences the development of international scientific standards. Despite the EU lacking imperative supranational competence in the field of science, the formation of subsidiary mechanisms for funding and supporting scientific activities has led to the establishment of robust institutions and mechanisms such as the ERA and EU programs like “Horizon Europe”. This evolution has substantially advanced scientific standards, particularly in ethics, multiculturalism, non-discrimination, views on transnational research, and sustainable funding and evaluation regimes for scientific projects. The

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EU's contributions to scientific research are actively implemented in international law through agreements with third countries and other international institutions, and this contribution is crucial for Ukraine's European integration.

EU Law and Scientific Research:

A significant contradiction in the development of EU law regarding scientific research is the incomplete correlation between EU competence, national sovereignty, and academic autonomy. The norms of Article 13 of the Charter of Fundamental Rights of the EU regarding scientific activity and academic freedom are highly generalized and not aligned with the primarily recommendatory functions of the EU in scientific research. Furthermore, balancing the interests of the EU and national sovereignty in sensitive areas like security and defense research and the right to research results continues, making programmatic legal regulation the primary means of EU influence.

The European Research Area:

The ERA is becoming a unique phenomenon in the legal reality of the EU, as its normative model aims to correlate the competencies of the EU and its member states in the context of academic autonomy of research institutions. Established by the Lisbon Treaty and regulated by EU secondary law, further developed by EU Council initiatives, the ERA now operates under programmatic documents like the Pact for Research and Innovation in Europe and will evolve within the new ERA Policy Platform, which has a distinctly programmatic regulatory dimension.

Programmatic Regulatory Dimension:

The programmatic regulatory dimension is key to implementing the EU's competence in scientific activities, not only within the ERA's functioning and development but also in the context of a series of EU programs for research and innovation funding and integrated support for research activities, such as "Horizon Europe" with a budget of € 95.5 billion, replacing the previous "Horizon 2020" program. The main regulatory act for "Horizon Europe" is Regulation (EU) 2021/695 of the European Parliament and Council of April 28, 2021, whichprovidesdefinitionsinthefieldofscientificresearchwhoserolesclearlyextendbeyond EU regulatory practice; the imperative nature of this Regulation's provisions is based on its financial-legal nature, as it establishes the expenditure regime of EU funds for implementing "Horizon Europe".

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Equitable learning for all: exploring hurdles and prospects in inclusive pedagogy

Рівноправне навчання для всіх: дослідження перешкод та перспектив в інклюзивній педагогіці

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Written by:
Nataliia Savinova[1]
https://orcid.org/0000-0003-2617-8221
Iryna Demchenko[2]
https://orcid.org/0000-0003-4302-7564
Iryna Kalynovska[3]
https://orcid.org/0000-0001-8805-4641
Anton Vertel[4]
https://orcid.org/0009-0007-5258-078X
Maryna Omelchenko[5]
https://orcid.org/0000-0001-8292-1791

Abstract

Inclusive education is a crucial aspect of contemporary educational systems to ensure accessibility and quality of education for all learners, including those with developmental peculiarities or disabilities. This article reviews current research and publications on inclusive education to identify critical trends, challenges, and achievements. Several aspects of inclusive education have been analysed, including teacher training, using technologies, creating an environment, and resolving socio-cultural issues. Based on the findings, conclusions are drawn about the necessity of a comprehensive approach to implementing inclusive education, including the professional training of educators, active use of technologies, and creation of an educational environment. Important directions for further research could include studying the impact of

Анотація

Інклюзивна освіта є важливим аспектом сучасних освітніх систем, що забезпечує доступність та якість освіти для всіх учнів, у тому числі з особливостями розвитку або інвалідністю. У цій статті зроблено огляд сучасних досліджень і публікацій з питань інклюзивної освіти з метою визначення найважливіших тенденцій, викликів і досягнень. Проаналізовано кілька аспектів інклюзивної освіти, включаючи підготовку вчителів, використання технологій, створення середовища та вирішення соціокультурних питань. На основі отриманих результатів зроблено висновки про необхідність комплексного підходу до впровадження інклюзивної освіти, що включає професійну підготовку педагогів, активне використання технологій та створення освітнього

[1] Doctor of Pedagogical Sciences, Professor of the Department of Special Pedagogy and Psychology and Inclusive Education, Faculty of Preschool and Special Education and History, Kharkiv Humanitarian Pedagogical Academy, Kharkiv, Ukraine. WoS Researcher ID: GLV-2985-2022
[2] Doctor of Pedagogical Sciences, Professor, Professor of the Department of Social Work and Rehabilitation, National University of Life and Environmental Sciences of Ukraine, Kyiv, Ukraine. WoS Researcher ID: E-3527-2019
[3] PhD in Pedagogical Sciences, Associate Professor, Special and Inclusive Education Department, Faculty of Preschool and Special Education, Pavlo Tychyna Uman State Pedagogical University, Uman, Ukraine. WoS Researcher ID: E-1318-2019
[4] PhD, Assistant Professor of the Department of Psychology, Sumy State Pedagogical University named after A.S. Makarenko, Sumy, Ukraine. WoS Researcher ID: AAE-4576-2019
[5] Doctor of Psychology, Professor, Department of Special Pedagogy and Inclusion, Faculty of Special Education, Donbas State Pedagogical University, Sloviansk, Ukraine. WoS Researcher ID: G-2932-2018

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professional teacher training on the successful implementation of inclusive education, analysing the effectiveness of various educational methods and strategies, and investigating the role of technologies in ensuring education accessibility for all learners. Integrating the findings from such studies can assist educational institutions and government bodies in developing and implementing more effective strategies and policies for inclusive education. It, in turn, can improve accessibility and quality of education for all children and youth, regardless of their characteristics and needs.

Keywords: adaptive technologies, educational accessibility, educational practice effectiveness, special educational needs, teacher professional training.

середовища. Важливими напрямами подальших досліджень можуть бути вивчення впливу професійної підготовки вчителів на успішне впровадження інклюзивної освіти, аналіз ефективності різних освітніх методів і стратегій, дослідження ролі технологій у забезпеченні доступності освіти для всіх учнів. Інтеграція результатів таких досліджень може допомогти навчальним закладам і державним органам у розробці та впровадженні більш ефективних стратегій і політик у сфері інклюзивної освіти. Це, в свою чергу, може покращити доступність та якість освіти для всіх дітей та молоді, незалежно від їхніх особливостей та потреб.

Ключові слова: адаптивні технології, доступність освіти, ефективність освітньої практики, особливі освітні потреби, професійна підготовка вчителів.

Introduction

In recent decades, inclusive education has attracted increasing attention within the global community and the academic environment. This educational approach seeks to ensure equal learning opportunities for all learners, regardless of their characteristics and needs, aiming to create an inclusive educational environment that facilitates the successful development of each individual. In the modern world, where technology is becoming an increasingly integral part of the educational process, interest in using information technology within inclusive education is growing. The works of Beketova & Ogoltsova (2023) and Abosi, Emereole, & Adjepon-Yamoah (2022) highlight crucial considerations regarding integrating intelligent learning systems and information technologies to enhance the efficacy of inclusive education. Moreover, a pivotal aspect of inclusive education is acknowledging socio-cultural factors and creating conditions for inclusive learning for all learners. The works of Bešić (2020) and Boyle & Anderson (2020) offer perspectives on inclusive education through intersectionality and justify the necessity of inclusive learning in the context of specific national educational systems.

Furthermore, scientific research in inclusive education actively explores the impact of gaming technologies and various methodologies on the education and social adaptation of children with special educational needs (Costa et al., 2022). It examines an approach to learning based on using beauty technologies and artefacts. Despite progress in inclusive education, challenges and obstacles that require further research and the development of new strategies remain.

It is crucial to acknowledge the existence of accessibility challenges in education for students with disabilities in specific fields, such as STEM education. The findings of Peña-Becerril et al. (2021) highlight the necessity for developing protocols that guarantee educational accessibility for students with disabilities in science, technology, engineering, and mathematics (STEM). Furthermore, Quapp & Holschemacher (2023) emphasise the importance of special conditions for engineering students with specific requirements. In light of the rapid development of digital technologies, it is also necessary to consider issues of educational accessibility in the context of the digital age. The work of Yanli & Danni (2021) analyses the prospects of vocational education in the digital era and the role of the European Union's Digital Education Action Plan (2021-2027). These issues represent only a tiny subset of the challenges inclusive education faces. Their resolution requires a comprehensive approach that includes technical and pedagogical innovations, changes in the socio-cultural environment, and the training of professionals.

This article aims to study and analyse inclusive education's challenges and propose practical strategies and recommendations for overcoming them. Based on a review of existing literature and analysis of current issues, the article aims to identify critical aspects affecting inclusive education's effectiveness and offer practical solutions to address them.

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Research objectives:

1. To conduct a broad review of existing literature and research on inclusive education to identify the main trends, challenges and achievements in this area.
2. To analyse the problems and challenges inclusive education practices face to gain a deeper understanding of them and identify critical aspects.
3. To develop practical strategies and recommendations for overcoming the identified problems and challenges based on the literature analysis and current trends in inclusive education.
4. To evaluate the effectiveness of different inclusive education practices to identify the most successful approaches and factors contributing to success.
5. To formulate generalised conclusions and recommendations based on the analysis and research to offer practical guidance and recommendations for education professionals.

Recent research and publication análisis

It is possible to analyse the list of references by dividing the sources into several areas reflecting different aspects of research in inclusive education.

1. Methodologies and approaches in inclusive education. Research in this field is focused on developing and substantiating methodologies that promote inclusive education. A. Gervasoni & A. Peter-Koop (2020) discuss methods of inclusive education in mathematics. C. Boyle & J. Anderson (2020) examine the rationale for inclusive education in Australia. The works of S. Lakkala & E. Óskarsdóttir (2021) focus on the sustainability of inclusive education. E. Bešić (2020) considers intersectionality in the context of inclusive education. L. Lübke, M. Pinquart, & M. Schwinger (2021) analyse the importance of flexibility in inclusive education. N. Pandey (2020) discusses various approaches to inclusive education. The authors analyse different pedagogical strategies that can be used to integrate learners with diverse needs into the educational process. Primary attention is paid to the adaptability and flexibility of learning, affirming the importance of an individualised approach to education.
2. Technology in inclusive education. The technological direction investigates the potential of modern tools and digital resources to facilitate inclusion. Incorporating ICT and other technological means into the educational process allows for creating a more accessible and adaptive environment for all learners. Researchers highlight the significance of technologies in enhancing educational competence and interaction. G. Chandrahasa (2022) explores the challenges of inclusive education and the role of technology. E. N. Beketova & E. G. Ogoltsova (2023) examine the application of information technologies. R. Xue & colleagues (2023) study the impact of the educational climate on teachers' competence. Sánchez, R.L.I, & colleagues (2019) investigate the use of ICT for inclusion in higher education. A.O. Costa, A. O., & others (2022) dedicate their work to the problems of using the aesthetics of technologies in inclusive education. They consider an approach that includes tangible artefacts and assessing affective states. This research approach emphasises creating a fun and engaging learning environment, facilitating deeper interaction and learning among learners with diverse needs.
3. The impact of inclusive education and its evaluation. This direction focuses on evaluating the effectiveness of inclusive practices and strategies. E. Volker et al. (2023) analyse inclusive education practices. N. Carrim & T. Bekker (2022) link inclusive education with digital technologies. G. Yenduri et al. (2023) discuss the transition from assistive technologies to the metaverse in education. The works in this section investigate the impact of changes in the educational environment on learners' learning process and social adaptation. Assessing this impact helps improve inclusion methods to achieve the best outcomes.
4. Case studies and research in different countries. Case studies illustrate the practical application of inclusive strategies across various geographical and cultural contexts. They highlight the diversity of approaches and solutions implemented in different countries and emphasise the importance of considering local characteristics when integrating inclusive education. Távara Sabalú et al. (2021) examine inclusive competencies in Mexico. M. Peña-Becerril et al. (2021) develop inclusive protocols in STEM fields in Austria. X. Yanli & L. Danni (2021) analyse vocational education within the context of the EU. U. Quapp & K. Holschemacher (2023) study inclusive education in Germany. C. L. Garay-Rondero et al. (2022) discuss the design of inclusive learning processes. Rivas Almaguer et al. (2022) prepare for higher education accessibility. C. G. Reynaga-Peña et al. (2019) work on creating accessible educational materials. K. Zdravkova & V. Krasniqi (2021) examine inclusive education during the pandemic. A. O. Costa & others (2022) apply the benefits of technology in inclusive education. M. A. Eliseo et al. (2021) advocate for inclusive formation through universal

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design. N. M. Novak et al. (2019) use ICT to educate Roma European communities. These studies contribute to a comprehensive understanding of global trends in inclusivity.

Thus, the research spans various aspects, from methodological to technological approaches, providing a significant picture of inclusive education's current state and progress worldwide.

Methods

Systematic literature review. This method involves analysing and synthesising available research, articles, books, and other sources related to inclusive education. A systematic review helps identify the main trends, challenges, and achievements in this area. Databases such as Scopus, Web of Science, ERIC, and Google Scholar were used for the search. The search conditions included keywords: "inclusive education", "inclusive practices", "adaptive technologies", and "education for all". The studies included in the review cover the period from 2010 to 2023. The quality of the included studies was assessed using PRISMA standards (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). Each study was evaluated based on criteria of methodological reliability, sample representativeness, and data significance for inclusive education. Thus, the systematic literature review provides a comprehensive understanding of current trends, challenges, and achievements in the field of inclusive education, which allows for the development of effective strategies and recommendations for the further development of this field.

Analysis of empirical data. The study contains an analysis of empirical data, such as the results of surveys, interviews, observations and questionnaires conducted with students, their parents, teachers and other participants in the educational process. Primary data collected through a series of methodological procedures are analysed. Surveys were conducted online and offline among students, parents, and teachers using pre-developed questionnaires, which included both closed and open questions. Semi-structured interviews with teachers, students, and their parents were conducted to gain a deep understanding of their experiences and opinions regarding inclusive education. Field observations in classrooms and educational institutions were made to record interactions and teaching methods in an inclusive environment. The questionnaires were developed to assess the satisfaction, perception, and experience of the participants in the educational process. The collected data were analysed using methods such as qualitative analysis (interviews and observations were analysed using thematic analysis methods to identify key themes, patterns, and insights), quantitative analysis (survey and questionnaire results were analysed using statistical methods such as descriptive statistics, correlation analysis, and regression analysis to identify significant differences and relationships), and comparative analysis (comparison of data between different groups of participants (e.g., teachers and parents) to identify differences and similar trends in their perceptions and experiences). Thus, the detailed process of collecting and analysing primary data allows for a comprehensive understanding of the current state and fundamental aspects of inclusive education.

Qualitative research methods. They include interviews, focus groups, and observations to understand the views, experiences, and learning outcomes of students with special educational needs and assess the effectiveness of various practices and teaching methods. Students with special educational needs were selected using targeted and snowball sampling methods to participate in the study. Semi-structured interviews included pre-prepared questions that allowed for flexible adaptation of the conversation depending on the participants' responses. Open and semi-structured focus groups stimulated group discussion and exchange of experiences among participants. The thematic analysis included data coding, identification of common themes, review, definition, and naming of themes. Data triangulation methods were used, including cross-checking from different sources. Member-checking methods were applied, where results and interpretations were discussed with participants to confirm accuracy.

Quantitative research methods. This type of research involves collecting and interpreting quantitative data to assess the statistical significance of differences in learning outcomes, adaptation success, and other indicators of inclusive education's effectiveness. Descriptive statistics, correlation analysis, regression analysis, and variance analysis (ANOVA) were used to interpret quantitative data. The sample size was determined based on the calculation of statistical power to ensure sufficient accuracy and significance of the research results. The main variables in the analysis were the academic performance (grades, test scores), adaptation success (level of social integration, attendance), and the effectiveness of various inclusive teaching methods (frequency of technology use, participant satisfaction). Data were collected using standardised tests, questionnaires, and registration data from educational institutions. Statistical methods

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were applied to identify significant differences and relationships between variables, which allowed for the assessment of the effectiveness of various aspects of inclusive education.

Methods of documentary analysis. They are used to analyse official documents, policies, and programmes in the field of education aimed at supporting inclusive education in different countries and regions. Official documents, educational policies, programmes, reports, and normative acts regarding inclusive education were analysed. Documents were selected based on their relevance, the authority of sources, and their correspondence to the topic of inclusive education. Content analysis was used to identify key themes, directions, and trends in the policy and practice of inclusive education. Documents were coded and categorised according to the main themes and aspects of inclusive education, which allowed for structuring and generalising the information. A comparative analysis of documents from different countries and regions was conducted to identify general and specific approaches to supporting inclusive education.

Research Results

Inclusive education has emerged as a critical focus in educational policy and practice worldwide in recent decades. The current research in this field allows for identifying significant achievements and ongoing challenges facing society and educational institutions. Conducting a review of such research is an essential step towards a deeper understanding of contemporary trends and finding effective strategies to improve access to education for all learners. Reviewing existing literature and studies on inclusive education enables the identification of the main trends, challenges, and accomplishments in this area.

Key trends

Technology integration. The use of information and communication technologies (ICTs) in education is becoming more widespread, allowing for more accessible and personalised learning environments for the diverse needs of learners.

Raising awareness and teacher training. There is growing attention to the need to train and support teachers to work in an inclusive environment, including developing skills in differentiated instruction, adaptation of learning materials, and classroom management to meet the diverse needs of learners.

Greater attention to socio-cultural aspects. Inclusive education is becoming more aware of students' cultural and social characteristics, leading to a deeper inclusion of all participants in the educational process in the learning environment.

Key challenges

Insufficient training of teachers. Many teachers lack the competencies and resources to work with the students' diverse needs in an inclusive environment, which makes it difficult to successfully implement inclusive education.

Availability of resources and teaching materials. There are not always enough accessible and adapted learning materials and resources to meet the needs of all students, especially those with special educational needs.

Socio-cultural barriers and bias. Certain socio-cultural norms and biases may create barriers to effectively including all students in the educational process.

Main achievements

Improving access to education. Inclusive education helps to increase the accessibility of education for all students, including those who may have previously been excluded from the educational process.

Creating individualised learning environments. The development of inclusive practices and technologies allows for the creation of individualised learning environments that consider students' diverse needs and abilities.

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Raising awareness and understanding. Inclusive education helps raise awareness and understanding of the diversity of students' needs and abilities, contributing to a more tolerant and educated community.

Development of technological solutions. The use of modern technologies, such as adaptive educational programmes, online platforms, and artificial intelligence programmes, promotes a more accessible and effective educational environment for all students.

Expanding the field of research and practice. Inclusive education stimulates the development of new methods, pedagogical approaches, and education research focused on considering the diversity of students' needs and abilities.

Promoting social integration. Inclusive education facilitates the social integration of students with different needs and contributes to forming a tolerant and inclusive society where every member has equal opportunities for education and development.

Improving the quality of education. Implementing inclusive education stimulates the development of quality educational practices that enhance students' academic performance and satisfaction and develop their potential and skills.

Collaboration and partnership. Inclusive education promotes cooperation and partnerships between different actors in the educational process, including teachers, parents, administrators, support professionals, and community and non-governmental organisations.

Improved quality of life. Inclusive education significantly improves students' quality of life with different needs by providing them with access to education, social integration, and self-realisation.

Development of the research base. Research in the field of inclusive education facilitates the accumulation of knowledge and development of the research base, which in turn leads to further improvement of practices and policies in this area.

It is necessary to analyse the identified problems and challenges faced by inclusive education practitioners:

1. Insufficient teacher training. One of the main problems is the lack of teacher training to deal with students' diverse needs. This may include a limited knowledge of teaching methods, adaptation of learning materials, and classroom management in an inclusive environment.
2. Accessibility of resources and learning materials. Many inclusive education practitioners need more support in accessing adapted learning materials and unique resources to support students with different needs.
3. Socio-cultural barriers and bias. Socio-cultural barriers and prejudices can create a hostile environment for inclusion and impede the successful adaptation of students with special educational needs.
4. Inefficient use of technology. The ineffective use of technology in inclusive education can be problematic due to limited access, insufficient teacher training, or a poor understanding of how technology can support students.
5. Insufficient attention to individual needs. Inclusive education may face a challenge in providing individualised support for each learner, considering their unique needs, abilities and learning styles.

Understanding these critical aspects enables the development of more effective strategies and solutions to address problems and challenges in inclusive education. These include improving teacher training, expanding access to resources, and creating a more supportive and inclusive educational environment.

A series of practical strategies and recommendations (Table 1) are essential to address the obstacles and concerns that arise in inclusive education.

These strategies can serve as the foundation for developing practical action plans and implementing measures to enhance inclusive education, thereby ensuring more effective support for learners with diverse needs and abilities.

In modern education, issues of inclusion and equal access to educational resources are becoming increasingly significant. However, to effectively develop and enhance inclusive education practices, it is

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essential to evaluate and analyse different approaches systematically. Analytical methods, such as the analysis of learning outcomes, observations of learners and educators, interviews, and surveys, allow for the identification of the most successful practices and factors that contribute to success in inclusive education.

Table 1.
Practical Strategies and Recommendations for Overcoming Problems and Challenges in Inclusive Education

Practical Strategies	Recommendations
Improving teacher training	Develop and implement professional development programmes for teachers, including training in differentiated instruction, adaptation of teaching materials, classroom management to meet the diversity of students' needs, and using technology in teaching.
Developing adapted learning materials	Create and disseminate adapted learning materials and resources, including significant print texts, audio materials, interactive learning programmes, etc., to support students with different needs.
Promoting an inclusive environment	Promote an inclusive learning environment that welcomes diversity and respects each student's individual needs and abilities, including through cultural and educational events and training on tolerance and inclusion.
Using technology to support learning	Facilitate the effective use of technology in education, including software to adapt learning materials, online platforms for distance learning and communication, and adaptive technologies for individualised learning.
Promoting partnerships and collaboration	Foster cooperation between educational institutions, governmental and non-governmental organisations, parents, and students to develop and implement comprehensive programmes to support inclusive education.

The effectiveness of various inclusive education practices can be assessed using the methods presented in Figure 1.



Figure 1. Effectiveness Evaluation of Different Practices in Inclusive Education.

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Based on these methods and data, it is possible to identify the most successful practices and factors contributing to success in inclusive education. These may include, for instance, individualised approaches to learning, collaboration between teachers and support professionals, effective use of technology and creating an educational environment.

Based on the analysis and research in inclusive education, the following generalised conclusions and recommendations can be drawn:

Individualisation of learning. When developing educational programmes and teaching methods, it is essential to consider each student's individual needs and abilities. Differentiated approaches to learning and access to adapted learning materials and resources are recommended.

Development of teachers' professional competencies. It is essential to provide training and professional development for teachers in inclusive education. It is recommended that systematic education and training be conducted on methods of teaching students with diverse needs, as well as support and advice on working with such students.

Use of learning support technologies. Technology can effectively support the learning and social adaptation of students with special educational needs. It is recommended that adaptive applications, online platforms, and other technological solutions be actively used to individualise learning and provide access to educational resources.

Creation includes the educational environment. It is crucial to create an educational environment that welcomes diversity and respects the individual needs of each learner. Cultural and educational activities should be conducted, tolerance and inclusion should be taught to students, and access to a variety of educational opportunities should be provided for all.

These recommendations can be a practical contribution to education professionals in developing and implementing inclusive educational programmes and strategies to support the diverse needs of students.

Discussion

The discussion in this context revolves around various perspectives and approaches to inclusive education. Bešić (2020) suggests that integrality could become a pivotal path to creating an inclusive educational environment. However, Boyle & Anderson (2020) argue for a thorough justification of inclusive education within the specific contexts of countries like Australia. Meanwhile, Carrim & Bekker (2022) examine the close connection between inclusive education and digital technologies, emphasising the importance of integrating the latter into the educational process. One of the main points of discussion by Costa et al. (2022) is the use of beauty technology as a means to support the learning process. While Távara Sabalú & colleagues (2021) emphasise the importance of developing teachers' competencies for the successful implementation of inclusive education, Eliseo & co-authors (2021) propose universal design for learning as a means to ensure educational accessibility for all learners. At the same time, Garay-Rondero et al. (2022) discuss a multidisciplinary approach to creating frameworks for inclusive education in engineering. In the work of Gervasoni & Peter-Koop (2020), the concept of inclusive education in the context of mathematics teaching is examined.

Furthermore, Sánchez et al. (2019) consider the role of information and communication technologies in inclusive education. Consequently, the discourse on inclusive education encompasses many themes and methodologies, ranging from the tenets of intersectionality to the utilisation of contemporary technologies. Further investigation and deliberation are necessary to ascertain optimal practices within this domain.

Nevertheless, the effectiveness of identified practices may vary depending on the context of their application and the specifics of the educational environment. For example, the integration of digital technologies requires significant resources and teacher training, which may be limited in some regions. The development of teacher competencies also faces challenges due to the lack of specialised training and methodological support. Universal design for learning requires the adaptation of educational materials and tools, which can be difficult under conditions of limited funding. A multidisciplinary approach to inclusive education in engineering requires coordination and cooperation between different disciplines, which can complicate its implementation.

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Conclusions

A comprehensive analysis of the literature on inclusive education has revealed a significant diversity of approaches and strategies employed in this field. The work emphasises the importance of individualising instruction and developing teacher competencies to implement inclusive practices successfully. It has also identified the substantial influence of information technology in ensuring education is accessible to all learners. It should be noted that different countries and regions may face unique challenges and issues in inclusive education, underscoring the need for a contextual approach to implementing inclusive strategies. Furthermore, the success of inclusive education depends on the collaboration of various educational and social institutions to provide comprehensive support and inclusion for all learners. An important conclusion is recognising the need for continuous research and adaptation of inclusive education practices according to changing socio-cultural and technological contexts. It will ensure the effectiveness and accessibility of education for all learners, regardless of their individual needs and characteristics. The further development of inclusive education necessitates a systematic approach, including individual learning approaches, training qualified professionals, the integration of technologies, and broad partnerships between different educational stakeholders. At the same time, ongoing research and discussion on inclusive education are critical components of its successful implementation in practice.

Future research may focus on evaluating the effectiveness of specific educational strategies and methods, such as differentiated instruction and adapted educational materials and technologies, to determine their impact on the success of learners with diverse needs. Further studies may also explore the influence of socio-cultural factors, such as bias, stereotypes, and cultural differences, on the implementation of inclusive education and the success of integrating all learners into the educational process.

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Governmental search for conceptual approaches to municipal self-government reform in the mid-19th century

(Development of the "main grounds of rules" for public municipal administration of capital cities and Odesa)

Урядовий пошук концептуальних підходів щодо реформи міського самоврядування середини XIX ст

(Напрацювання «головних підстав правил» для громадського міського управління столичних міст та міста Одеси)

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Written by:
Volodymyr Kyrychenko[1]
https://orcid.org/0000-0002-5497-907X
Yevhen Butyrin[2]
https://orcid.org/0000-0003-3915-4026

Abstract

This study is dedicated to exploring the practice of building a local self-government system in the Russian Empire, which differed from the European experience. This system was created exclusively through the government's initiatives and efforts, with minimal public intervention. The combination of methodological approaches to solving the set tasks relied precisely on the historical dimension. Combined with a functional approach, it allowed for reconstructing a systematic picture of the researched subject. This way, government measures were analysed to develop the "main grounds of rules" for public urban administration of capital cities and Odesa. Special attention was paid to the differences in the Regulation on the Public Order of the City of Odesa regarding implementing the principle of all-class inclusiveness and independence in public administration. Given the urgency of the problem of self-government for society, it was highly politicised, especially by Soviet historiography, and was far from impartial research. Therefore, the authors aimed to provide an unbiased view of the legislative process. Prospects for further research lie in seeking ways to return the self-governing traits genetically inherent to Ukrainians and to build Ukrainian statehood based on the dominance

Анотація

Дане дослідження присвячено дослідженню практики побудови системи місцевого самоврядування в Російській імперії, яка відрізнялася від європейського досвіду. Ця система була створена виключно ініціативами та зусиллями влади, з мінімальним втручанням громадськості. Поєднання методологічних підходів до вирішення поставлених завдань спиралося саме на історичний вимір. У поєднанні з функціональним підходом, це дозволило реконструювати системну картину досліджуваного предмета. Таким чином, були проаналізовані урядові заходи щодо розробки «основ правил» громадського міського управління столиці та Одеси. Окрему увагу було приділено відмінностям у Положенні про громадський порядок м. Одеси щодо реалізації принципу станової сукупності та незалежності державного управління. Зважаючи на актуальність проблеми самоврядування для суспільства, вона була дуже політизована, особливо радянською історіографією, і була далекою від неупередженого дослідження. Тому автори мали на меті надати неупереджений погляд на законодавчий процес. Перспективи подальших досліджень полягають у пошуку шляхів повернення

[1] Doctor of Law, Professor, Department of Fundamental and Legal Disciplines, Kharkiv National University of Internal Affairs, Kharkiv, Ukraine. WoS Researcher ID: AEY-8496-2022
[2] PhD, Associate Professor, The State Institution "South Ukrainian National Pedagogical University named after K. D. Ushynsky", Odesa, Ukraine. WoS Researcher ID: КВУ-7488-2024

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of local self-government in the political-organisational and institutional-functional aspects.

Keywords: place, self-government, community, omnipotence, local self-government.

генетично притаманних українцям самоврядних рис та розбудови української державності на основі домінування місцевого самоврядування в політико-організаційному та інституційно-функціональному аспектах.

Ключові слова: місто, самоврядування, громада, всевладдя, місцеве самоврядування.

Introduction

Most specialists associate establishing local self-government in Europe with the growth of cities, specifically with the trend that emerged on the continent in the 11th century and developed over the next three centuries. Starting from the Magna Carta, the process of legally establishing the main principles of local self-government began in many European cities (Kyrychenko, 2020). The right to self-government of city dwellers is formulated, and relations between the urban community and individuals are normalised – taking oaths, mutual assistance, the obligation to pay taxes to the city treasury, the duty to defend the city from enemies, etc. The primary efforts regarding the legal formalisation of local self-government were made in creating the Magdeburg Law, which provided a legal framework for medieval urban administration. The modern era brought specific features to the legal regulation of local self-government in Western European states depending on their historical, geographical, national, and structural development conditions. Thus, we have the unique experience of organising English local administration, which to some extent was considered in creating the Prussian model of local self-government, as well as the example of the "decentralisation" approach that emerged during the development of local self-government after the French Revolution (Paneyko, 2002).

The Western tradition of local self-government was historically created and established as an essential element of a modern, developed democratic society. It is characteristic that the impetus for developing this system came "from below"—from the townspeople who formed a single territorial community. The forming factor of urban self-government was the citizens, endowed with certain rights based on voluntary participation and financial independence, who constantly worked towards the legal formalisation of the rights and duties of local self-government institutions.

Apart from this, the Western European vector of local self-government system development was the Russian Empire, where most socio-economic processes occurred significantly slower than in the leading European countries, particularly concerning urban development and the further growth of cities. This factor determined the presence of specific features in the construction of the empire's local self-government system, which was created exclusively through the initiatives and efforts of the government with minimal public intervention.

It is important to remember that the Russian Empire had a history of social class self-organization that was deliberately encouraged by the state. During the second half of the 19th century, local government reform made evident the principles and constraints of estate. The voters were divided into three groups based on the amount of taxes paid, which inadvertently benefited the guild merchants and excluded employees, individuals in free professions, and other citizen categories without real land from the election. Only caste was allowed for peasant self-government. It eliminated the chance that those from outside the rural community who lacked land holdings may have been involved.

Russian municipal history saw "zemstvo," city councils, and councils as the most "standard" representations of local administration at the national level. For the past 150 years, academics have been interested in their structure and activities. The topics covered include the planning of reforms, the development of election laws, the authority granted to local governments, etc. Nonetheless, it is clear that there aren't enough studies looking at the particulars of the local self-government reforms that were implemented during that time in the Russian Empire, their unique regional characteristics, and how they differed conceptually from Western European methods. Investigating this subject is crucial for understanding contemporary issues affecting local self-governments in post-Soviet area as well as for history research.

At first, we attempted to systematize available resources in the area under consideration, which allowed us to carry out analysis based on formal-legal point of view. In further development of the investigation, we

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consider specific cases of cities, in particular St. Petersburg and Odessa, concluding with the socio-economic implications of government legislative initiatives.

Literature Review

Despite the existing interest of scholars in this issue at all stages of its existence (Golovachev, 1871; Semenov, 1901; Bogdanov, 1906; Nemirowsky, 1911), though there was an inevitable decline in relevant studies during Soviet times (Velikhov, 1996; Sheffer, 1939; Gorlovsky, 1948; Klokman, 1964; Nardova, 1984), the analysis of subsequent research on local self-government demonstrates a lack of consensual understanding and well-founded assessments of this phenomenon, its nature, historical roots, and role in the governance of society (Vinogradov, 2005; Solovyova, 2007). It is worth noting the dominance of scientific works dedicated to zemstvo (rural self-government) topics in historical and historical-legal historiography compared to studies that analyse the problems of urban self-government. The general paradigm within which these studies were conducted is also essential. Only recently have domestic researchers started to consider the history of local self-government in the context of the development of civil society and the formation of a legal state. Moreover, the country's current state of local self-government can confidently be described as critical and in need of reform efforts. This is what determines the relevance of the research, the urgent need to identify management mechanisms and principles that would ensure the effective functioning of representative authorities in cities, establish a proper balance between centralisation and decentralisation, create an organic mechanism of interaction between state authorities and local self-government, and continuously improve self-government as an integral element of democracy.

Materials and Methods

Approach. The object of the study is local government in the Russian Empire at the end of the 19th - beginning of the 20th century. The subject of the study is the legal acts that regulated the creation and activities of local self-government in the Russian Empire, as well as projects for changing them and the practice of appropriate implementation. The choice of the research period is due to the fact that the development of the local government system took place in the second half of the 19th - early 20th centuries against the backdrop of socio-economic and political processes that were qualitatively new in the history of Russia. The reforms had a strong influence both on the implementation by the state of its main functions, and on public consciousness, on the activation of public life. On the one hand, the country was increasing its economic power, on the other hand, the crisis of autocracy was strengthening. The situation of the population was negatively affected by financial crises, inflation, frequent crop failures, epidemics and wars, which actualized the need to create an effective system of self-government capable of solving problems at the local level. The methodological basis of the study is the general scientific dialectical method of cognition, general scientific methods of analysis and synthesis, as well as special methods: structural-functional, formal-legal, retrospective, comparative. The institution of local self-government in the Russian Empire was studied in development, in relationship and interaction with local central authorities, with the existing socio-political situation.

Sources. As the main source of research, the work uses the legislation of the Russian Empire on local self-government, as well as the works of historians and legal scholars on the topic of local government reforms in Russia during the period under review - both in general and in the cities of Moscow, St. Petersburg and Odessa. Criteria for inclusion for scholarly sources were developed based on the general principles of systematic reviews and grounded theory, using first the keywords and then summaries, prefaces, and book/articles reviews. The choice of legislative documents was carried out based on sequential search for legislative documents on the functioning of local government reform in the period under review (both for the Russian Empire as a whole, and for capital cities and the city of Odessa.

Analysis. Regarding the methodological aspects of this study, it should be noted that, given the impossibility of explaining numerous problems of legal and state reality using classical and non-classical methodologies, a postmodernist methodology was predominantly applied. It is worth mentioning the combination of methodological approaches that integrate the provisions of classical, modernist, and postmodernist methodologies to solve the set tasks, relying specifically on the historical dimension. Because historical understanding of a particular process allows us to comprehend its essence and identify patterns of its development, under these conditions, the methodological basis of this research was the functional approach, the essence of which lies in the perception of primary sources in the context of their functioning within the tradition that generated them. To this end, several primary sources were analysed within knowledge systems

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to investigate the possibilities of disseminating previously formulated theories and their influence on other knowledge systems. Naturally, the research object was examined based on a dialectical paradigm where problems acquire a historical character and are understood through the revelation of existing contradictions.

Research Results

From a formal-legal point of view, urban self-government in the Russian Empire begins its count from the "Charter to the Rights and Benefits of the Cities of the Russian Empire" (more commonly known as the Charter of the Cities or the City Statute of 1785 (Lieven, 2008)). Researchers have praised this normative-legal act, calling it a kind of constitution. (Kamensky, 1994), or the "cornerstone" of Russian urban legislation (Dityatin, 1875). In the empire's territories, this was the first legislative attempt to change the system of public administration based on the principles of all-class inclusivity and the independence of electoral institutions. However, the Charter's general nature, gaps, and certain contradictions led to the realisation that this was not a fully organised law but a program for the government to follow in urban reorganisation (Kollektiv, 2015).

According to the Charter, "The urban inhabitants of each city are granted permission to assemble in that city and create an urban community...". Urban inhabitants who formed the urban community were meant to be "all those who are long-term residents in the city, or were born there, or settled there, or have houses or other buildings, or own city or land, or are registered in a guild or a workshop, and thus serve or carry obligations to the city" (Kollektiv, 2015). Thus, when defining the urban community, non-class characteristics were chosen: residency, ownership of real estate, engagement in trade, craftsmanship, and city service.

This broad representation in the urban governance system could not be reproduced in subsequent legislation. Soon, the "urban community" concept lost its original meaning as an institution encompassing the entire urban population. The Code of Laws of 1842 referred only to the association of merchants, townspeople, and craftsmen. Serving in elective positions was mandatory, responsible, and costly, thus lacking prestige. The tasks imposed by the state on elective bodies, such as noble assemblies and magistrates, were far from serving local public interests and were reduced to fulfilling bureaucratic orders for tax collection and proper performance of obligations to the state. Therefore, elective service was not attractive even to those who wished to work for the community's benefit. It is not surprising that merchants of the 1st and second guilds, who in 1824 obtained the right to refuse election to a city position, regarded this right as a privilege. In turn, the unwillingness of the nobles to participate in public affairs was so natural that when, in the 1840s, the question of the service class's participation in urban governance arose, it was necessary to convince them that they had received this right back in 1775 (Kizevetter, 1912).

However, not all members of the service class sought to avoid participating in their city management. By the late 1850s, petitions from urban homeowners who were nobles started arriving at the Minister of Internal Affairs, requesting the right to participate in urban self-government. For instance, in 1861, a petition to the minister was sent from nobles who owned houses in the city of Poltava, asking for the right to participate in the management of urban affairs, as the nobles of St. Petersburg had (Hourly History, 2022). A similar petition was received in 1869 from the nobles of Kherson (Hourly History, 2022). This activity can be explained by the fact that according to the provisions of the Code of Laws on Estates, a nobleman who owns real estate in the city was required to bear all civil burdens on par with urban inhabitants while remaining exempt from service (Lieven, 2008). However, most nobles and merchants did not aspire to devote their time to public affairs. The Cabinet of Ministers noted that the best citizens avoid urban elections and that public service in cities is very burdensome. As a result, it was necessary to establish a more solid foundation for the order of public elections and the subsequent service of elected officials to stimulate the desire among citizens to engage in public affairs (Mullov, 1864a).

Thus, in the first half of the 19th century, self-government in cities existed purely nominally. Neither magistrates, town halls, six-member councils, or city mayors had absolute power, which was entirely concentrated in police institutions and budget committees that administered urban funds.

Regarding practical steps from the government, they were taken during the reign of Nicholas I and even earlier. It all started from the "top". In 1821, after completing a study on the urban economy of St. Petersburg, the Ministry of Internal Affairs submitted a proposal to the State Council regarding the reform of the capital's city council and created the "main grounds of rules" by which the council should temporarily

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be guided. The development of the entire statute was entrusted to the Commission of Laws (Varadinov, 1862). Since then, work in government institutions has continued perpetually.

The Commission of Laws began by studying the European experience, familiarising itself with how self-government was organised in the leading capitals of Europe. After this, the task of developing a project for public order in St. Petersburg was assigned to Privy Councillor M. A. Baludjansky. The State Council reviewed the result of the joint work in March 1827. The highest approved decision was to reassign such a broad and complex matter to the Ministry of Internal Affairs to develop a complete project without being limited by the rules established by the Commission of Laws. For this purpose, a Special Committee was created within the ministry, which developed another project. However, the leadership of the capital, headed by P. V. Golenishchev-Kutuzov, assessed it as not conforming to the fundamental laws of the empire and incompatible with the needs of the people. The basis for this conclusion was that the project was conceived in a European style and provided a very complex mechanism of power organisation in the city, significantly complicating government oversight. The revision of the project continued, and in 1837 and 1840, it was reviewed again. However, the scarcity of information about urban economic management did not allow the developers to create a document that met the needs of the capital. In 1842, a decision was made, based on a thorough analysis of the Ministry of Internal Affairs' affairs, to highlight the state of some regions of public urban administration. The following year, by order of the Minister of Internal Affairs L. A. Perovsky, the St. Petersburg City Council, the Merchant Board, the Townspeople's and Craftsmen's Administration, and other public institutions of the capital were audited (Mullov, 1864b). The audit revealed horrifying facts about the urban self-government's non-compliance with the current legislation.

Realising the actual state of affairs, the Ministry of Internal Affairs entrusted the development of the Urban Statute of St. Petersburg to the head of the city's economic department of the Ministry of Internal Affairs – M. O. Milyutin. The new draft of the statute for public administration in St. Petersburg attempted to correct all the shortcomings revealed by the audit. However, given the historical conditions, the developers did not dare abandon the class-based approach to urban self-government. However, M. O. Milyutin and his colleagues were familiar with the municipal systems of the leading European countries, where there was a gradual move towards all-class and even classless representation, particularly with the experience of Prussia, where after the reform of H. von Stein in 1808, elections to municipalities were held by urban territorial districts without considering class affiliation. In some lands of the Prussian Kingdom, such as the Rhine provinces, Westphalia, and Poznan, where the influence of French revolutionary era legislation was felt, municipal systems operated that had almost eliminated class restrictions (Dityatin, 1877).

After reviewing the draft statute, the State Council, after making the necessary corrections to the bill, approved it, and the tsar endorsed its opinion on February 13, 1846 (Kollektiv, 2015). The statute aimed to introduce the main rules by amending the existing laws regulating urban self-government, removing contradictions, normalising gaps, and clarifying specific provisions. However, given the general content of the statute's norms, by imperial decree to the Governing Senate on February 25, 1846, it was ordered to establish a temporary commission to develop the "principles" of the statute and to draft detailed instructions necessary for the opening of new city presences. The commission developed procedures for public meetings, elections, and the opening of presences based on the principles of the 1846 Statute and instructions and rules in various areas of public administration. After a preliminary agreement with the Military General-Governor – the head of the capital – these developments by the commission were submitted to the Ministry of Internal Affairs and, after their approval, were submitted for consideration by the Governing Senate.

Over time, the capital's experience was extended to Moscow (Setton-Watson, 1967), Odesa, and Tiflis. Just as in St. Petersburg, before the implementation of the 1846 Statute, urban self-government in these cities was far from the City Charter of 1785 provisions and had the same shortcomings as in the empire's capital. Therefore, in 1859, the Governor-General of New Russia and Bessarabia, Count A. G. Stroganov, petitioned the tsar to apply the statute implemented in St. Petersburg to Odesa. To support his petition, the Governor-General noted that due to its commercial status and the complexity of its urban economy, Odesa holds the first place in Russia after the capital. However, the absence of a General Council, the lack of representation for nobles and commoners who own real estate in this city in matters of urban management, the absence of a proper system in urban elections, and the lack of independence of the City Council hinder urban public administration and have an extremely negative impact on the urban economy. The Ministry of Internal Affairs responded favourably to Count A. G. Stroganov's petition. It established a special commission under the leadership of the Odesa city governor, which included the district head of the

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nobility, the city mayor, and honorary citizens and officials. Using the Statute on Public Urban Administration of Moscow as a basis, the commission developed a corresponding draft law, which, after being refined in the Ministry of Internal Affairs and reviewed by the State Council, was approved by the tsar on April 30, 1863 (Setton-Watson, 1967).

However, the Statute on Public Urban Administration of Odesa had certain peculiarities. In the Odesa Council formed based on the statute, not five classes of townspeople were represented, as was the case in St. Petersburg and Moscow, but only three: 1) owners of real estate of any origin who are neither merchants nor townspeople; 2) merchants accredited by the Odesa guild; 3) townspeople of Odesa. As can be seen, the second and third groups of urban inhabitants were represented exclusively by Odessans. The first group was classless and included all those who had real estate. This included out-of-town merchants, townspeople, and hereditary nobles and artisans who did not receive a separate category. This approach was justified by the consideration that homeowners form the basis of the urban population, bear the burden of the most essential duties, and generate the city's primary income. Therefore, dividing them into existing state classes – hereditary and personal nobles, peasants, etc. – became impractical (Kollektiv, 2015). Thus, although the Odesa statute did not match the 1785 City Charter in terms of implementing the classless principle, it did advance to some extent compared to the capital's 1846 statute.

It was also considered impractical to subordinate the Odesa Executive City Council to the Governing Senate, as with previous capital councils, because the Senate already had enough work. It was decided that only decisions subject to approval by the city governor would be submitted to the Senate for review. The rest were to be appealed first to the city governor and, if there was disagreement with his decision, then to the Governor-General, who, if he disagreed with the council's decision, would forward the complaint, with his conclusion, to the Senate (Kollektiv, 2015).

A specific difference in the Statute concerned the electoral process. The Odesa Statute established a unique voting procedure for imperial legislation. It abandoned the usual process of differentiated voting by layers, which was confusing and time-consuming and instead tested a system of positive voting by slips (ballots). This simplified the election process for the voter and made it more thoughtful (Kollektiv, 2015).

Another notable feature of the Odesa Statute was that it did not provide for a representative of state authority – a "member from the crown" – in the Executive City Council (Kollektiv, 2015). However, the 1846 Urban Statute became a model for developing local and urban self-government in the Russian Empire. (Kazachenko, 2009).

Notably, the concept of combining bureaucratic and public institutions in local self-government was born in the cities, and the idea was found in the noble deputies' mandates of 1767. However, the mandates expressed the desire to subordinate bureaucrats to public electees. In contrast, Catherine's reform did the opposite by assigning all current, substantial district work to the elective institutions and subordinating them to the provincial leadership. Nonetheless, the state acknowledged the necessity of involving local communities in administrative affairs, which the bureaucracy could no longer manage alone. However, these reform ideas were hindered by serfdom and administrative arbitrariness. Therefore, just a year after the promulgation of the Manifesto on the Most Gracious Granting of Rights to Serfs as Free Rural Inhabitants and the Regulation on Peasants Leaving Serf Dependence on February 19, 1861, according to the reform program of P. O. Valuyev, which included the reorganisation of cities as the next step, there was a Supreme Order by Alexander II on March 20, 1862, which instructed the Ministry of Internal Affairs to immediately start improving public administration in all cities of the empire (Economic Department of the Ministry of Internal Affairs, 1877).

Traditionally (as was done during the development of the peasant reform), the ministry began by collecting information and determining the state of affairs in the cities. By a circular from the ministry dated April 26, 1862 (Economic Department of the Ministry of Internal Affairs, 1877), the leadership of the provinces in the European part of the empire was invited to provide their thoughts on implementing measures to improve public administration in the cities of the empire. To this end, special commissions were ordered in the provinces composed of urban inhabitants to formulate their proposals according to a particular ministry program. As a result of the work of 595 city commissions, the ministry described the economic state of urban settlements in the European part of the empire, and the commissions' thoughts were compiled into a corresponding code. In addition, the ministry took care to gather other information. Thus, a historical review of government measures regarding the organisation of urban public administration in the empire was

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compiled to serve as an informational and reference base for developing the general reform project (Economic Department of the Ministry of Internal Affairs, 1877). Information about the current state of municipal institutions in the leading Western European countries and their comparative analysis conducted by the Vice-Director of the Economic Department of the Ministry of Internal Affairs, M. I. Vtorov, was also gathered (Vtorov, 1864).

Based on the collected material, the initial draft law on urban self-government began, which was developed in 1864. Although some modern historiographers insist that the three-tier electoral system first appeared in this draft law, an analysis of the Statute on Public Administration of the City of Odesa dated April 30, 1863, proves that the three-tier electoral system not only existed as a concept in government developments but had also been implemented in legal norms and provided, albeit small, practical experience in its application.

The history of state and law of the Russian Empire provides an example of interaction and interpenetration of state power and local self-government. The balance of state administration and self-government in Russia has often been upset in favor of the former, which is explained by the political and geographical factors of the country's development. However, the socio-economic realities of the development of large cities gradually led to positive changes in the degree of their autonomy, features of voting rights, etc. The conducted research indicates that the study of the history of local self-government in 19th century Russia is not only relevant, but also extremely interesting from a scientific point of view. It makes to think about such issues as the essence of democracy, the continuity of democratic traditions, and the role of self-government in the system of state power.

Conclusions

The research that was conducted allows us to draw several conclusions regarding the development of legal foundations for the new public order in the cities of the empire. Firstly, the Charter to the Cities of 1785 first recognised the city as a self-governing entity with an independent sphere of activity from the state and, in essence, stayed within European practices. However, having created a legal foundation, it did not correspond to the state's development level of cities. It thus did not gain practical implementation, remaining a theoretical monument of legislative thought. Secondly, urban self-government came under the dominance of state authorities, turning into their lower-level branch. The government, having started the development of a new urban law at the beginning of the 1820s, found itself confused because none of the developed projects received support from the authorities, the nobility, or the merchants. Thirdly, public opinion did not accept the idea of all-class urban self-government, considering such a government approach as a blind imitation of the English or French experience. The government had to reassert the principle of all-class inclusiveness, which had been enshrined in the current legislation for over half a century. The introduction of public order statutes in the capital cities, and later in Odesa, was necessary to bring society closer to the practical acceptance of the all-class approach in different organisational models. It was the Odesa version of the statute that the government took as the basis for further development of the general statute on urban public administration in the empire. Fourthly, the changes that took place in the urban community cannot be explained solely by the government's legislative activity. The socio-economic development of cities influenced the correction of government legislative initiatives, ensuring their gradual development.

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Sociocultural education as a key to fostering social responsibility in modern youth

Социокультурное образование как ключ к воспитанию социальной ответственности у современной молодежи

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Written by:
Irina Aryabkina[1]
https://orcid.org/0000-0002-8765-2153
Anastasia Spiridonova[2]
https://orcid.org/0000-0001-6211-6779
Ludmila Belonogova[3]
https://orcid.org/0000-0002-0840-2034
Larisa Kazakova[4]
https://orcid.org/0000-0002-5792-1041

Abstract

This study investigates the importance of developing social responsibility in youth within the context of socio-cultural education, a pedagogical approach fostering social values and civic engagement. We analyze this issue from philosophical, pedagogical, and psychological perspectives, emphasizing the need for young people to develop qualities like empathy, adherence to social norms, and responsible decision-making.

A comprehensive review of literature from the 20th and 21st centuries reveals the complexity and relevance of "social responsibility" and its formation. We conducted a psychological and pedagogical experiment involving schoolchildren, students, and teachers to assess levels of social responsibility. The results demonstrate positive shifts in social responsibility levels following the implementation of a socio-cultural education program, with significant increases in participants exhibiting high and average levels of social responsibility. Qualitative data from participant statements further support the effectiveness of the

Аннотация

Это исследование изучает важность развития социальной ответственности у молодежи в контексте социокультурного образования, педагогического подхода, способствующего развитию социальных ценностей и гражданской активности. Мы анализируем этот вопрос с философской, педагогической и психологической точек зрения, подчеркивая необходимость развития у молодых людей таких качеств, как эмпатия, соблюдение социальных норм и ответственное принятие решений.

Всесторонний обзор литературы XX и XXI веков показывает сложность и актуальность понятия «социальная ответственность» и его формирования. Мы провели психолого-педагогический эксперимент с участием школьников, студентов и учителей для оценки уровня социальной ответственности. Результаты демонстрируют позитивные сдвиги в уровнях социальной ответственности после внедрения программы социокультурного образования, со

[1] Doctor of pedagogical sciences, professor of the Ulyanovsk State University of Education, Russian Federation. WoS Researcher ID: AAG-1303-2019; Scopus Author ID 57219127993
[2] Candidate of Pedagogical Sciences, docent of the Ulyanovsk State University of Education, Russian Federation. WoS Researcher ID: AAF-4034-2019
[3] Candidate of Pedagogical Sciences, docent of the Ulyanovsk State University of Education, Russian Federation. Scopus Author ID 57190182073
[4] Candidate of Pedagogical Sciences, docent of the Ulyanovsk State University of Education, Russian Federation. WoS Researcher ID: AAF-6572-2019; Scopus Author ID 57193311464

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program in fostering a stronger sense of social responsibility among youth. This study contributes to the field by offering empirical evidence for the effectiveness of socio-cultural education in promoting socially responsible behavior in young people.

Keywords: social responsibility, young generation, modern society, socio-cultural education.

значительным увеличением числа участников, проявляющих высокие и средние уровни социальной ответственности. Качественные данные, полученные из высказываний участников, дополнительно подтверждают эффективность программы в формировании более сильного чувства социальной ответственности среди молодежи. Данное исследование вносит вклад в эту область, предоставляя эмпирические доказательства эффективности социокультурного образования в развитии социально ответственного поведения у молодых людей.

Ключевые слова: социальная ответственность, молодое поколение, современное общество, социокультурное воспитание.

Introduction

In the socio-cultural space of the modern world, great attention is paid to the formation and development of human potential, in which social responsibility occupies one of the central places: there is a need to create conditions for the formation of a developing personality, who has the readiness and ability to make decisions independently and responsibly, to consciously relate to their own activities in different spheres and areas of life, to the acceptance of social responsibility (responsibility for themselves and others) as a personal value.

The problem of developing social responsibility in the younger generation is multifaceted and complex. It is, in essence, an interdisciplinary scientific category that requires a comprehensive approach to understand its implications fully.

This article aims to:

1. Substantiate the importance of developing social responsibility in young people within the context of socio-cultural education.
2. Analyze the concept of social responsibility from philosophical, pedagogical, and psychological perspectives.
3. Examine the role of socio-cultural education in fostering vital qualities such as a sense of duty, empathy, adherence to social norms, responsible decision-making, and internalization of universal values.
4. Present the results of a psychological and pedagogical experiment conducted to determine the levels of social responsibility among students in three Russian universities and an educational center in Egypt.
5. Discuss the effectiveness of a socio-cultural education program in fostering social responsibility in children and youth in modern society.

The article is structured as follows: First, we will review the relevant literature on social responsibility, exploring different perspectives and definitions. Next, we will describe the methodology of our study, including the design of the socio-cultural education program and the assessment tools used to measure social responsibility. Then, we will present the results of our experiment, analyzing the impact of the program on students' levels of social responsibility. Finally, we will discuss the implications of our findings for educational practice and suggest directions for future research.

Generalization of philosophical and psychological-pedagogical concepts presented in the works of Russian scientists (N.V. Antipina (Antipina, 2004), A.V. Belov (Belov, 2011), I.E. Bulatnikov (Bulatnikov, 2019), M.D. Lapteva, Zimnyaya (Lapteva & Zimnyaya, 2012), K. Muzdybaev (Muzdybaev, 2010), V.N. Podshivalov (Podshivalov, 2009), S.L. Sidorkina (Sidorkina, 2010), D.I. Feldstein (Feldstein, 1997), etc.) and foreign scientists (L. Kohlberg (Kohlberg, 1986), R. Merton (Merton, 1968), R. May (May, 1961), R. Selman (Selman, 1980), S. Smiles (Smiles, 1871), R.J Spadey. (Spadey, 2006), V. Frankl (Frankl, 2017),

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A. Fromm (Fromm, 1969), etc.), allows us to define the concept of "social responsibility" as a system of personal qualities associated with the implementation of a person's ability to recognize himself as the cause of the actions he commits and their consequences for himself and others, that is, to be responsible for them. In addition, it is social responsibility, on the one hand, that underlies the socio-cultural education of each person, on the other hand, it should be the main goal and result of socio-cultural education.

An analysis of the publications of Russian and foreign scientists published in recent years concerning the psychological and pedagogical aspects of social responsibility shows that the authors, when determining social responsibility and the possibilities of its formation, refer mainly to the works of recognized scientists of the middle and second half of the 20th century. At the same time, there is currently an increasing interest of scientists from different countries in the formation of social responsibility as a psychological and pedagogical problem (Dima etc., 2013; de Moraes Abrahão etc, 2024; Kobylarek, 2019; Yan, 2020; Alfrević et al., 2023; Alsaeed, 2022; Terentyeva & Nikitina, 2019), and we have not found any special differences in their positions on this issue. Rather, in their works we find an analysis of various facets of such complex and, in their opinion, relevant phenomena as: "social responsibility of the individual" and "formation of social responsibility of the individual". Some differences in the interpretations of these concepts by different researchers are largely determined by the mental characteristics of citizens of a particular country and the legislative documents adopted in it. Their study expands and enriches the understanding of the problem stated in this article.

Theoretical framework

The current situation in the world requires the intensification of the dialogue of cultures, the harmonization of political and economic contacts between states, which increases the pragmatic significance of the socio-cultural education of the younger generation, by which we mean the purposeful creation of conditions for the development of moral, aesthetic, organizational, communicative, economic, ecological, gender and other social abilities in each young member of society. The success of socio-cultural education helps to develop qualities that give rise to actions and behavior and, ultimately, shape a person's character (Aryabkina et al., 2019). Social responsibility is a special pedagogical phenomenon that underlies socio-cultural education and is one of its main goals.

First of all, let us turn to the philosophical dictionary, which states that social responsibility is a category of “ethics and law, reflecting a special social and moral-legal attitude of an individual to society, which is characterized by the fulfillment of one’s moral duty and legal norms” (Malyshevsky, 2004). In the Dictionary of the Russian Language we read: “Responsibility is an obligation imposed on someone or taken by someone to account for any of their actions and to accept the blame for their possible consequences” (Evgenieva, 1985).

The article by I.N. Timoshina, I.V. Aryabkina (Timoshina & Aryabkina, 2022) analyzes the works of Muzdybaev, devoted to the analysis of the phenomenon of social responsibility. Summarizing various psychological concepts that consider social responsibility as a personal quality, K. Muzdybaev (Muzdybaev, 2010) comes to the conclusion that responsibility is a generalized psychological property of a person. The importance of this quality is difficult to overestimate, since the organization of a person's cognitive and social activity, his emotional reactions, achievement of success in life, etc. depend on its formation (Timoshina & Aryabkina, 2022). K. Muzdybaev attributes the main signs of responsibility to "accuracy, punctuality, loyalty to the person in the performance of duties and readiness to act and readiness to be responsible for the consequences of one's actions" (Muzdybaev, 2010).

Responsibility, according to V.G. Hvorostovskaya, is a personal quality that is interconnected with its independent ability to recognize the significance of its actions and deeds (Hvorostovskaya, 1981). According to V.N. Myasishchev, responsibility acts as a stable system of relationships of the individual to different aspects of the surrounding reality. It manifests itself in typical ways of expressing these relationships in everyday behavior (Myasishchev, 1995). B.G. Ananiev considers it as a system of personal properties, subjective relationships to people around and to oneself, which is constantly manifested in the behavior and lifestyle of a person (Ananiev, 2018).

Important from the point of view of socio-cultural education is the position of V.A. Sukhomlinsky, who believed that the formation of responsibility in children and young people as the highest form of human activity is directly connected with the formation of citizenship, morality, duty to society, which, in turn,

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requires the implementation of self-assessment, self-control and at the same time increases the sphere of influence of the individual on the surrounding world (Sukhomlinsky, 1979).

The dictionary of terms in general and social pedagogy defines responsibility as "the ability of an individual to understand the correspondence of the results of his actions with the set goals, social, moral and legal norms and rules accepted in society or a group, as a result of which a feeling of involvement in a common cause arises, and in case of non-compliance – a feeling of unfulfilled duty" (Voronin, 2006).

In philosophical and psychological-pedagogical literature it is emphasized that the complexity of the content of responsibility determines its various types, among which scientists especially highlight social responsibility (Timoshina & Aryabkina, 2022). The development of this type of responsibility at the scientific level began not so long ago, in the 70s of the 20th century.

Social responsibility is considered by K. Muzdybaev in three components (Muzdybaev, 2010). The scientist attributes to it:

- The need to follow generally accepted norms and rules in society;
- Conscious performance of numerous role responsibilities for each member of modern society;
- Readiness to give an account for one's actions.

In this understanding of social responsibility, a conditional differentiation of personal and social responsibility is traced. According to the scientist, personal responsibility is characterized by awareness of one's duty to others and society. Social responsibility is based on understanding and awareness of the tasks that are set before society, specified by regulatory requirements that facilitate the choice of courses of action. According to D.I. Feldstein, social responsibility is one of the complex integral personal qualities, which finds its expression "in the deep interconnection of the objective need to comply with social norms, internal readiness to bear responsibility for oneself and others and the active implementation of this readiness in any life situations" (Feldstein, 1997).

I.E. Bulatnikov views social responsibility as a complex system of professional qualities: each person's awareness of the importance of their own work, a lasting interest and love for their chosen profession, a sense of pride in their work, the ability for emotional-volitional self-regulation of behavior and attitudes in the professional environment (Bulatnikov, 2019).

Social responsibility is expressed "in the totality of diverse relationships between the individual and society, in all spheres of human life, in all forms of social consciousness of the individual (Abulkhanova-Slavskaya & Gordienko, 2001). The complexity of social responsibility as a complex social phenomenon is determined by the reflection in this concept of both the objective laws of social development and public interests, and the subjective activity of each person, his values, needs, interests and assessments.

Formed social responsibility is a certain "maturity", self-sufficiency of the individual, the ability and desire of a person for self-realization (Rean, 2004).

In the psychological and pedagogical works of K.A. Abulkhanova-Slavskaya, E.V. Gordienko (Abulkhanova-Slavskaya & Gordienko, 2001), N.V. Antipina (Antipina, 2004), A.V. Belov (Belov, 2011), L.B. Itelson (Itelson, 1972), A.V. Mudrik (Mudrik, 2011), V.N. Podshivalov (Podshivalov, 2009), E.L. Sidorkina (Sidorkina, 2010) and others, the main directions of forming social responsibility in the younger generation are revealed.

1. Revealing the "spiritual powers" of each person (social responsibility is considered as a special state of the human spirit, implying the formation of a hierarchy of value orientations, the axiosphere of the individual, its focus on social creativity. Such a spiritual state is characterized by a holistic and harmonious focus on both the inner "I" and the surrounding reality" (Podshivalov, 2009).
2. Expansion of emotional experience (social responsibility is felt as a stable emotional experience in the process of building relationships with other people. In this case, the Act is the highest manifestation of social responsibility when it is personally significant and morally colored, focused on the social good, the implementation of existential values and freedoms (Itelson, 1972)).

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3. Formation of the axiosphere of the individual (the formation of social responsibility has a humanistic character and is based on reflection, self-regulation, self-esteem, tolerance, a set of universal human values (Mudrik, 2011)).
4. Acquisition of socially significant knowledge about relationships with nature and society (social responsibility is based on social competence and positive social experience (Sidorkina, 2010)).
5. Instilling "good habits" (social responsibility implies individual behavior that takes into account the interests of other people and the social environment, accepted norms and performed role responsibilities (Antipina, 2004; Muzdybaev, 2010)).
6. Development of the ability to make responsible moral choices, to be responsible for oneself and others (social responsibility is manifested in proactive voluntary behavior that requires an effort of will aimed at overcoming circumstances that hinder helpful action (fear, warning others, the need to organize other participants, financial costs, etc.)" (Voronin, 2006; Abulkhanova-Slavskaya & Gordienko, 2001).

Thus, we have identified the complex multi-aspect nature of the concept of "social responsibility", which is manifested in the interrelation of cognitive-evaluative, emotional-volitional and behavioral components.

The cognitive-evaluative component of social responsibility includes a person's knowledge about himself, about the rules and norms of behavior, as well as the ability to comprehend what a person is responsible for. The implementation of this component is carried out in the identification and self-realization of a person through his responsible act.

The emotional-volitional component of social responsibility is the presence of a person's motivation for socially significant activities; organization, the ability to focus on solving a particular emerging moral problem (Timoshina & Aryabkina, 2022).

The behavioral component of social responsibility is responsible behavior and activity; fulfillment of moral obligations, including those that go beyond immediate duties but concern the well-being of other people (Timoshina & Aryabkina, 2022). "This component is associated with the function of self-realization through responsible action" (Lapteva & Zimnyaya, 2012).

The problem of social responsibility as a relevant issue is addressed not only by Russian but also by foreign authors. Thus, V. Frankl (Frankl, 2017) emphasizes that a person's responsibility lies in his choice between those opportunities that exist at a certain moment and which he can either realize or not realize. Thus, responsibility is associated by the scientist with the concept of "choice" and the activity of a person in making a choice: it is responsibility that is recognized by the scientist as the decisive factor in decision-making. R. May (May, 1961) emphasizes that "responsibility" is a person's acceptance of the consequences of the choice he has made (a person must be aware of the consequences and be aware of what he is doing).

The study of psychological, pedagogical and philosophical literature allows us to conclude that there is a wide range of understanding of this phenomenon (Aryabkina et al., 2021). R.J. Spadey considers social responsibility through personnel management processes (Spadey 2006); L. Kohlberg - as a result of moral judgment (Kohlberg, 1986); A. Fromm - as a manifestation of discipline (Fromm, 1969); V. Frankl - as one of the existentials of human existence (Frankl, 2017); S. Smiles - as self-activity (Smiles, 1871); R. Selman - as a component of social intelligence (Selman, 1980), R. Merton - as an indicator of social competence (Merton,1968).

Thus, we can conclude about the pedagogical relevance of social responsibility as an important criterion for the socio-cultural education of an individual, the formation of awareness and understanding of the personal value of socially responsible behavior in the younger generation.

For our research, it was significant to study the works of foreign colleagues devoted to the study of various aspects of the formation of social responsibility among the younger generation at the present stage of society development.

So, Dima, A. M., Vasilache, S., Ghinea, V., & Agoston, S. исследуют социальную ответственность в академической среде: «Social responsibility in the academic environment is not only a challenge, it must become a purpose of the academic environment, as young people's formation also means to create a high level of awareness about involving the members of society in solving social problems. After extensive literature review and content analysis of tertiary data, we found that the concept of social responsibility is

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not properly addressed in the Romanian scientific research, although actions undertaken by the Romanian universities, with significant social impact, abound» (Dima et al., 2013, p. 25). Their proposed model of social responsibility in the Romanian universities based on six main dimensions: alumni-oriented projects; inter-university cooperation; university – high schools / other institutions cooperation; community-oriented university – business environment cooperation; community-oriented international cooperation; socio-cultural and ecological projects. We are close to the conclusions made by these scientists from Budapest who note that «good will is not enough for creating a vibrant environment and for stimulating the real implementation of the social responsibility including sustainable development practices, in companies, or universities. Social campaigns in universities should be approved by the university's board (university's Senate and rectors), by the professors, the auxiliary personnel and, last but not least, by the students. Otherwise, their aim is not a realistic one, mainly because of the great variety of culture and values displayed by the faculties and students. However, if these individuals educated at university will behave and work in their future lives according to sustainability principles taught in universities (e.g. separating waste and saving energy, walking, cycling or using public transportation instead of commuting by car), then the university is acting as a positive actor in the community» (Dima et al., 2013, p. 31).

Spanish scientists consider an important aspect of the formation of social responsibility as an essential component of social education Viviane de Moraes Abrahaoa, María Vaquero-Diegoa, Rosa Curras Mostoles. В статье «University social responsibility: The role of teachers» читаем: «In terms of training, the study highlights the need for greater investment in facultytraining so that they can connect the content of their courses withcurrent issues of social responsibility and have a greater impact onthe environmental awareness of undergraduates. Likewise, a greaterconnection with external agents in social management and knowl-edge production would be necessary, as would the implementationof communicative actions aimed at making teachers more aware ofthe campaigns carried out by their university to promote socialresponsibility values and participation in volunteer actions.Thus, in addition to responding to these social demands throughknowledge production, higher education institutions must train stu-dents to become professionals who are aware of their social impact.Teachers—the backbone of the higher education system—must striveto perform their role as educators in its entirety, aiming to includesuch topics in their subjects as relevant, necessary, and objectivecompetencies. Only in this way will it be possible to narrow the exist-ing gap between the content of the curricula and the trainingdemanded by the current global context » (de Moraes Abrahão et al., 2024, p.7).

Polish scientist A. Kobylarek considers a very interesting and relevant aspect of social responsibility: responsibility to science and in science through responsibility to knowledge. In his article, the author writes: «Social responsibility can be viewed in various ways. For the purpose of this article let us assume that it is a pro-social fundamental, related to voluntary activities on the behalf of others. In the case under discussion we can talk about social responsibility in relation to science in its strictest sense (knowledge), toscientists, and to educational institutions. In turn, these three areas can also be considered in relation to the activities themselves, whether explicit or implicit. In examining the explicit approach we should consider what socially responsible science is, what are the qualities which characterise the socially responsible academic, and how educational institutions should shape their activities in carrying out their idea of social responsibility. In turn, in analysing implicit social responsibility in science, we should be looking at how particular areas (knowledge, academics, educational institutions) can or should Àt in with the needs of the non-scientific community. It is probably easiest to define what should characterise socially responsible science. Above all it is a thorough and expert verification of knowledge which can be the starting point for practical action – designing and altering reality, correcting errors, avoiding mistakes, predicting, constructing comfort zones, and finally making further development of the world possible (Kobylarek, 2019, pp. 6-7).

Important for our experimental work was the study of Yan Wenjuan, from Xi'an University, who writes about the value system of modern adolescents and the need to form a conscious attitude towards their social responsibilities (Yan, 2020).

Scientists from the University of Sarajevo Nikša Alfrević, Maja Arslanagić-Kalajdžić, Žan Lep (Bosnia and Herzegovina) analyze the potential infuence of the higher education institutions (HEIs) at which they study to support prosocial behaviors: «Prosocial behaviors are generally defned as voluntary behaviors aimed at helping others. Tey can be as direct as helping a person in need or as broad as volunteering for the (perceived) beneft of society at large. In the psychological literature, prosocial behaviors can be operationalized by considering their underlying mechanisms, for example, motivation to help, perceived

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norms, internalized prosocial value orientations, moral reasoning, and social competence. Tus, the concept of prosocial behavior comprises a broad spectrum of actions such as helping, cooperating, sharing, comforting, empathy, altruism, volunteering, and donating, which could be both private and public, or spontaneous or planned» (Alfrević et al., 2023, p. 1).

A researcher from Saudi Arabia, Huda Al saeed, notes: «Social responsibility has become a contemporary global trend. Within an educational context, this concept can be understood as the practices adopted by developed countries that aim to activate the partnership between public sector schools and the communities they serve» (Alsaeed, 2022, p. 2758).

Indisputable, in our opinion, is the statement of I. Terentyeva, & T. Nikitina that «socialization of youth is a subjective formation of personality on the basis of assimilation of sociocultural values, inclusion in socially significant activities the result of which is social competence. We define social competence as an integrative personal education, including knowledge, skills, abilities that are formed in the process of socialization and allow a person to quickly and adequately adapt in society and effectively interact with the social environment» (Terentyeva & Nikitina, 2019, p. 823).

Thus, we come to the conclusion that:

- The process of forming the social responsibility of the younger generation is recognized as an urgent problem in different countries;
- This process is influenced by a variety of factors (among the main ones: the modern socio-cultural situation in the world, characterized by a sufficiently large number of "challenges" to the educational process; social demands of society to the educational system; mental and cultural characteristics and traditions of a particular people; state policy and relevant legislative documents);
- Each of the scientists, without directly entering into a discussion on this issue with other scientists, nevertheless makes his valuable contribution to the study of the phenomena of "social responsibility", "formation of social responsibility", considering them in various aspects, thereby enriching psychological and pedagogical theory and practice.

The above positions of various scientists have allowed us to organize experimental work on the problem of socio-cultural education as a key factor in strengthening social responsibility in the modern youth environment.

Methodology

The authors of this article paid much attention to the use of theoretical methods (synthesis, analysis, systematization, abstracting), empirical methods (observation, questionnaires, tests), and impact methods of the obtained empirical data (mathematical and statistical).

The choice of research methods was based on their validity and reliability, the possibility of obtaining the maximum amount of information about the recipient in accordance with the characterized criteria for the formation of social responsibility, the ability to assess the dynamics of personality development and, based on this, make a forecast about its prospects and possible adjustments to the program of pedagogical interaction with students.

The respondents in the research process were students of Russian pedagogical universities – future teachers and already practicing primary school teachers (since it is this category of teachers who professionally interact with primary school age, which is sensitive for the formation of social responsibility as a system of personal qualities necessary for every member of modern society), as well as schoolchildren studying Russian in schools in Egypt.

The following diagnostic methods were used in our study: Questionnaire "Level of Subjective Control" by E. F. Bazhin, E. A. Golynkina & A. M. Etkind, Locus of Control (questionnaire by D. Rotter (1984), Questionnaire of Subjective Control" (OSK) by O. A. Osnitsky (2007), Methodology for Assessing Social Responsibility by V. L. Marishchuk & V. Evdokimov (2001), анкеты авторов статьи по выявлению уровней социальной ответственности обучающихся.

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These research methods take into account the diverse age of respondents (since schoolchildren, students, and teachers took part in the study) and were aimed at determining the level of formation of respondents' social responsibility according to the following criteria: cognitive (respondents' knowledge of social responsibility, its role in the life of modern society as a whole, and each of its members, in particular in particular); motivational (willingness and striving for conscious socially responsible behavior and the formation of such behavior in pupils), emotional and value-based (the ability to feel empathy, to come to the aid of someone who needs it), active (participation in socially significant actions and projects (socio-cultural and educational)).Using the above diagnostic techniques, the subjects also revealed the level of subjective control over a variety of life situations, which is absolutely necessary for a modern person to adequately socialize and exclude antisocial behavior.

The questions and tasks contained in the diagnostic materials meet all the ethical requirements for materials of this kind. Diagnostic tests were conducted individually, confidentially, and voluntarily.

Results

The use of theoretical research methods allowed us to develop and implement in the educational practice of 3 universities of the Russian Federation (Ulyanovsk, Glazov, Cheboksary), also Teaching Center «Botanik» Educational Center (Cairo) and "World of Knowledge" (Hurghada) in the Arab Republic of Egypt the Program of socio-cultural education of children and youth and, in accordance with it, educational, scientific-methodological and educational activities were carried out (including with the aim of forming the social responsibility of the younger generation). This Program is based on universal spiritual values, taking into account the national characteristics of various peoples and their cultural traditions and includes classes in the form of interactive lectures, master classes, debates, business games, quests, round tables, presentations of modern practices of socio-cultural education.

The content of the Program includes topics related to charity, the need for volunteer gratuitous activities to help the elderly, sick people, children left without parental care, birds and animals and anyone who needs this kind of help.

Classes were held in various forms: debates, round tables, master classes, trainings, lectures, seminars, creative living rooms.

450 schoolchildren and students of various fields of study took part in the pedagogical experimental work.

During the implementation of this Program, its effectiveness was monitored in accordance with the identified criteria for the formation of a person's social responsibility: cognitive-evaluative, emotional-volitional and behavioral and a diagnostic complex developed by the authors.

The cognitive-evaluative component is characterized by the volume, depth, and nature of recipient's social and moral ideas. Understanding the basic concepts of "good", "evil", "benefit", "good", "moral / immoral act" determines the qualities of a socially responsible person: the desire to help, the ability to provide gratuitous assistance, caring for animals, indifference to someone else's misfortune and etc.), awareness of the situation of social responsibility, the degree of meaningfulness of judgments about the essence and significance of socially responsible behavior, the criticality of its assessment. This component also includes the recipient's correct assessment of the social and moral norms of behavior established in society.

The emotional-volitional component is characterized by an attitude to the world, reflected in the human mind through the prism of values and expressed in moral feelings (empathy, sympathy). It determines the stability of beliefs in the importance of a value attitude towards others, the importance of accepted socially responsible behavior, the ability to emotionally experience the moral aspects of the surrounding world and human relationships.

The behavioral component characterizes the degree of the recipient's involvement in matters significant for society, attitude towards them, awareness of oneself as a subject of socially responsible behavior. In addition, the characteristics of this component include the presence of awareness of one's own decisions and corresponding actions. The behavioral component determines a person's lifestyle and activities, rules and norms of his behavior, the level of independence in relation to moral choice in overcoming emerging problems based on humanistic values and moral requirements and rules accepted in society.

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The results of the monitoring, carried out for five years, indicate that, in almost every group of students included in our experiment, according to all three criteria we identified, there was a positive trend in the levels of social responsibility of students (by the end of the pedagogical experiment, which consisted in the implementation of the Program socio-cultural education of children and youth, schoolchildren, students with a high (sustainable) level of formation of social responsibility turned out to be 65% (which is 25% higher than at the beginning of the experiment), with an average (situational) level - 24% (which is 12% higher than in beginning of the experiment), with a low (passive) level - 11% (which is 37% lower than at the beginning of the experiment). Monitoring the level of subjective control over various life situations of each of the respondents participating in the experiment also shows positive dynamics (studies conducted individually with each respondent of this important personal quality show that trainings, actions and projects conducted within the framework of the Program of socio-cultural education of children and youth allow to activate introspection, reflection of all participants, a more serious and conscious attitude towards their personal and (in the case of teachers and students-future teachers) professional responsibilities in society).

For example, answering the question about the essence of the concept of "social responsibility of a teacher", many students – future teachers associated it with responsibility for the quality of work performed and implied a high-quality level of teaching students in various subject areas, the strength of knowledge (Here are some examples of answers to this question: "This is a professional and ethical quality, which is expressed in the ability and willingness to anticipate the results of pedagogical activity and hold it accountable", "The social responsibility of a teacher is the ability and willingness to anticipate the results. The ability to adapt to the educational environment, use available resources and transfer knowledge to your colleagues"). There were answers related to the creation of conditions for the successful socialization of the child (The social responsibility of the teacher is "The responsibility of the teacher for how the student will go into society; "The teacher, first of all, must prevent antisocial behavior of children). We especially note the answer, which revealed the worldview and motivational and value component of the student's social responsibility as his professional quality: The social responsibility of a teacher is "Understanding that a teacher is an image of the world around him", "Responsibility for his behavior and the behavior of his students", "Duty to society".

The implementation of the Program developed by the authors of this article allows us to conclude that its implementation gives a positive educational effect if: - take into account the interests, needs, mental, age and individual characteristics of each respondent; -to create a creative educational environment in an educational institution based on trusting, friendly, respectful relationships; - to include each pupil in socially significant active and conscious activities based on the principles of voluntariness and conscientiousness.

Conclusion

The relevance of social responsibility as the most important criterion of socio-cultural education of the younger generation in modern society is increasingly growing and is a unique and necessary characteristic of each person's personality, since he constantly interacts in different social roles with other people. At the same time, we are talking about a special understanding of responsibility - responsibility not just for oneself, but for oneself in a common cause, responsibility for a common cause and for other people. The basis for the formation of social responsibility is the unity of knowledge, experience, emotional experiences of a person and the assignment of social responsibility as a personal value.

The experimental study on educating students' social responsibility was conducted in several stages:

- Preparatory stage (2019) - study of literary sources, determination of the experimental base of the study, selection of diagnostic material for the study;
- The main stage of the study (2019-2022) consisted of three parts: conducting ascertaining diagnostics (September 2019), development of the formative stage of the experiment on the formation of social responsibility in students (October 2019 - November 2022), conducting control diagnostics (December 2022);
- Final stage (2023) - assessment of the effectiveness of work on the formation of social responsibility in schoolchildren and students, formulation of conclusions on the results of the experimental study.

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Thus, the results of the psychological and pedagogical experiment show that the effectiveness of educating students on social responsibility depends on the following implementation of the following pedagogical conditions:

- Creation of a creative socio-cultural environment in the educational organization;
- Implementation of socio-cultural education with a focus on social demand, taking into account the results of modern theoretical and empirical research in the field of studying the views and preferences of the modern younger generation, advanced pedagogical practices of socio-cultural design.

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A study of cyber-addictions in Ukrainian youth

ДОСЛІДЖЕННЯ КІБЕР-АДИКЦІЙ СЕРЕД УКРАЇНСЬКОЇ МОЛОДІ

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Written by:
Hanhan Yuliia[1]
https://orcid.org/0000-0002-0052-3982
Yang Yueqing[2]
https://orcid.org/0009-0002-7720-2279
Porpulit Olena[3]
https://orcid.org/0000-0002-5118-305X
Melnichuk Iryna[4]
https://orcid.org/0000-0003-1982-7393
Synitska Tetiana[5]
https://orcid.org/0000-0001-9575-2878

Abstract

This article investigates the specific manifestations of various types of cyber-addictions among Ukrainian adolescents and young adults. The Internet's increasing connectivity fosters diverse user behaviors, with potential consequences ranging from social relationship disruption and isolation to mental health disorders and physical ailments. Notably, Internet addiction frequently emerges during adolescence, hindering socialization, professional growth, and family formation. Alongside Internet addiction, the modern scientific community recognizes cyber addictions and the growing prevalence of smartphone addiction (phubbing). These addictions share a compulsive urge to remain constantly online and an inability to disengage. To examine modern cyber addictions, the study employed the "Smartphone Addiction Scale" (SAS) and the "Cyber Addiction Test-Questionnaire" (TQC), involving 316 participants aged 15-21. Results revealed distinct

Анотація

У цій статті досліджуються особливості прояву різних типів кіберзалежностей серед українських підлітків та молодих людей. Зростаюча підключеність до Інтернету сприяє різноманітній поведінці користувачів, що може мати наслідки, починаючи від порушення соціальних зв'язків та ізоляції, до психічних розладів та фізичних недуг. Примітно, що інтернет-залежність часто виникає в підлітковому віці, перешкоджаючи соціалізації, професійному зростанню та формуванню сім'ї. Поряд з інтернет-залежністю, сучасна наукова спільнота визнає кібер-адикції та зростаючу поширеність залежності від смартфонів (фаббінг). Ці залежності об'єднує компульсивне бажання постійно перебувати в мережі та нездатність відключитися. Для вивчення сучасних кібер-адикцій у дослідженні використовували: "Шкалу залежності від смартфонів" (SAS) та "Тест-опитувальник кібер-адикцій" (TQC), за

[1] Graduate student of the Department of Psychiatry, Medical and Special Psychology of the State institution «South Ukrainian National Pedagogical University named after K.D. Ushynsky», Odessa, Ukraine. WoS Researcher ID: KRO-5661-2024
[2] Graduate student, Psychology of the State institution «South Ukrainian National Pedagogical University named after K.D. Ushynsky», Odessa, Ukraine. WoS Researcher ID: KSM-3222-2024
[3] PhD (Candidate of Philological Sciences) Associate professor, Associate professor at the Department of Social Psychology, Odessa I.I. Mechnikov National University, Ukraine. WoS Researcher ID: JVO-6082-2024
[4] PhD, Associate Professor of the Department of Psychiatry, Medical and Special Psychology of the State institution «South Ukrainian National Pedagogical University named after K.D. Ushynsky», Odessa, Ukraine. WoS Researcher ID: ISS-3893-2023
[5] PhD, scientific secretary of the State Institution "Institute of Forensic Psychiatry of the Ministry of Health of Ukraine" Kyiv, Ukraine. WoS Researcher ID: KTI-0090-2024

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manifestations of cyber-addictions across gender groups, reflecting varying goals and preferences in Internet and technology use. The timely implementation of psycho-prophylactic and psycho-corrective interventions is emphasized to address cyber dependencies and prevent the development of destructive tendencies.

Keywords: personality, cyber-addiction, adolescence and youth, Internet addiction, phubbing, gender.

участю 316 осіб віком 15-21 рік. Результати виявили різні прояви кібер-адикцій серед гендерних груп, що відображає різні цілі та уподобання у використанні Інтернету та технологій. Підкреслюється своєчасне впровадження психопрофілактичних та психокорекційних заходів для профілактики кібер-адикцій та запобігання розвитку деструктивних тенденцій.

Ключові слова: особистість, кібер-адикція, підлітковий та юнацький вік, Інтернет залежність, фабінг, ґендер.

Introduction

The modern world has become a realm of digital technologies, increasingly drawing the younger generation into its sphere. With the increasing availability of smartphones and the Internet, a new form of addiction has emerged – phubbing, which is characterized by a constant need to use a smartphone even when communicating with other people. This phenomenon has serious psychological, social, and behavioral consequences that affect the development of adolescents and young adults. And it is of concern to the modern scientific community around the world: Abbasi, G.A., Ahn, H., Aymedov, K.V., Asieieva, Yu.O., Benvenuti, M., Billieux, J., Blachnio, A., Choi, E.J., Choi, J.S., Choi, S.W., Griffiths, M. D., Gwendolyn, S., Jeong, B., Kim, B. M., Kim, D. J., Kuss, D. J., Kulyk, O., Kwon, J. G., Lee, D., Lee, J. Y., Lee, Y., Lisnychenko, L., Lubenets, I., Mazzoni, E., Naumova, I., Park, E., Pontes, H. M., Przepiorka, A., Song, W.Y., Young, K. S. and many others. (Abbasi et al., (2021), Aymedov et al., (2017), Asieieva Yu.O. (2021), Griffiths, M. D., Kuss, D. J., Billieux, J., & Pontes, H. M. (2016), Jeong, B., Lee, J. Y., Kim, B. M., Park, E., Kwon, J. G., Kim, D. J., Lee, Y., Choi, J. S., & Lee, D. (2020), Young K. S. (1996), Blachnio A., Przepiorka A., Benvenuti M., Mazzoni E., & Gwendolyn S. (2019), Choi S.W., Kim D.J., Choi J.S., Ahn H., Choi E.J., & Song W.Y. (2015) Lubenets, I., Kulyk, O., Kulakova, N., Lisnychenko, L., & Naumova, I. (2023).

The goal is to empirically study the manifestations of cyber addiction among Ukrainian youth.

Today, we are witnessing various forms of cyber-addiction; studying the types and specifics of these addictions will help develop psycho-correction programs tailored to each type. By understanding the unique characteristics and causes of each form of cyber-addiction, specialists (psychologists, social workers, educators, psychotherapists) will be able to create more effective prevention and treatment programs. This comprehensive approach will ultimately improve the mental health outcomes of people suffering from cyber-addiction.

Objectives:

1. Explain the meaning of the concepts of Internet addiction, cyber-addiction and phubbing.
2. To explore the gender characteristics of modern cyber-addicted adolescents and young adults.

Research methods:

The following methods were used in the work: 1) analysis, synthesis, and comparison of scientific, theoretical, and practical literature on the selected topic; 2) ascertaining experiment; 3) mathematical and statistical methods of data processing.

The analysis, synthesis, and comparison of scientific, theoretical, and practical literature on the selected topic included a review of existing scientific works in the fields of psychology, philosophy, pedagogy, and medicine on issues of non-chemical addictions. This also involved analyzing statistical data from the World Health Organization and other organizations regarding the use of digital technologies and the Internet, particularly among young people.

The ascertaining experiment included conducting a psychodiagnostic study using the following test tools:

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the “Smartphone Addiction Scale” (SAS) (Kwon et al., 2013) and the “Test questionnaire for detecting cyber-addiction” (TQC) (Yu.O. Asieieva, K.V. Aymedov) (Asieiev, 2021) These tools allow us to determine the degree of dependence on seven types of modern addictions, which can be personalized or have comorbid manifestations.

Based on the classification of cyber-addictions by Yu.O. Asieieva (2020), we divided them into three categories: introverted, mixed, and extroverted. We expanded the types of addictions that belong to these groups, so that the introverted category includes: computer addiction, Internet addiction, pathological online reading, and web surfing. Mixed addictions include: gaming addiction; gadget addiction; phubbing, and extroverted addictions include cyber-communication addiction, selfies, cybersex, virtual dating.

Mathematical and statistical methods of data processing included the calculation of percentages, Cronbach's Alpha statistical analysis, and correlation analysis according to K. Pearson. The calculations were performed using SPSS 26.0 for Windows XP.

The study involved 316 participants: 141 people aged 15-17 years, including 63 boys and 78 girls; and 175 people aged 18-21 years, including 81 boys and 94 girls. Thus, the sample consisted of 144 boys and 172 girls.

Conflict of interest. The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Analysis of recent research and publications

Educators, psychologists, and sociologists are increasingly beginning to recognize the dual effect of the latest digital technologies, as a positive aspect of the development of society, the latest opportunities for obtaining information, but there are also some negative consequences, the emergence and formation of new forms of addictive behavior from various gadgets and devices. Especially important are studies conducted among those who are forming their own habits related to the use of digital media, i.e. adolescents. This group is characterized by a high level of risk of exposure to cyber threats, including the initiation of problematic situations related to widely used digital devices. The scale of social and digital phenomena is impressive, and they are associated with the negative impact of new technologies on young people as the main users of mobile devices.

Impaired self-control when using computers, smartphones, and the Internet can lead to health deterioration. Symptoms of Internet addiction include withdrawal syndrome, distress, intolerance, compulsive behavior, aggressiveness, and can result in functional impairments, the development of anxiety-depressive disorders, sleep disturbances, carpal tunnel syndrome, visual impairment, and other health issues. Currently, cyberspace addiction is viewed as a complex problem in three main areas: psychological, social, and medical. From a social perspective, cyber- addiction is considered a form of deviant behavior. Medical perspectives increasingly emphasize that this is a type of non-chemical addiction with its own nosology and pathogenesis that requires treatment. In the field of psychology, cyber-addiction is regarded as a disorder with its own stages of development and levels of dependence on the object of addiction, which negatively affect social relationships, psychological state, physiological health, and overall disrupt the normal process of life. Regardless of the field of study, the necessity of further research into cyber-addiction is emphasized. (Asieieva, 2021, Griffiths et al., 2016; Kent & Hoffman, 2024; Goldberg, 1996; Kaminska et al., 2019; etc).

The progressive development of digital technologies is leading to a further increase in the number of people dependent on cyberspace, gadgets, smartphones, and the Internet. Many researchers, such as Griffiths M. D. (Griffiths et al., 2016) conducted a study among adolescents on Internet addiction: its prevalence and risk factors. 3105 adolescents were given psychodiagnostic tools: the Compulsive Internet Use Scale and the Big Five Scale. After analyzing the data, it turned out that 3.7% of the sample was at risk of developing Internet addiction (Griffiths et al., 2016).

Research aimed at identifying gender characteristics of Internet-addicted adolescents revealed that out of 56,086 children, 3.6% of boys and 1.9% of girls suffered from addiction. At the same time, addicted teenagers had health issues, subjectively assessed themselves as unhappy, and showed signs of depression

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in their psychological state compared to other teenagers who were not identified as Internet addicts (Hong Yeon-Ran & Do Eun-Young, 2014).

According to the latest sociological research conducted among 12.9 million Ukrainian Internet users, the In Mind Factum Group found that 22% of respondents use the Internet daily, 30% once a week or more, and only 33% once a month or more often. Considering the results of the socio-demographic structure of Ukrainian users, it can be noted that among the users, people living in cities with a population of 100 thousand or more predominate - 58%, among them men make up 54%, and the largest number is among adolescents and young people aged 15-30 years old - 58%. The number of mature users is 29% - aged 31-45, while people over 46 make up only 13% of Internet users. (Kent & Hoffman, 2024; Asieieva, 2021)

In studies by Alex S. Hall and Jeffrey Parsons, which were aimed at studying interaction with virtual reality, it was emphasized that excessive exposure to cyberspace harms the normal development and functioning of cognitive processes, leads to behavioral disorders, and negatively affects the affective sphere of a person. Despite the results obtained from their own study, these authors did not join the cohort of scientists who believe that Internet addiction has a pathological etiology (Hall & Parsons, 2001).

Other scholars clearly emphasize that Internet addiction is a disease, not a bad habit, a flaw in upbringing, or an unfavorable set of circumstances. It is on the same level as other types of chemical (drug and alcohol addiction) and non-chemical (gambling, training addiction) addictions, as it shows all the signs of the disease (cause, symptoms, course, treatment and prognosis) (Bilouschenko & Charnetska, 2013; Kaminska et al., 2019).

So, the discourse continues, and the concepts of Internet and computer addiction can be interpreted from two main perspectives: biological and psychological. From a biological perspective, Internet and computer addiction, like drug addiction (or any chemical addiction), causes physiochemical reactions in the human body that act on neuromodulators and lead to addiction due to positive emotional states, which are generated by a state of euphoria, satisfaction, i.e. acting on the “pleasure center” and subsequently cause disruptions in the dopaminergic neurotransmitter system, and disconnection from the network causes boredom, depression, emptiness, etc. From the psychological point of view, the concepts of Internet and computer addiction are behavioral disorders, deviations, and disorders in the emotional and volitional sphere, the inability to control urges are the result of a habit.

To describe the irresistible desire to use the Internet, I. Goldberg proposed the term “Internet addiction” (Goldberg, 1996). The scientist argued that Internet addiction affects everyday, educational, social and psychological spheres of activity and denotes excessive use of a computer to engage in social interaction (Goldberg, 1996).

The results of studies conducted in many countries have shown that the problem of Internet addiction is international (Shapira et al., 2003). Different authors have obtained an impressive range of estimates of the prevalence of Internet addiction: among the population - from 1÷5% of Internet addicts (Young, 1996; Griffiths et al., 2016); among students in Turkey – 6.6% of Internet addicts (Cigdem H., Öztürk M. 2016).

The works of John Suler indicate that cyber-addiction should be considered as a dependence on the virtual space that is created by computer technology (Suler, 2016).

In the works of Voiskunsky A.E. (Voiskunsky, 2013), even three types of cyber activities that cause global negative changes in the personality have been identified:

1. Fascination with knowledge in the field of programming and telecommunications, as an extreme variant – hacking.
2. Fascination with computer games and games via the Internet, as an extreme variant – game addiction.
3. Fascination with network communication, as an extreme option – Internet addiction – dependence on the Internet (Voiskunsky, 2013).

Asieieva Yu.O. (2020) notes in her study that computer addiction, Internet addiction and cyber addiction are defined as a form of addictive behavior, a mental disorder that affects the process of a person's life and has a procedural nature and various manifestations. The author concludes that cyber-addiction is a type of non-chemical addiction, which is expressed in a violation of psychological health caused by an obsessive

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desire to constantly be in virtual reality, to live and be realized in cyberspace through the use of gadgets or electronic devices, despite the destruction of reality, negative consequences for health and for the process of life in general (Asieieva, 2020).

Thus, it can be noted that Internet addiction reflects a universal dependence on the Internet as a whole phenomenon. This can include not only the use of smartphones but also computers, tablets, and other devices. A person addicted to the Internet may spend a significant amount of time online, neglecting other aspects of life such as work, education, and social relationships.

A relatively new type of addiction is phubbing – a specific form of dependent behavior related to the use of smartphones and other mobile devices. It manifests as the habit of constantly checking one's phone during interactions with others, even in real-time conversations. Phubbing can cause communication and relationship disorders due to feelings of being ignored and undervalued. In our view, phubbing represents social maladjustment characterized by unconscious, uncontrolled actions resulting from an inability to effectively engage in face-to-face communication and relationships, replacing them with virtual interactions.

Phubbing often negatively impacts the quality of relationships and personal well-being, reducing satisfaction with relationships. Research conducted by Beranuy M., Oberst U., Carbonell X., and others has shown that phone use can become a means of avoiding loneliness, but it can also lead to anxiety, restlessness, and deprivation disorders that manifest when separated from the device. It has also been found that impaired self-control in using computers and the Internet can lead to deteriorating well-being and distress. Moreover, there is growing debate about whether phubbing is a manifestation of addiction or a new social norm (Beranuy et al., 2009).

Therefore, the issues of Internet addiction, cyber addiction and phubbing are relevant and require further research, especially given the rapid development of technology and changing social norms in modern society.

Results

In order to study the gender peculiarities of cyber-addictions in adolescence and young adulthood, the following groups were created from the total sample: the first study group (GS1) included 63 boys aged 15-17 years, the second study group (GS2) consisted of 78 girls aged 15-17 years, the third study group (GS3) included 81 young men aged 18-21 years, the fourth study group (GS4) included 94 girls.

Table 1 shows the data on gender peculiarities of cyber addiction in adolescence and young adulthood according to different subscales of the TQC: computer addiction, Internet addiction, game addiction, gadget addiction, cyber-communication addiction, and selfie addiction.

Table 1.
Sexual characteristics of cyber addictions in adolescence and youth

Sub-scales TQD / y %	Absence of cyber addiction	Absence of signs of addiction	1st degree of addiction	2nd degree of addiction	3rd degree of addiction
Computer addiction (PC)					
GS1	3,17	90,48	3,17	3,17	0,00
GS2	7,69	88,46	3,85	0,00	0,00
GS3	3,70	92,59	2,47	1,23	1,23
GS4	4,26	93,62	1,06	1,06	0,00
Internet addiction					
GS1	3,17	88,89	4,76	1,59	1,59
GS2	2,56	91,03	2,56	2,56	1,28
GS3	1,23	88,89	4,94	2,47	2,47
GS4	1,06	94,68	2,13	1,06	1,06
Game addiction					
GS1	4,00	55,00	1,00	2,00	1,00
GS2	14,00	60,00	3,00	1,00	0,00
GS3	8,00	70,00	1,00	1,00	1,00
GS4	18,00	73,00	2,00	1,00	0,00
Gadget-addiction					
GS1	0,00	90,48	4,76	3,17	1,59

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GS2	0,00	93,59	3,85	2,56	0,00
GS3	0,00	95,06	2,47	1,23	1,23
GS4	0,00	95,74	3,19	1,06	0,00
Cyber-communication addiction					
GS1	3,17	90,48	3,17	3,17	0,00
GS2	2,56	89,74	3,85	3,85	0,00
GS3	3,70	93,83	1,23	1,23	0,00
GS4	2,13	91,49	4,26	2,13	0,00
Selfitis					
GS1	31,75	50,79	15,87	1,59	0,00
GS2	11,54	66,67	12,82	6,41	2,56
GS3	24,69	71,60	2,47	1,23	0,00
GS4	15,96	51,06	21,28	6,38	4,26

Author of the table (Hanhan Yuliia)
Note: Group GS1 is a group of boys aged 15-17; GS2 is a group of girls aged 15-17; GS3 is a group of boys aged 18-21; GS4 is a group of girls aged 18-21.

Considering the results obtained for each type of cyber addiction, it can be noted that computer addiction is most pronounced among (GS3) young men aged 18-21 years, as 2.47% of respondents were found to have the 1st level of addiction, and 1.23% of respondents had the 2nd and 3rd levels of addiction. The highest rate of absence of this type of addiction is among girls (GS2) aged 15-17 years – 88.46% of respondents. The highest results in terms of Internet addiction manifestations were demonstrated by young men (GS3) aged 18-21 years, as 4.94% of respondents were found to have the 1st level of addiction, and 2.47% of respondents had the 2nd and 3rd levels of addiction. The highest rate of absence of this type of addiction is among young men (GS1) aged 15-17 years – 88.89% of respondents. Girls of both groups have a total manifestation of Internet addiction at the level of 97.44% and 98.94% of respondents (GS2 and GS4, respectively).)

The manifestations of gambling addiction were distributed as follows: the highest overall level Is demonstrated by young men aged 18-21 years – 76.00% of respondents, with the highest rates in terms of GS1, as 1.00% of respondents have the 1st and 3rd level of addiction and 2.00% of respondents have the 2nd level of addiction. The highest percentage of absence of addiction is demonstrated by girls aged 15-17 years (GS4) – 18.00% of respondents.

The peculiarity of gadget addictio”s is’the absence of people who are not addicted in all groups of respondents. The highest rates of gadget addiction are demonstrated by (GS1) boys aged 15-17 years, with the total rate of pronounced addictive behavior (1st, 2nd and 3rd levels) equal to 9.52% of respondents, and the lowest manifestations among (GS4) girls aged 18-21 years – 4.26% of respondents.

Analyzing the results of cyber-communication addiction manifestations, the least pronounced among (GS3) young men aged 18-21 years, as the manifestations of the 1st and 2nd levels of addiction are only 2.47% of respondents, the highest level among girls aged 15-18 years is the manifestations of the 1st and 2nd levels of addiction – 3.85% of respondents each.

The peculiarities of selfie manifestations are characterized by the highest rates of absence, especially among young men (31.75% of respondents in GS1, 24.69% of respondents in GS3), the highest rates of total dependence (1st, 2nd and 3rd levels) among girls (21.79% of respondents in GS2 and 31.91% of respondents in GS4).

According to the results obtained, we can note that among boys aged 15-17, the most pronounced is PC addiction, among boys aged 18-21 – Internet addiction, among girls aged 15-17 – cyber-communication addiction, and among girls aged 18-21 – selfie addiction. The least pronounced among boys are selfie and cyber-communication addictions, and among girls – PC addiction. Thus, boys are more interested in PCs, the Internet, and gaming addiction, which may be due to the great popularity of online video games that require certain different technical features of devices. Girls use cyberspace more actively to build communication and demonstrate themselves in it.

The general trend is that there are different manifestations of cyber-addictions in different gender groups, and these differences point to different purposes and benefits of using the Internet and modern

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technologies. It is important to keep in mind that these conclusions are based on data, and further research can help to further understand and explain the trends found.

Based on the objectives and overall aim of the study, we also identified individuals with a dependence on phubbing. To achieve this, we applied a test to identify the risks of dependent behavior associated with pathological smartphone use (Table 2).

Table 2.
Identification of the risk of smartphone addiction in the studied groups

Groups	Number of examined	Number of addicts	Percentage of addicts
GS1	63	23	36,51
GS2	78	35	44,87
GS3	81	21	25,93
GS4	94	30	31,91

Author of the table (Hanhan Yuliia)
Note: Group GS1 is a group of boys aged 15-17; GS2 is a group of girls aged 15-17; GS3 is a group of boys aged 18-21; GS4 is a group of girls aged 18-21.

According to the obtained results, it can be noted that the highest percentage of addicted individuals is found in the group of girls aged 15-17 years (GS2), accounting for 44.87% of the respondents, while the lowest addiction risks are observed among young men aged 18-21 years (GS3) – 25.93%. The average percentage of addicted individuals across the entire sample (aged 15-21 years) is 34.49%.

In order to understand the interrelationships of phubbing with various types of cyber addictions, we conducted a statistical analysis of Cronbach's Alpha, according to which it was established for the group of 15-17 years – 0.7421, and for the group of 18-21 – 0.6366. Correlation analysis according to K. Pearson was also conducted among two age groups of 15-17 years and 18-21 years (tables 3 and 4)

Table 3.
Correlation matrix of cyber addictions according to K. Pearson in the group of 15-17 years

Pearson correlation	Dependence on ZP	Internet addiction	Game addiction	Gajet addiction	Cyber-communicative	Selfitis
SAS-SV	,354 **	,381 **	,228 **	,411 **	,462 **	,388 **
SAS	,370 **	,412 **	,223 **	,394 **	,460 **	,347 **

Author of the table (Hanhan Yuliia)
*Note: ** – Correlation is significant at the 0.01 level*
**– Correlation is significant at the 0.05 level*

Considering the results of the correlation analysis according to K. Pearson, it can be noted that phubbing is directly correlated with all types of cyber addictions, especially with jet addiction r = 0.411, cyber communicative addiction r = 0.462 and selfitis r =0.388 according to the shortened version of the smartphone addiction test. And according to the extended version of the test for detecting phubbing, the strongest connections can be noted with Internet addiction r =0.412 and cyber communication addiction r =0.460.

Table 4.
Correlation matrix of cyber addictions according to K. Pearson in the group of 18-21 years

Pearson correlation	Dependence on ZP	Internet addiction	Game addiction	Gajet addiction	Cyber-communicative	Selfitis
SAS-SV	0.147	,358 **	,402 **	.265 **	.269 **	.339 **
SAS	0.032	,396 **	,424 **	,368 **	,262 **	,374 **

Author of the table (Hanhan Yuliia)
*Note: ** – Correlation is significant at the 0.01 level*
**– Correlation is significant at the 0.05 level*

Statistically significant correlations between phubbing and cyber addictions among young men were found according to Gaming Addiction, both in the extended and shortened SAS test (r =0.402 and r

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=0.424), Internet addiction (r =0.358 and r =0.396), as well as between phubbing and selfitis and selfitis (r =0.339 and r =0.374). According to the extended SAS test, a positive significant relationship between phubbing and jet-addiction was revealed r = 0.368. In contrast to the adolescent group, no connection was found between phubbing and PC addiction, which may indicate that young people do not use it to distract from interpersonal communication.

According to the data obtained, in our opinion, it is necessary to emphasize the prevention of preventive and psycho-corrective measures for cyber addictions. Prevention of cyber addictions may include social and educational activities that study the impact of the Internet on various spheres of life (Asieieva et al., 2021). Preventive measures should be based on the following principles: the principle of comprehensiveness – both government agencies and public organizations should be involved in preventive measures to prevent cyber addiction among the younger generation, as well as training events that educate addicts. The main means of psycho-correction of cyber addicts include: psychological support; training (plasticity, positive learning, education and development in the context of the person's life prospects: association, tolerance and stress resistance, formation of rational attitudes, etc.); social and psychological; transactional analysis (development of the ego-state of the "Adult"); symbolic drama; music therapy, art therapy, REBT, ACT, etc.

In general, ways to overcome cyber addiction should be socially and psychologically oriented, aimed at: correcting behavioral deficiencies; changing the life program so that the individual can meet their needs, focusing not on the virtual environment, but on the surrounding reality; developing the ability to establish constructive relationships with others; displacing cyberspace from the leading activity; normalizing emotional responses to difficult life situations.

Conclusions

1. "Internet addiction," "cyber addiction," and "phubbing" are all concepts that reflect dependence on digital technologies, which manifests as replacing real-world interests with illusory, virtual ones. While they all address the problematic use of technology, including smartphones and the Internet, they have their distinctions.

Internet addiction and cyber addiction refer to a general dependence on the Internet as a whole phenomenon. This can include not only the use of smartphones but also computers, tablets, and other devices. A person addicted to the Internet may spend a significant amount of time online, neglecting other aspects of life such as work, education, and social relationships.

Phubbing is a specific form of dependent behavior related to the use of smartphones and other mobile devices. It manifests as the habit of constantly being distracted by a phone during interactions with others, even in real-time. Phubbing can cause communication and relationship disorders due to feelings of being ignored and undervalued.

2. In studying the gender characteristics of phubbing manifestations in adolescence and youth, it was found that among adolescent boys (15-17 years old), 36.51% of male respondents are addicted, while among female respondents it is 44.87%. Among young men (18-21 years old), it is 25.9%, and among young women, it is 31.91%.

Gender differences in addiction manifestations were noted, with the findings showing that among boys aged 15-17, PC addiction is most pronounced; among young men aged 18-21, it is Internet addiction; among girls aged 15-17, it is cyber communication addiction; and among girls aged 18-21, it is selfitis. The least pronounced among boys are selfitis and cyber communication addiction, while among girls it is PC addiction. Therefore, boys are more involved with PCs, the Internet, and gaming addiction, which may be due to the popularity of online video games requiring various technical device features. Girls more actively use cyberspace for communication and self-presentation.

3. Timely implementation of psycho-preventive and psycho-corrective measures will positively contribute to overcoming cyber addiction, as individuals prone to addiction will be subjected to targeted interventions aimed at preventing the development of destructive tendencies.

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Further study of cyber addictions will allow for the creation of psychological profiles of addicted individuals and, based on them, the development of more effective prevention and correction programs for these types of non-chemical dependencies.

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Justice for victims: a comparative analysis of victim representation in Ukraine and international standards

Правосуддя для потерпілих: порівняльний аналіз представництва потерпілих в Україні та міжнародних стандартів

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Written by:
Ivan Iemets[1]
https://orcid.org/0009-0003-9056-5346
Serhii Tiulieniev[2]
https://orcid.org/0000-0001-9685-1536
Serhii Perepelytsia[3]
https://orcid.org/0000-0002-0721-9609
Volodymyr Popov[4]
https://orcid.org/0009-0003-9020-9448
Mykola Kolomoitsev[5]
https://orcid.org/0009-0005-8957-5509

Abstract

The issue of providing access to justice for every person is now topical worldwide. The problem of protecting the interests of crime victims needs improvement. Therefore, the purpose of the article is to clarify the issue of compliance of the legislation of European countries, including Ukraine, with international standards in the field of protection of victims' rights. Based on the analysis results, recommendations were proposed to improve regulatory provisions to bring them into line with international legal acts.
An analysis of the court verdicts passed based on the results of criminal case consideration was carried out. The need to ensure professional representation of the victim's rights has been established. The need for mandatory representation of the elderly, people with

Анотація

У світі зараз актуалізоване питання надання доступу кожній людині до правосуддя. Удосконалення потребують питання захисту інтересів жертв злочинів. Тому мету статті визначено як з'ясування питання про відповідність законодавства європейських країн, у тому числі України, міжнародним стандартам у сфері захисту прав потерпілих. За результатами проведеного аналізу запропоновано рекомендації щодо вдосконалення нормативних положень з метою приведення їх у відповідність до міжнародних правових актів.
Проведено аналіз судових вироків, ухвалених за результатами розгляду кримінальних справ. Констатовано потребу забезпечення професійного представництва прав

[1] Private notary of the Kharkiv City Notary District, Doctoral student at National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» of the Ministry of Justice of Ukraine, PhD in Law, Kharkiv, Ukraine. WoS Researcher ID: KMY-7519-2024
[2] Director at National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute», PhD in Economics, Kharkiv, Ukraine. WoS Researcher ID: KOC-3990-2024
[3] Leading researcher of the department of postgraduate and doctoral studies at National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» of the Ministry of Justice of Ukraine, PhD in Law, Assosiate Professor, Kharkiv, Ukraine. WoS Researcher ID: JMC-7189-2023
[4] Doctoral student at National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» of the Ministry of Justice of Ukraine, PhD in Law, Kharkiv, Ukraine. WoS Researcher ID: KOC-3890-2024
[5] Lawyer, Doctoral student at National Scientific Center «Hon. Prof. M. S. Bokarius Forensic Science Institute» of the Ministry of Justice of Ukraine, PhD in Law, Kharkiv, Ukraine. WoS Researcher ID: KMY-7592-2024

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disabilities, and representatives of other social categories is emphasized.
Analyzing the legislation of countries such as Czechia, Bulgaria, and Georgia determined the peculiarities of victim representation in criminal proceedings. The fundamental principles to which the legal system of any legal and social state must comply have been determined based on international legal treaties. Considering the received conclusions, recommendations for improving Ukraine's legislation were formulated.

Keywords: criminal justice, prosecution, representative, victim, lawyer.

потерпілих. Наголошено на необхідності обов'язкового представництва осіб похилого віку, з обмеженими можливостями та представників інших соціальних категорій.
На прикладі аналізу законодавства таких країн, як Чехів, Болгарія, Грузія визначено особливості представництва потерпілих у кримінальному судочинстві за законодавством цих країн. На підставі міжнародно-правових договорів визначено ті фундаментальні принципи, яким має відповідати правова система будь-якої правової та соціальної держави. З урахуванням отриманих висновків, сформульовано рекомендації щодо вдосконалення законодавства України.

Ключові слова: кримінальне судочинство, сторона обвинувачення, представник, потерпілий, адвокат.

Introduction

The national legislation of each state consists of relevant sources of national law and international standards. One of the international standards in human rights protection is the right to have one's case examined by impartial and competent specialists (United Nations, 1948).

In addition, the European Convention on Human Rights guarantees the right of everyone to an effective remedy for violated rights and freedoms in a national body, even though persons exercising their official powers may have committed such a violation (United Nations, 1950). Therefore, the protection that a person receives must have such a feature as effectiveness. This concerns protecting the rights of those who have committed and become victims of a crime. We conclude that despite the equality of rights of all citizens, in criminal justice, there is a certain inequality of the statuses of representatives of the defense and prosecution sides. Such a conclusion is formulated based on analyzing the normative provisions of many international legal treaties. It is generally accepted that the parties in criminal proceedings are equal before the law and the court. The principle of adversarial of the parties also belongs to the international criminal justice standards. Considerable attention in legislative acts is paid to protecting a person from criminal prosecution. At the same time, the issues of protecting the rights of crime victims and the peculiarities of their representation in court are currently poorly researched. Therefore, we believe that the role of the victim's representative in criminal proceedings regarding the protection of the rights of crime victims is becoming an urgent problem. This requires an analysis of the regulatory support of the mechanisms of the national protection system and finding out whether they are aligned with international norms.

It is generally accepted that the parties are equal before the law and the court in criminal proceedings. In addition, the page on the adversarial principle belongs to the international criminal justice standards. Therefore, we believe that the role of the victim's representative in criminal proceedings regarding the protection of the rights of crime victims is an urgent problem. This requires analyzing the regulatory support of national system protection mechanisms and finding out whether they are aligned with international norms.

To achieve the goals of the article, a theoretical analysis of literary sources and court practices of judicial bodies of Ukraine and foreign countries was carried out.

It is well founded that comprehensive studies on the representation of victims in Ukraine and compliance of national practice with international standards have not been conducted in the literature.

The list of methods used during the research is given, and a description of the materials for which the analysis was carried out is provided.

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In the first section of "Results and discussion" the provisions of the national legislation of Ukraine are analyzed. Significant shortcomings have been identified that hurt the representation of the victim in criminal proceedings. In the second section, proven international practices of victim representation are presented. The importance of public participation in non-governmental organizations in conducting consultations on legal issues for citizens is indicated. It was determined that the legal provisions of foreign countries regulate the rights of victims' representatives in more detail. In the third section of the main part, the procedure for involving the victim's representative free of charge in Ukraine and European countries is subjected to a comparative analysis. In the fourth section of the main part, a systematic analysis of the provisions of international legislation was carried out, and the practice of the European Court of Human Rights and the International Criminal Court was analyzed. Positive practices of victim representation have been identified.

The conclusions state the prospects for improving the legal order victims' representation in Ukraine.

Literature Review

The provisions of the Universal Declaration of Human Rights (United Nations, 1948), the European Convention on Human Rights (United Nations, 1950), and the Council of Europe 2012/29/EU (European Union, 2012) and others represent the legal basis of the study.

The legal principles of the activity of the representative of the victim are determined based on the analysis of legislative acts of Ukraine, in particular, the provisions of the Constitution of Ukraine (Law of Ukraine No. 254k/96-VR, 1996), the Criminal Procedure Code of Ukraine (Law of Ukraine No. 4651-VI, 2012), the Laws of Ukraine "On Advocacy and Advocacy" (Law of Ukraine No. 5076-VI, 2012), " About free legal aid" (Law of Ukraine No. 3460-VI, 2011), and others.

The study also analyzed the provisions of the Criminal Procedure Code of the Czech Republic No. 141/1961 Sb (Law of the Czech Republic No. 141/1961, 1961), the Law of the Czech Republic "On Victims of Crime" No. 45/2013 Sb (Law of the Czech Republic No. 45/2013, 2013), the Criminal Procedure Code of the Republic of Bulgaria (2006) and others.

The theoretical analysis was carried out based on the analysis provisions of the works of Ukrainian scientists. Among them are the scientific works of S. Ablamskyi et al. (2020), T. Fomina et al. (2020), I. Mudrak et al. (2019), I. Rakipova et al. (2023) and many others. S. Vasiliev (2014) studied the peculiarities of the presentation of victims at the International Criminal Court. I. Rakipova et al. (2023) identified the peculiarities of victims receiving legal aid in Ukraine. I. Mudrak et al. (2019) and his colleagues conducted a study of the physiological and psychological states of the victim. They determined how this affects the possibility of self-defense and self-representation in court.

It is based on the developments of foreign scientists, such as J. Ouwerkerk (2019), C. H. Terence and P. Osinsky (2006), and others. In recent studies, proposals have been made for involving the public in the protection of crime victims (Al-Majtoumi, 2023), human trafficking (Rodda, Smith-Cannoy, 2024), organized crime (Bell-Martin, Díaz Domínguez, 2024), etc. However, comprehensive studies on the issues of victim representation and compliance with national provisions and international standards have not been conducted. In addition, scientists did not conduct comparative legal studies within the scope of this issue. This proves the relevance of the chosen topic.

Methodology

The article is devoted to analyzing the state of modern legislative support for the representation of the victim in criminal proceedings in Ukraine and abroad. It also defines international standards in the field of protecting the rights of crime victims and determines prospects for their improvement. In particular, this applies to those states that position themselves as legal and social.

It is normative legal research. A special scientific method such as comparative legal analysis played a priority role in achieving the article's goal. It was used during the analysis of national and foreign legislation, as well as the court practice of Ukraine, the European Court of Human Rights, and the International Criminal Court.

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During the research, a complex of general scientific and special methods was used. The authors used analysis and synthesis to analyze the textual content of legal provisions regulating the activities of lawyers to protect crime victims. Dogmatic, comparative-legal, logical, and generalizing methods and legal analysis were also used to formulate the research conclusions.

In addition, content analysis methods were used to study legislation as a basis for research. Quantitative and statistical methods were also used for article purposes, contributing to the systematization of empirical data. Empirical data are represented by court verdicts where the victims were natural persons from violent crimes, as well as where the victims were legal entities. The empirical research is presented by the results of the study of 180 decisions of the national courts of Ukraine. The category of cases is criminal. Open data from the Unified State Register of Court Decisions was also subjected to statistical analysis.

The comparative legal method was used to outline the main problems of Ukraine's legislation on the representation of the victim in the criminal process, analyze foreign experience in resolving these issues, and formulate proposals for improving the current legislation.

Results and discussion

Experience of Ukraine and legal guarantees participation of the victim's representative in criminal proceedings

The Constitution of Ukraine guarantees everyone's right to legal aid. Lawyers can provide effective and qualified assistance. Representation of the victim's interests by a lawyer in criminal proceedings is the main means of protecting his rights and legitimate interests (Law of Ukraine No. 254k/96-VR, 1996).

Ukraine's criminal procedural legislation provides for the possibility of ensuring the rights and legitimate interests of the victim in criminal proceedings by a legal specialist. Generally, these specialists can be lawyers (Law of Ukraine No. 4651-VI, 2012).

A lawyer in Ukraine is a natural person who practices law on the grounds and in the manner prescribed by the Law. Advocacy is an independent professional activity of a lawyer regarding protection, representation, and provision of other types of legal assistance to the client (Law of Ukraine No. 5076-VI, 2012). In this way, a specialist who protects the rights of an individual is required to be professional, and his activity to be efficient.

"Representation" is a type of lawyer's activity that consists of ensuring the rights and obligations of the client in administrative, civil, economic, and constitutional proceedings before natural and legal persons in other state bodies, as well as the rights and obligations of the victim in cases of administrative offenses, rights and obligations of the victim, civil defendant and plaintiff in criminal proceedings (Law of Ukraine No. 5076-VI, 2012). In the essential aspect, the victim's representative in the criminal process is a participant in the criminal proceedings who takes actions to restore and ensure the rights and interests of the person he represents.

The victim's representative in criminal proceedings is granted derivative status, which guarantees him the right to use only those rights granted to the victim. At the same time, the representative is prohibited from using the rights that the victim can directly exercise.

Regarding the legal basis for the participation of the victim's representative in criminal proceedings, according to the modern doctrine of criminal procedural law, the subject who can be a defense attorney in criminal proceedings has the right to represent the victim, who is a natural person, which is confirmed by a certificate of the right to engage in advocacy. The representative of the victim, personified by a legal entity, can be:

1) Its manager;
2) A person authorized by law or constituent documents;
3) An employee of a legal entity under a power of attorney or a person with the right to be a defense attorney in criminal proceedings (Law of Ukraine No. 4651-VI, 2012).

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We analyzed court cases that the national court of Ukraine considered during 2019-2024. Thus, it was established that during the specified period, 538,712 cases of criminal offenses against the life and health of a person were identified, of which representatives of the victims took part in 62,359, which is 12 % of the total number of smaller cases of this category. As for the case under the category "Criminal offenses against sexual freedom and mortal inviolability of the person", 27,161 cases were presented, and a representative was involved in 6,280 cases, 23% of the total number of recorded offenses. That is, the involvement of victims' representatives is still low.

We analyzed 180 criminal proceedings where damage was caused to a legal entity. In 84% of these criminal proceedings, an employee of the legal entity was involved as a representative of the legal entity. He certified his authority with a power of attorney signed by the head of this legal entity. In such situations, it is difficult to agree that the representation of the injured party will be provided at the appropriate level. That is, it will be competent and effective. This is because such subjects often do not even have a legal education. They confirm the insufficient participation of victims' representatives in criminal proceedings and we receive the results of the analysis of empirical data.

Based on the analysis of legislative norms and theoretical developments, it should be noted that the activities of the victim's representative consist of:

- Providing legal advice;
- Ensuring legality during procedural actions, in the form of control over compliance with legislation by employees authorized to the pretrial investigation of criminal offenses and other participants in the case;
- Implementation of measures to restore violated rights, submission of requests for procedural actions;
- Collection and submission of evidence in the case;
- Participation in court debates;
- Appeals of court decisions;
- Participated in the signing of an agreement on reconciliation in criminal proceedings.

That is, the lawyer enjoys almost all the rights of the person he represents. This position is confirmed by Clause 9 of the Resolution of the Plenum of the Supreme Court of Ukraine "On the practice of courts applying legislation that provides for the rights of victims of crimes." By its provisions, the representative of the victim, whose powers are certified by the relevant power of attorney, enjoys the same rights as the victim and can act both together with him and instead of him (Resolution of the Plenum of the Supreme Court of Ukraine No. 13, 2004).

We consider the lack of a separate norm that would directly contain a clear list of rights and duties of the representative-advocate of the injured person to be a gap in the domestic legislation. The legal relations participants interpret the law's general mention that the representative can use the victim's rights differently. Therefore, in judicial practice, the number of facts is increasing when representatives of the victims are forced to challenge the actions of the participants in the proceedings, who are trying to limit their legal status. We support the position on changing the Criminal Procedure Code of Ukraine to provide a separate article 58-1. It should be entitled "Mandatory participation of the representative (lawyer) of the victim," the content of which would be a list of cases of mandatory participation of the victim's lawyer in the criminal process, namely, pre-trial investigation and trial of criminal proceedings (Kavun, 2017).

The participation of the victim's representative is also important in those cases when the prosecutor refuses to support the state prosecution. In this regard, we consider it a rational idea to introduce the mandatory participation of a lawyer as a representative of the victim in such cases. Suppose the victim is not able to hire a lawyer on his own. In that case, the court should issue a decision instructing the relevant body (institution), authorized by law to provide free legal aid, to appoint a lawyer to provide representation as assigned and to ensure his arrival at the time and place specified in the decision to participate in criminal proceedings (Marynych & Stepanok, 2018).

The experience of some European countries regarding the protection of crime victims' rights and the representativeness of victims in criminal proceedings

Countries worldwide have national legislation that defines the procedure for representing the interests of crime victims in different ways. The situation is similar in the aspect of exercising the rights of victims in

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court. However, the laws of other countries, unlike the legal system of Ukraine, clearly enshrine the rights of representatives of crime victims.

Crime undermines sustainable development, impedes access to education, and discourages investment opportunities, and combating crime successfully has become an important element in achieving that development. Sustainable development should provide access to justice for all and build effective, accountable, and inclusive institutions at all levels). These goals were mentioned in the United Nations General Assembly resolution of 25 September 2015, and on 1 January 2016, the 17 Sustainable Development Goals were included in the 2030 Agenda for Sustainable Development. In the framework of combating crime, the legislator has given a role to the public in contributing to providing support and information to the criminal justice agencies, which contributes to protecting the rights of crime victims, as the public has a role in reporting the crime, and in assisting the security services in arresting the perpetrators (United Nations General Assembly, 2015). Finally, one of the most prominent pictures in which it appears clearly to help the victims of crime is the role of the public in giving testimony.

Regarding public participation in protecting the rights of crime victims, we consider it appropriate to cite the positive experience of Great Britain, particularly England and Wales. Recently, on the territory of these countries, parties participating in court proceedings on their own were provided (if necessary) with legal assistance on a volunteer basis by the Personal Support Unit - "Personal Support Unit." Now, it is already a legal charity "Support Through Court, which assists in civil and family cases (disputes), and although this does not apply in the context of legal representation of persons during hearings and categories of criminal cases, such departments can express their position about whether a person should seek the professional help of a lawyer, what are the problematic points or weak points in his case, etc. (Support Through Court, 2024).

Also, under the Criminal Procedure Code of the Czech Republic, a representative can make proposals and submit requests on behalf of the injured party. He can also implement other means of legal protection and participate in all actions the injured party can participate in. In addition, the representative has the right to be present during investigative actions to clarify the circumstances important for exercising the rights of the persons he represents. The obtained results can be used as evidence in court proceedings. The representative is guaranteed the right to ask questions of the accused and other interrogators, but only when the police authority finishes the interrogation and gives him the floor. In cases where there are several victims, the court may require the involvement of only one representative common to all victims. This position is explained by the fact that the participation of several representatives can increase the period for consideration of the case (Law of the Czech Republic No. 141/1961, 1961).

The right of a crime victim to free assistance of a lawyer according to the laws of Ukraine and foreign countries

The different standard of living of citizens naturally determines that not every victim can attract a qualified representative. Sometimes, victims are not aware of their right to receive free legal aid. Currently, several trends have formed naturally in the world. In some countries, mechanisms for obtaining free legal assistance from a lawyer are constantly being improved. In other countries, on the contrary, such centers either do not exist or do not function fully, and access to their services is provided to a minimal category of people.

A positive example is the legislation of the Czech Republic. By the law, a lawyer is engaged to protect the interests of:

1) A victim who testifies for the commission of an intentional crime that caused serious injury to health;
2) If the death of the victim occurred, which was caused by a criminal act;
3) A minor victim;
4) Especially vulnerable victims.

A separate law of the Czech Republic, "On Victims of Crime," defines especially vulnerable victims:

- Children;
- Elderly persons;
- Persons who have physical, mental, psychological, or sensory disabilities, and this affects the ability to exercise rights in society compared to other members of society;
- Victims of crimes related to human trafficking;

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- Rape victims;
- Victims of abuse by a trusted person, domestic violence, a terrorist attack, or sexual violence;
- Victims of discrimination on any grounds;
- Victims of a crime committed by an organized criminal group if there is an increased risk of causing secondary damage in a specific case. According to the law, lawyers provide such assistance; other persons have the right only to provide legal advice (Law of the Czech Republic No. 45/2013, 2013).

Since 2005, the National Bureau of Legal Aid has provided free legal aid in the Republic of Bulgaria. Bulgarian legislation also allows for involving a proxy on behalf of a private accuser, a private complainant.

Suppose a person provides evidence that he cannot pay a lawyer's fee, and the jurisdiction's interests require it. In that case, the court appoints him a proxy (Law of the Republic of Bulgaria No. 502-01-11/10.08.2005, 2005).

A similar law on free legal aid is in force in Georgia. It provides that the protection of the victim's rights in criminal proceedings can be carried out at the expense of the state (Law of Georgia No. 4955, 2007).

In Ukraine, the following are entitled to free legal aid:

- Children;
- A person's average monthly income, which is less than two amounts of the subsistence minimum;
- Refugees and persons in need of additional or temporary protection;
- Internally displaced persons;
- Citizens living in the temporarily occupied territory or the territory located in the area of hostilities;
- War veterans and family members of fallen (deceased) war veterans, family members of fallen (deceased) Defenders of Ukraine, persons who have special merits to the Motherland;
- Persons, who have special labor merits for the Motherland, and persons who are among the victims of Nazi persecution
- Persons affected by human trafficking;
- Persons who suffered from domestic violence or gender-based violence;
- Victims of criminal offenses against sexual freedom and sexual integrity, torture or ill-treatment during hostilities or armed conflict;
- Foreigners and stateless persons residing in Ukraine (Law of Ukraine No. 3460-VI, 2011).

According to the materials of the court cases analyzed by us, the level of involvement of the mentioned categories of representatives is too low. We believe that this is because those of the few victims who belong to this list usually simply do not know about their right to a lawyer free of charge. Such a negative practice must be corrected. The investigator should also explain to the victim the right to have a representative by the Law of Ukraine, "On Free Legal Aid." We believe that persons with disabilities should also be allowed to engage a defense attorney free of charge. Moreover, this practice has already been successfully tested (Slavic Court Donetsk region judgment, 2022) and, therefore, needs to be regulated at the legislative level without any restrictions.

As for scientific views on this issue, for example, scientists put forward ideas that a lawyer should be provided to the victim free of charge (at the expense of the state) in all cases without exception and regardless of any circumstances, at the very first request (Shchyhol, 2022, p. 40). Unlike the suspect, the accused, whose rights may be violated in perspective, the victim's rights are violated de facto and require real protection. At the same time, access to legal aid is of primary importance in protecting and restoring the victim's rights. In our opinion, a lawyer must necessarily represent the interests of victims of crimes. At the victim's initiative, a defense attorney should be engaged exclusively in the categories of cases classified as criminal misdemeanors.

International standards for the protection of the rights of crime victims and their representation in court

First, in international practice, the issue of compensation for the damage caused by a criminal offense to the victim began to be raised and regulated normatively. Resolution (77) 27 of the Committee of Ministers

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of the Council of Europe "On compensation to victims of crime" (Resolution (77) 27, 1977) defines these issues.

In 1983, the European Convention on Compensation for Victims of Violent Crimes was adopted (Council of Europe, 1983). The United Nations defines some principles of protecting the victims' rights and features of the administration of justice about them. In November 1985, this organization adopted the Declaration on the Basic Principles of Justice for Victims of Crime. The main ideas of this document are fair treatment of the victim, guaranteeing the victim's right to access justice, and providing him with compensation for the damage caused by a criminal offense (United Nations, 1985).

In the future, such a requirement for the representation of the victim as professionalism was established. It was consolidated in the Basic Provisions on the Role of Lawyers, adopted by the VIII UN Congress on Crime Prevention in August 1990 (The Law Society, 1990).

Subsequently, in 2001, the Council of the European Union adopted a Decision on the Status of Victims in Criminal Proceedings, binding on all member states, which enshrined victims' right to access information, legal assistance, and the right to so-called mediation (representation) (Council Framework Decision European Union, 2001).

On June 14, 2006, the Committee of Ministers of the Council of Europe issued Recommendation Rec (2006)8 to member states on assistance to victims of crimes. This document defines the procedure for developing standards for selecting and training workers and volunteers who provide direct assistance to victims to assist victims of crimes by professional standards to ensure their protection from secondary victimization (Committee of Ministers of the Council of Europe, 2006). The authorities, realizing the importance of legal consultations for citizens, established the procedure for training specialists who could provide it at a professional level on a volunteer basis.

The next important step in regulating the legal status of victims was the EU Directive 2012/29/EU, by which all member states of the European Union were entrusted with the obligation to standardize the list of rights of crime victims and to provide them with comprehensive support and assistance (European Union, 2012).

Another standard that must be ensured in justice is the equality of the parties. The principle of equality of the parties has repeatedly found its interpretation in the European Court of Human Rights decisions. It establishes a "fair balance" between the parties - so that each party is given a reasonable opportunity to present the case in conditions that do not put this party in a significantly disadvantageous position relative to the other party. For example, this is the decision of the European Court of Human Rights in cases "Nadtochiy v. Ukraine" (2008), "Dombo Beheer v. the Netherlands" (1993), "Ankerl v. Switzerland" (1996), "Gurepka v. Ukraine" (2010).

The rules for representing victims at the International Criminal Court should be promising and effective. For example, the clerk of this court should assist victims in obtaining legal advice and organizing their legal representation, providing their legal representatives with adequate support, assistance, and information. The victim is free to choose a legal representative. If there are several victims, the Chamber can use the Register to choose a common legal representative for all victims. This is done to ensure the effectiveness of the proceedings, the requests of victims, or individual groups of victims.

To facilitate the coordination of victim representation, the Secretariat of the International Criminal Court may assist in the representative selection. This can be done by providing a list of registered lawyers or by offering one or more joint legal representatives. Suppose the victims cannot choose a joint legal representative or representatives within a period determined by the Chamber. In that case, the Chamber may invite the Secretary to select one or more joint legal representatives: a victim or a group of victims who do not have the necessary funds to pay for the services of a representative can receive assistance from the Secretariat.

The victim's representative is guaranteed to be present and participate in the meeting and hearing if, under the circumstances of the case, the relevant chamber does not recognize the opinion that the representative's intervention should be limited to written comments or submissions. The representative is given the right to

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ask questions of the prosecutor and the defense if it is necessary to cross-examine a witness, an expert, or the accused (International Criminal Court, 2002).

I.Prospects for further research

Based on the analysis of foreign experience and international principles of representation of the victim in criminal proceedings, it was found that the derivative status granted to the victim's representative guarantees him the right to use only those rights granted to the victim. It was determined that the activity of the victim's representative consists of providing legal advice; ensuring legality, collecting and submitting evidence, participating in court debates; appeals of court decisions; signing an agreement on reconciliation in criminal proceedings, and others. To ensure their implementation, all of them must be directly enshrined in a separate article, as is done in the laws of other countries.

It is proposed to make changes to the legislation of Ukraine regarding the grounds for mandatory participation of the victim's representative in the case. This applies to those situations when the prosecutor refuses to support the state prosecution and when crimes have been committed.

Conclusions

Based on the analysis, we found that the legislation of Ukraine meets the basic standards in the representation of crime victims in terms of ensuring their rights. The main powers of the victim's representative in criminal proceedings are determined. It has been established that the victim's right to have a representative is basic. Still, the cases of mandatory participation of the victim's representative-advocate in criminal proceedings at the legislative level are not defined. It was determined that this issue needs an urgent solution by introducing changes and additions to legislative acts. Such changes should be made to restore and establish a balance between the rights of the victim and the suspect, the accused, and the defendant and ensure the principle of equality and competition between the parties.

In the analysis of Czech Republic, Bulgaria, Georgia, and other countries legislation, the peculiarities of the representation of victims in criminal proceedings are determined. The fundamental principles to which the legal system of any legal and social state must comply have been determined based on international legal treaties analysis. Considering the received conclusions, recommendations for improving the legislation of Ukraine were formulated.

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The role of virtual reality technologies in the quality training of future specialists in socionomic specialties

Роль технологій віртуальної реальності у якісній підготовці майбутніх фахівців соціономічних спеціальностей

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Written by:
Nataliia Ivanytska[1]
https://orcid.org/0000-0002-1422-1176
Valentyna Miroshnichenko[2]
https://orcid.org/0000-0002-3931-0888
Hennadii Mahas[3]
https://orcid.org/0000-0002-2769-9718
Tetiana Kochubei[4]
https://orcid.org/0000-0002-9104-8442
Natalia Ovdii[5]
https://orcid.org/0009-0000-1634-5765

Abstract

The article reveals the content and proves the necessity of using virtual reality technologies in the quality training of future specialists in socionomic fields. It demonstrates the experience of using virtual reality technologies and identifies the types of virtual reality. The main environments for developing virtual reality applications are highlighted. The advantages of virtual reality formats in training future specialists in socionomic specialties are analyzed. Experimental research concluded that most teachers recognized the positive impact of using virtual reality technologies in the professional training of students, enhancing their interest in the educational process. A survey of students showed that most consider using virtual reality technologies in professional training as a more interesting and effective method, greatly

Анотація

У статті розкрито зміст та доведено необхідність застосування технологій віртуальної реальності у якісній підготовці майбутніх фахівців соціономічних спеціальностей, показано досвід використання технологій віртуальної реальності, названо типи віртуальної реальності. Виокремлено основні середовища для розробки застосунків віртуальної реальності. Виокремлено та проаналізовано переваги форматів віртуальної реальності при підготовці майбутніх фахівців соціономічних спеціальностей. У процесі експериментального дослідження було зроблено висновок, що більшість викладачів визнали позитивний вплив використання технологій віртуальної реальності при фаховій підготовці студентів та їх вплив на зацікавленість студентів в освітньому процесі.

[1] Candidate of Pedagogical Sciences, Doctoral Student, Institute of Postgraduate Education and Adult Education named after Ivan Zyazyun of the National Academy of Educational Sciences of Ukraine, Ukraine. WoS Researcher ID: KBA-4261-2024
[2] Doctor of Pedagogical Sciences, Professor, Professor of the Pedagogy Department, National University of Life and Environmental Sciences of Ukraine, Ukraine. WoS Researcher ID: ABA-7908-2022
[3] Doctor of Science in Public Administration, Associate Professor, Deputy Head of the Border Security Department, Bohdan Khmelnytskyi National Academy of the State Border Guard Service of Ukraine, Ukraine. WoS Researcher ID: KLY-5402-2024
[4] Doctor of Pedagogical Sciences, Professor, Professor of the Department of Social Pedagogy and Social Work, Pavlo Tychyna Uman State Pedagogical University, Ukraine. WoS Researcher ID: E-9429-2019
[5] Postgraduate Student of the Department of Social Work and Rehabilitation, National University of Life and Environment Sciences of Ukraine, Ukraine. WoS Researcher ID: KMX-2160-2024

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facilitating the understanding and study of subjects. These research results serve as a basis for conclusions regarding the practicality of using virtual reality technologies in the professional training of students, their impact on students' interest in the educational process, and their importance in improving the quality of education for future specialists in socionomic fields.

Keywords: virtual reality technologies, quality training, future specialists of socionomic specialties, higher education institutions, virtual reality formats.

Анкетування студентів показало, що більшість з них вважають використання використання технологій віртуальної реальності при фаховій підготовці цікавішим та ефективнішим процесом, який значно полегшує розуміння предметів та їх вивчення. Такі результати дослідження слугують підставою для висновків щодо доцільності використання технологій віртуальної реальності при фаховій підготовці студентів, їх вплив на зацікавленість студентів в освітньому процесі, вказують на значущість для підвищення якості навчання майбутніх фахівців соціономічних спеціальностей.

Ключові слова: технології віртуальної реальності, якісна підготовка, майбутні фахівці соціономічних спеціальностей, заклади вищої освіти, формати віртуальної реальності.

Introduction

In recent years, the requirements and format for engaging higher education students in the educational process have changed significantly. Digital technologies play a crucial role in the transformation of education. The need for virtual reality technologies is particularly evident in the quality training of future specialists in socionomic fields. These specialists are trained within an environment characterized by unlimited information resources, a new information space, multi-channel access to information, and the possibility of long-term storage and dissemination of data.

Future specialists in socionomic fields are prepared to address practical problems across various spheres of human life and society, necessitating the application of approaches for developing complex software systems and mastering new algorithms. This preparation is based on the persistent cognitive interest of higher education students in acquiring new knowledge and skills. The search for the latest digital content, modern forms, and methods of learning—particularly the active use of Internet resources and mobile applications—aims to improve the quality of education. This approach contributes to developing the information and communication skills of future specialists in socionomic fields, highlighting the importance of using virtual reality technologies in their quality training. (Tarangul & Romaniuk, 2022).

In today's conditions, virtual reality technologies are in wide demand in various spheres of human activity, in particular, in the quality training of future specialists in socionomic specialties during the educational process, scientific activity, design, business, and entertainment, etc. (Zadereiko et al., 2023).

The transformation of education under the influence of the latest information technologies, particularly VR technologies, and the determination of the necessary strategy for its development today requires the identification of relevant foundations and trends.

In the process of raising the level of quality training of future specialists in socionomic specialties, several contradictions remain unresolved:

- A public order for specialists in socio-economic professions who take an active life position aimed at supporting other people, improving the quality of their social life, and insufficient justification of the theoretical and methodological foundations of such training in institutions of higher education;
- The need for an urgent response of specialists in socionomic professions to the challenges of society, to overcome the manifestations of the spiritual and moral crisis in society, to promote the social growth of citizens and the lack of clear conceptual provisions for explaining and projecting the development of the social activity of individuals who acquire such professions from the standpoint of modern pedagogy;

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- The need for consistent and systematic work on the development of the social activity of future specialists in socionomic professions and the absence of an especially substantiated pedagogical system as a basis for organizing such work;
- The need to improve educational and methodological support for social practices of future specialists and the fragmentation of the development and selection of such support.
- Between the possibilities of using virtual reality technologies in training specialists and the insufficient development of the corresponding methodology.

The development of virtual reality technologies in the quality training of future specialists is an urgent issue of theory and teaching methods in the educational process. Based on this, we considered the following questions in the article:

1. The content and necessity of virtual reality technologies in the quality training of future specialists in socionomic specialties.
2. Experience using virtual reality technologies in quality training of future specialists in socionomic specialties.
3. Types of virtual reality.
4. Basic environments for developing virtual reality applications.
5. Formats of virtual reality in the training of future specialists in socionomic specialties.
6. Experimental study.

Insufficient study and justification of the problem of quality training of future specialists of socionomic specialties in pedagogical theory and methodology, the need to resolve the mentioned contradictions determined the choice of the topic of the article.

Literature Review

We reviewed literary sources on the following topics:

- Study of the mechanisms of influence of virtual reality on the formation of a person's worldview;
- Development of virtual reality;
- Application of virtual reality technologies in the educational process of higher education institutions;
- A description of the possibilities of virtual reality technologies in the educational process;
- Analysis of the peculiarities of the use of immersive technologies in the training of future specialists;
- Showing the disadvantages and advantages of using immersive technologies;
- Analysis of conceptual requirements when using educational progressive digital technologies;
- Specifying the elements of the method of using immersive technologies in the training of future specialists;
- Description of examples of implementation of immersive technologies in the educational process;
- Show optimal formats of the synergy of innovative and traditional models of education;
- Research of resources of global information networks, and multimedia technologies;
- The role in the modern world of practical psychology of virtual reality – a new, relevant, and high-tech field of professional activity;
- The issue of using a virtual educational platform for Internet training participants and users of social networks to encourage students to study in STEM fields.

Scientists from different countries are actively searching for the application of virtual reality technologies in the quality training of future specialists, who studied the mechanisms of influence of virtual reality on the formation of a person's worldview and made scientific reviews of the development of virtual reality, implemented the application of virtual reality technologies in the educational process of higher education institutions, described the possibilities, the current state, and problems of using virtual reality tools in the educational process.

In particular, O. Sokoliuk (2016) outlined the mechanisms of influence of virtual reality on the formation of a person's worldview and made scientific reviews of the development of virtual reality, and also proved that the need for a transition to a higher level of information technologies to satisfy the natural need of a person to form a new reality, individual creativity, is the main reason for the virtualization of society. This problem was worked out by O. Merzlykin, I. Topolova, & V. Tron (2018), who studied the directions of

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influence on the methodology of virtual reality education and proved the possibility of expanding the types of educational activities to improve and promote the emergence of new types and methods of learning and organizational forms of the educational process, improving the interaction of the academic space and students. Scientists H.-K. Wu, S. W.-Y. Lee, H.-Y. Chang, & J.-C. Liang (2013) are actively searching in this direction, who study the phenomenon of virtual reality, the mechanisms of influence on the formation of a person's worldview, and make scientific reviews of the current state of education, regarding the development of virtual reality, highlight the problems and possibilities of using augmented and virtual reality tools in the educational process.

I. Mintii, & V. Soloviov (2018) indicate the problems associated with the implementation of augmented and virtual reality technologies in the field of education, in particular: a shortage of specialists in the preparation of educational projects for the introduction of virtual reality technologies in the training of future specialists, uncoordinated activities of education and business, etc.

The following scientists are devoted to using virtual reality technology to train future specialists: J. Martin-Gutierrez, E. Guinters, & D. Perez-Lopez (2012). The communicative aspects of the use of virtual and augmented reality tools in education are analyzed, and a model of a hybrid cloud-oriented learning environment is developed for an educational institution.

V. Tkachuk, Yu. Yechkalo, S. Hotzkina, O. Markov, & V. Hotzkina (2023) analyzed the features of immersive technologies in the training of future specialists. The scientists made an analysis, showed the disadvantages and advantages of the use of immersive technologies, described examples of the introduction of immersive technologies into the educational process, provided elements of the methodology of using immersive technologies in the training of future specialists, proved the need to prepare teachers for the use of immersive technologies in the educational process, selected means of immersive technologies for support training of future engineers in institutions of higher specialization, such as augmented and virtual reality.

V. Bykov, & O. Burov (2020) proposed a theoretical model between the internal and external organization of e-learning parameters and features; considering the problems of digitalization of education at the stage of transition from distance to traditional forms of education, when the activity of computer modeling, the use of new technologies (virtual and augmented reality), social networks, and cloud applications is increasing; regarding the participant in the educational process – analyzed conceptual requirements when using educational progressive digital technologies. The study focuses on improving the effectiveness of learning in a digital learning environment from the point of view of optimal use of human capabilities as a knowledge acquirer.

O. Politova, D. Pustovoichenko, N. Hrechanyk, K. Yaroshchuk, & S. Nenko (2022) revealed the nearest prospects for using information and communication technologies in preparing a specialist for higher education. Education is characterized by conservatism, the authors proposed forecasting the educational environment and introducing innovative elements of ICT training into the educational process. The aspects of the method of using immersive technologies in the training of future specialists are given, examples of the introduction of immersive technologies into the educational process are described, and optimal formats of the synergy of innovative and traditional learning models are shown, which dictates the need for value awareness of the information society and the practical use of technological achievements.

V. Kovalenko (2018) and O. Nemesh (2017) investigated the problem of forming an individual's social competence, identified multimedia technologies and web-oriented technologies for the formation of social competence of a person, and emphasized the use of ICT in open education: resources of global information networks, and multimedia technologies.

To encourage students to study in STEM fields, the issue of using a virtual educational platform was considered by N. Honcharova (2021), and in combination with education, the possibilities of virtual reality applications were described, which is aimed at forming the skills necessary for a career in STEM professions. The application of augmented reality applications is described in the educational process during distance learning.

M. Smulson, P. Ditiuk, I. Kovalenko, O. Kobylianska, & D. Meshcheriakov M. Nazar, S. Rudnytska, V. Deputat, & O. Ivanova (2018) revealed the theoretical and methodological analysis of the categories subject activity in virtual space, activity, subject, considered the activity of participants of Internet training

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and users of social networks, outlined the concept of the development of subject activity in the virtual space of adults, described the technologies of forming subject activity adults, the specifics of the development of the elderly and their subjective activity are shown.

As a result of the analysis of scientific sources, we see active searches in the direction of the application of virtual reality technology for the purpose of quality training of future specialists, in particular, scientists from different countries study the mechanisms of influence of virtual reality on the formation of a person's worldview and make scientific reviews of the development of virtual reality, implement the application of virtual reality technology in the educational process of institutions of higher education, describe the possibilities and current state and problems of using virtual reality tools in the educational process, make a theoretical and methodological analysis of the categories subject activity in virtual space, activity, subject, consider the activity of participants of Internet trainings and users of social networks, consider the problems of digitization of education at the stage of transition to distance forms of education, when the activity of computer modeling, the use of new technologies (virtual and augmented reality), social networks, and cloud applications is increasing. However, the role and ways of implementing virtual reality technologies in the quality training of future specialists in socionomic specialties have not been fully explored. In particular, the experience of using virtual reality technologies is not shown, the impact of virtual reality types on the educational process is not shown; the main environments for the development of virtual reality applications have not been singled out, the advantages of virtual reality formats have not been analyzed in the training of future specialists in socionomic specialties; the positive impact of the use of virtual reality technologies in the professional training of specialists in socionomic specialties has not been experimentally proven.

The purpose of the article. To find out the role of virtual reality technologies in the quality training of future specialists in socionomic specialties.

Methodology

To achieve the goal, the following research methods were used: theoretical – analysis, synthesis, systematization of the generalization of educational and methodological, scientific literature to substantiate the categorical research apparatus and determine the essence of the problem; analysis of influencing factors on educational activity – for substantiating and defining the research problem, proving its relevance; empirical methods of diagnostics, questionnaires, interviews, the technique of indirect observation adapted to the research objectives to determine the level and clarify the role of virtual reality technologies in the quality training of future specialists in socionomic specialties; a pedagogical experiment – to test the effectiveness of virtual reality technologies in the quality training of future specialists in socionomic specialties; statistical – statistical methods for the analysis and processing of experimental data.

To verify the results of the adopted teaching methodology, a study was conducted with the participation of university students. They were divided into two groups.

The first group – the control – used only traditional teaching methods, and the second – the experimental – used only virtual laboratory simulators.

Both groups had the same amount of time to complete the tasks. Higher education students passed a knowledge test before and after the experiment, to objectively assess the knowledge they received. Compared to traditional learning methods, the results showed a 76% increase in learning efficiency when using virtual laboratories.

We investigated the teacher's influence on the learning process. It was proven that when in virtual laboratories training was combined by the teacher with mentoring and coaching, there was an increase in the effectiveness of training, and with the same amount of time, the effectiveness of the influence of teachers doubled.

The survey of students and teachers was conducted using Google resources.

The number of teachers who participated in the survey was 29. The questionnaire for teachers contained 5 questions, the content of which is aimed at using virtual reality technologies in the educational process to train future specialists in socionomic specialties.

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The number of students who participated in the survey was 92. The questionnaire for them contained 5 questions, the content of which is aimed at using virtual reality technologies in professional training and their impact on students' interest in the educational process.

In the process of experimental research, it was concluded that most teachers recognized the positive impact of using virtual reality technologies in the professional training of students and their effects on students' interest in the educational process. A survey of students showed that most consider using virtual reality technologies in professional training a more interesting and effective method, which greatly facilitates understanding the subject and study.

The obtained data indicate the positive impact of virtual reality technologies in professional training and their effects on students' interest in the educational process. Teachers and students highly appreciate the innovation, pointing to an increased understanding of the material and its interest. Students' results are improved by academic achievements when using innovative methods. Such research results serve as a basis for conclusions regarding the practicality of using virtual reality technologies in the professional training of students, their impact on students' interest in the educational process, and their importance for improving the quality of education of future specialists in socionomic specialties.

When determining the sample of subjects, the general specificity of the research subject was considered. The total volume of the sample is 121 subjects. The criteria of meaningfulness, representativeness, and equivalence were considered when forming the sample. The sample was composed by random selection using the technical procedure for calculating the selection step.

The experiment was conducted at the National University of Life and Environmental Sciences of Ukraine, Pavlo Tychyna Uman State Pedagogical University. The scientific councils of the universities permit the conduct of the experiment not to violate ethical considerations in institutions of higher education.

The reliability and validity of the obtained results, and the objectivity of their evaluation were ensured by the methodological validity of the initial positions and the qualitative mechanism of the assessment of the quality under study, the use of a complex of complementary research methods, and the involvement of a group of respondents from a higher educational institution in the analysis of its results.

To assess the homogeneity of experimental and control data, statistical processing was performed using MS Excel and SPSS (Statistical Package for Social Science).

Research relies heavily on the accuracy and reliability of the data. In the framework of research work, the quality of data collection and analysis not only adds weight to the research but also contributes to the formation of sound conclusions, which is the key to academic success.

The following digital data collection tools were useful in the study:

- *Google Forms* – a simple survey tool that allows you to collect data from respondents, create different types of questions, and collect answers in spreadsheets.
- *SurveyMonkey* – a modern survey tool that offers a wide range of customization options and analytical tools for analyzing the collected data.
- *JSTOR*, *Google Scholar*, and other academic search engines provide access to scholarly articles, books, and other educational resources that may be useful for literature review and theoretical data collection.
- *Zotero* or *Mendeley* – bibliography management programs that help organize research materials, store references, and format bibliographies and citations according to different citation styles.
- *Microsoft Excel* or *Google Sheets* – spreadsheets are useful for organizing and analyzing collected data when working with quantitative data.
- *SPSS*, *R*, or *Python* for more advanced data analysis, statistical analysis, and processing of volumes of data.

Results and Discussion

Modern AR/VR technologies for modeling the production processes of specialists in socionomic specialties expand the boundaries of practical training of specialists in socionomic specialties. It is important to ensure a high level of simulation of the production environment, which students perceive as real, in the educational

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process. Professional training of future specialists in socionomic specialties based on the use of virtual reality technologies allows for the involvement of students in future professional activities, including higher education graduates in production processes (Tkachuk et al., 2023).

The content and necessity of virtual reality technologies in the quality training of future specialists in socionomic specialties.

The use of virtual reality in education is essential in the process of modeling real situations from everyday life or training cognitive functions. When in virtual laboratories the training of future specialists in socionomic specialties was combined with mentoring from the teacher and coaching, the effectiveness of the influence of teachers for the same amount of time doubled, and the effectiveness of education increased. Scientists interpret virtual reality as:

- the technology of full immersion using a computer in a virtual, artificially created environment;
- contactless interaction technology, which creates the illusion of presence in the virtual space of real-time and direct immersion;
- the result of the interaction of the subjective and the objective, which is not rooted or not completely fixed in society and which is characterized by the status of accidental existence (Danylian & Dzioban, 2020).

So, we conclude: that virtual reality is closely related to various spheres of activity, influencing the human psyche, providing user interaction with the virtual space, and providing personal, social, and educational needs (Zadereiko et al., 2023).

Virtual reality (VR) plays an important role in time in computer education because future specialists of socionomic specialties remember information better when it is presented to a student in virtual reality than when it is transmitted using a two-dimensional image created on the screen of a tablet, or smartphone, or personal computer.

Classes using virtual reality technologies in the quality training of future specialists in socionomic specialties increased interest in the topic, aroused students' curiosity, and made it possible to maintain their interest in classes at a much higher level than when classes are conducted using traditional methods.

The undoubted advantage of using virtual reality technologies in the quality training of future specialists in socionomic specialties, for example, during classes in the classroom, is the transformation of teaching methods into an interesting experience. Students of higher education in any specialty can use virtual reality. Engineering students or architects to design and build digital structures, marine biology students to learn virtually on the ocean floor, and history students to discover ancient ruins (Humennyi, 2022).

Experience using virtual reality technologies in quality training of future specialists in socionomic specialties.

The Internet of Things, mobile communication, cloud computing, and artificial intelligence provide the necessary information infrastructure for intelligent production. VR systems of the next generation are being created only thanks to these modern technologies that improve the process of labor safety of future specialists and professional adaptation of specialists in socio-economic specialties.

Those future specialists of socionomic specialties who studied using virtual reality technologies studied four times faster than during regular classroom training. This virtual reality training was carried out using VR training simulators and maintenance simulators, key VR training programs. These systems allow educators to provide feedback to learners, monitor learning, and more. The peculiarity of VR training makes it possible to repeat training actions until there is no productivity and the desired level of competence is achieved and consists of gamification.

Virtual reality technology for high-quality training of future specialists in socionomic specialties is an important part of intellectual production. Still, when implementing these technologies, there are several problems during the training of specialists:

- VR technologies require prior training of instructors;

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- VR technologies are expensive;
- VR technologies have a complex process of adaptation in different regions to different production situations;
- Lack of methods for calculating the effectiveness of VR technology implementation (Tkachuk et al., 2023).

VR technology is not considered or used as a replacement but to achieve better results, as an additional component. The use of such advanced technologies as virtual reality technologies and 3D – three-dimensional animation was studied for this purpose. Such a balanced approach to developing educational materials was demonstrated through several applications in training courses. Developed technological learning methods that use traditional learning concepts were presented to improve learning.

Types of virtual reality

Let's name the types of virtual reality:

- Virtual reality technologies with a common structure, include in their content a virtual space, which consists of a three-dimensional virtual world that creates interaction with other users (Minecraft game);
- Technologies with the effect of full immersion include the entire virtual space, which simulates the environment with a high degree of detail;
- Technologies without immersion, create a virtual space that reproduces simulations with sound, image, and controllers on a widescreen but does not fully meet the requirements for VR technologies.

Virtual reality technologies are becoming increasingly common in various spheres of human professional activity. In the educational process: "the use of interactive technologies during learning in three-dimensional space, for example, during the study of the solar system. Together with Google, Lenovo has developed more than 700 virtual tours that can be transported to any point on Earth: from the depths of the world's oceans to the most famous museums in Europe" (Holionko & Ostrovska, 2020).

Basic environments for developing virtual reality applications

With the help of virtual reality technologies, students of sociology majors can visit any place online. Nowadays, only some modern students perceive the material by reading or listening to lectures. The rest of the future specialists of socionomic specialties perceive visual information better. Virtual technologies allow you to visualize mechanisms, formulas, plans, etc. – many complex things. For example, Anatomyou VR 2.0 virtual reality technology demonstrates how our organs look and function. When training future specialists in socionomic specialties, the effect of presence provides them with such a training format that it overtakes the usual practical classes in popularity.

One such virtual reality technology is Story Spheres. This site, which combines digital tools and virtual reality, allows specialists of socionomic specialties to add images from Google Maps or photos and accompany them with their comments (Zadereiko et al., 2023).

Thus, future specialists in socionomic specialties can, acting as a presenters, make reports about certain historical events, imagining that they are conducting a report from the event scene.

The Panoform device allows you to convert 2D images into 3D models. With its help, future specialists in socionomic specialties can independently review and adapt the presented material in virtual reality mode during training. With the introduction of virtual reality, higher education students can use gadgets during classes for educational purposes. The effectiveness of virtual reality technologies can also be observed among specialists from various fields. For example, virtual reality devices were used by surgeons for two hours, and 83% of students saw the effectiveness of the work done. With the help of a gamified virtual reality program, soldiers were trained and when demonstrating their skills in practice, they were 17% ahead of their colleagues.

For e-learning applications of virtual reality – UX and content transport users to another reality, that is, the effect of presence is created. Therefore, these technologies can be effective educational tools.

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Augmented reality glasses, specialized helmets/glasses (mixed reality), and the development of "Microsoft Hololens 2" facilitate interaction with objects that go beyond the virtual framework. They direct the student to the real world and are the most common means of virtual reality immersion. The helmet comprises a system of lenses and motion-tracking sensors, a body, and a display. Controllers and base stations allow interaction in virtual space with other objects. Therefore, the student can feel himself inside the virtual reality, to "look around" inside the virtual reality, and in the real world (Savchuk, 2017).

The use of virtual reality systems in higher education institutions is a new approach to the assimilation of systematic and scientific material and its presentation. With their assistance, students can work in unique experimental laboratories, observe and participate in historical events, and even conduct experiments, construct three-dimensional diagrams, go on a trip to any point on the globe, and visit space. Virtual reality objects make it possible to feel like a participant in the objects of material reality. According to the real laws of physics, students affect these objects (properties of water, gravity, reflections, collisions with objects, etc.).

Currently, a person's conditions and way of life are distinguished by the new characteristics of the information society. These differences are acutely felt by future specialists of socionomic specialties, who act as the "main consumers" of educational services. That is why they put forward demands for the quality and level of the educational process, to the content of education. Therefore, virtual technologies will increase the communication skills of students and teachers, open access to educational resources, help individualize educational programs, and ensure controllability and flexibility of the educational process. Scientifically introduced elements of virtual environment technologies, training highly qualified specialists in higher education, and virtualization of the educational learning environment will contribute to forming a fundamentally new education system (Savchuk, 2017).

Objects of virtual reality for quality training of future specialists in socionomic specialties behave closely to the behavior of similar objects of material fact. At the same time, modern smartphones capable of independently processing any 3D content are highly productive. Smartphone monitors have a fairly high resolution. The smartphone has sensors for determining the position of the device in space. Virtual reality technologies in the quality training of future specialists in socionomic specialties can make the educational process more interesting. For example, future specialists in socionomic specialties can see various events and dangerous and complex processes "with their own eyes" described in manuals and textbooks.

There are two main environments for developing virtual reality applications:

- Unreal Engine;
- Unity.

Unreal Engine is a game engine written in C++ language, supported and developed by Epic Games, and allows you to create educational games for:

- Operating platforms and systems: Linux, Microsoft Windows, Mac OS; consoles Xbox, Xbox One, Xbox 360, Xbox Series, PlayStation 5, PlayStation 4, PlayStation 3, PlayStation 2, PSP, PS Vita, Dreamcast, Wii, GameCube, etc.;
- On various portable devices: controlled by the iOS system and others, Apple (iPad, iPhone).

Kismet, an innovative editor for creating interactive and animated levels, appeared in Unreal Engine 3, a special scripting language in which there is no work with UnrealScript, but block diagrams are used. It allows you to operate with many properties of objects (transparency of materials, rotation of movers, color of lighting, etc.). The Matinee utility of the animation task is closely related to the movement of objects at a certain time.

Unity is a cross-platform environment for developing computer games for educational applications. Unity allows you to create applications that include mobile devices, game consoles, personal computers, Internet applications, and more, and run under more than 20 different operating systems. Availability, cross-platform support, a visual development environment, and a modular system of components are the main advantages of Unity. Unity offers a flexible approach to the visual editing of objects. Also, due to the specifics of its architecture, the WebGL version of the engine has several unresolved problems with performance, memory consumption, and performance on mobile devices (translation of code from C # to

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C ++ and further to JavaScript). Hundreds of games, applications, and simulations are written on Unity, which can be used in the educational process of a higher school. Unity is used both in creating indie games and by large developers (for example, Blizzard) (Plakhotnik et al., 2023).

Interactive intelligent educational systems built based on virtual reality technologies activate the educational and cognitive activities of students of higher education. Educational programs created based on virtual reality technologies widely use cognitive computer graphics, the main task of which is developing creative thinking, stimulating human cognitive mechanisms, and not unambiguous interpretation of knowledge in the educational process. With this approach, the active use of virtual reality technologies in the high-quality training of future specialists in socionomic specialties is one of the system requirements that ensures the maximum effect of education at reasonable costs for developing educational process systems. So, we can see that virtual reality technology in the high-quality training of future specialists in socionomic specialties is an ideal educational environment, because it allows you to visually conduct seminars, lectures, and training, demonstrate to students of higher education all aspects of a real process or object, which improves the speed and quality of educational methods, gives a significant effect, reduces their cost (Shetelya et al., 2023).

Virtual reality technologies in the training of future specialists in socionomic specialties make it possible to make full use of the fact that a higher education student receives 80% of information from the surrounding world with the help of vision. In comparison, a university student remembers 20% of what he sees, 40% of what he hears and sees, and 70% of what does, sees and hears. The motivation of those seeking higher education and success in acquiring knowledge increases because students are fully involved in the educational process. Using new technologies in education implies that the educational process must be rebuilt accordingly.

Formats of virtual reality in the training of future specialists in socionomic specialties.

Currently, the following formats of virtual reality in education are distinguished:

- *Face-to-face training* – virtual technologies offer interesting opportunities to transfer empirical material. With this approach, the classic training format is not distorted, because the class is supplemented with an n-minute immersion. A virtual lesson can be divided into several scenes, which are turned on at the right moments. As before, the lecture remains a structural element of the lesson. This makes it possible to involve students in the educational process, to modernize classes, to fix and illustrate the material visually;
- *Distance learning* – preference is given to group classes with social interaction and the effect of presence. During distance learning, both the students and the teacher are in any part of the world. Each of them is personally present in the virtual audience and has his own avatar (can interact, listen to lectures, perform group tasks). This will make it possible through video conferences to eliminate the boundaries that exist during training, to feel presence);
- *Mixed education* – provides an opportunity to see what is happening, to be in the classroom remotely, and to interact with real teachers and students (the student can work remotely). For this purpose, the audience must be equipped with a camera for recording video in real-time with the possibility of broadcasting it in 360 o format;
- *Self-education* – student adaptation to the independent study of developed educational courses. Classes are posted in online stores (Oculus Store, Steam, Google Play Market, App Store) so that everyone has the opportunity to repeat the material or master it independently.

According to experts' estimates, the entire education system will spend about five years to put into operation and purchase 8 million augmented reality and virtual reality devices. Experts estimated that the revenue from the sale of software for higher education and extracurricular education was estimated at $300 million in 2020 and $700 million in 2025.

A vivid example of the use of virtual reality technologies in training future specialists is the Apple program. In March 2013, since the start of the project, the company has provided 8 million tablet computers to educational institutions around the world, 4.5 million of them to educational institutions in the United States. The company has donated almost 7% of all iPads produced in three years.

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The Google company is promoting its Cardboard project for free for education (according to the developers' idea, the helmet is the basis of an experiment that can be assembled from improvised materials). More than 100 educational programs were ready by the beginning of 2016.

Among the best projects are the following:

- LABSTER – an interactive 3D project developed in partnership with leading universities – MIT (Massachusetts Institute of Technology), Harvard and Stanford. Students in scientific laboratories with a full set of equipment can carry out remote experiments;
- EXPEDITIONS PIONEER PROGRAM – the program allows future specialists of socionomic specialties to visit places "where students cannot reach". The virtual platform makes it possible to conduct virtual excursions to exotic and strange places on our planet and is designed as a program for students (the platform has more than 100 such excursions);
- LECTURE VR – the project offers a series of lectures with visual visualization, which are iconic, and can be attended both as part of a group and individually, for example, as a supplement to a training course;
- COLOSSEUM VR (the creators of this application offer everyone who wants to be transported to study the history of the world. This immersion in history will not leave anyone indifferent, even though the graphics in this project are still far from ideal;
- ZSPACE – the project makes it possible to use glasses that function according to the 3D example in the educational process: with the help of an interactive pen, students can examine the human body step by step, control the model of the molecular lattice, and at the same time, everyone who is wearing the glasses at that moment can see the image.

Thus, virtual reality technology in the training of future specialists in socionomic specialties is a set of tools that technically immerse the student in a virtual 3D scene, the model of which is created with the help of a computer and implemented in the educational process. This approach to education allows the student to see a realistic prototype of what exists so far only in drawings and to feel present in another world. There can be a different set of devices that affect the student: a virtual reality helmet, a three-dimensional screen, a 3D room, or any other configuration of a VR system.

In addition, depending on the customer's budget and desired functions, the virtual reality system can be equipped with various peripherals. These can be various joysticks, tactile feedback devices, virtual reality gloves, and motion-capture suits. Virtual reality technologies make it possible to interact with the virtual scene with a high degree of interactivity. Undoubtedly, VR technologies are a promising direction, the development of which will contribute to the further progress of self-education and professional development in the field of education (Trach, 2017).

Experimental study

The purpose of the article was to clarify the role of virtual reality technologies in the quality training of future specialists in socionomic specialties.

The implementation of the pedagogical experiment was carried out in three stages: preparatory, main, and final.

At the preparatory stage, the purpose and tasks of the research were defined, the experimental plan was developed, methods of measurement and processing of results were selected, control and experimental groups were selected, and their homogeneity was checked.

At the main stage, an experiment was conducted.

At the final stage, the results of the experiment were analyzed, their reliability was confirmed, and conclusions were drawn about the pedagogical effect of the experiment.

In our research, we used the results of research by scientist O. Humennyi (2022) who proved that virtual reality technologies in combination with traditional teaching methods give very good educational results.

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At the university, in practice, the important work of a virtual simulator of a scientific laboratory was proven, in which students of higher education had the opportunity to conduct experiments and simulate what happens in a real laboratory.

After that, to check the results of the adopted teaching methodology, a study was conducted with the participation of university students. They were divided into two groups. The first group – the control – used only traditional teaching methods, and the second – the experimental – only virtual laboratory simulators. Both groups had the same amount of time to complete the tasks. Students of higher education passed a knowledge test before and after the experiment, to objectively assess the knowledge they received. The results showed a 76% increase in learning efficiency when using virtual laboratories, compared to traditional learning methods.

We investigated the teacher's influence on the learning process. It was proven that when in virtual laboratories training was combined by the teacher with mentoring and coaching, there was an increase in the effectiveness of training, and with the same amount of time, the effectiveness of the influence of teachers doubled.

The survey of students and teachers was conducted using Google resources.

The number of teachers who participated in the survey was 29. The questionnaire for teachers contained 5 questions, the content of which is aimed at the use of virtual reality technologies in the educational process in the training of future specialists in socionomic specialties.

To the first question, regarding the use of virtual reality technologies in the educational process:

- 88% of the interviewed teachers noted that they use virtual reality technologies in the educational process when training future specialists in socionomic specialties;
- 12% of respondents do not use such technologies.

The second question of the questionnaire involved finding out whether virtual reality technologies have a positive effect on the level of knowledge of students in the training of future specialists in socionomic specialties. The respondents received the following answers:

- 66.7% indicated that the use of virtual reality technologies in the training of future specialists in socionomic specialties has a positive effect on students,
- 33.3% believe that the use of virtual reality technologies in the training of future specialists in socionomic specialties negatively affects the level of students' knowledge.

The third question of the questionnaire involved finding out whether the educational process involves the use of virtual laboratories in classes during the training of future specialists in socionomic specialties. It turned out that the majority of interviewed teachers do not use virtual laboratories at all in the educational process when training future specialists in socionomic specialties:

- 69.1% was their share;
- 30.9% of teachers, this is the rest who successfully use virtual laboratories.

The fourth question of the questionnaire in the course of the study involved finding out the feasibility of using smartphones during classes or other digital means. The following results were obtained:

- 88.9% of the interviewed teachers consider it appropriate and necessary to introduce smartphones or any digital means into the educational process;
- 11.1% of respondents consider the use of gadgets in classes inappropriate.

The survey of students – future specialists in socionomic specialties, as well as teachers, was conducted with the help of Google resources.

The number of students who participated in the survey was 92. The questionnaire for them contained 5 questions, the content of which is aimed at the use of virtual reality technologies in professional training and their impact on student's interest in the educational process.

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To the first question – do you like the use of virtual reality technologies and virtual laboratories during classes, the following answers were received (Fig. 1):

- 71% of the surveyed respondents noted that they like the use of virtual reality technologies and virtual laboratories during classes and listed the most effective of them;
- 21% have not decided which ones and what exactly they like in the innovative approach to education;
- 8% of respondents are not satisfied with the use of virtual reality technologies and virtual laboratories during classes.

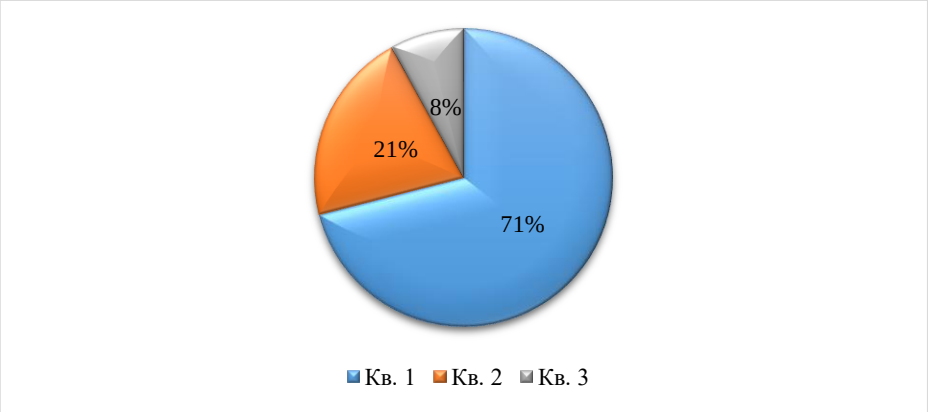


Fig. 1. Student preferences for using virtual reality technologies in class.

The purpose of the second question was to find out how accessible online resources and digital textbooks are to students (Fig. 2).

We received the following survey results:

- 23.1% of respondents believe that digital textbooks and online resources are available at a high level;
- 60.8% assess the availability of digital textbooks and online resources at an average level;
- 16.1% of respondents rate the availability of digital textbooks and online resources at a low level.

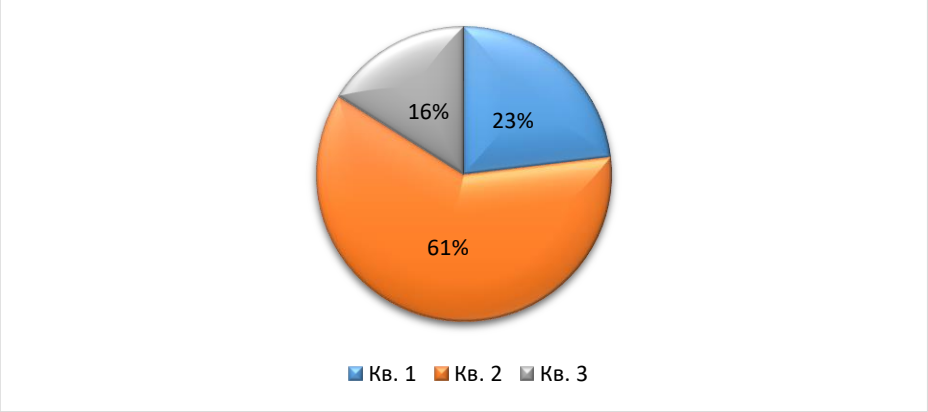


Fig. 2. Availability levels of digital learning materials as rated by students.

The third question related to the content and use of online resources and digital textbooks in ways that facilitate the study of disciplines (Fig. 3):

- 90.3% of respondents gave affirmative answers regarding the importance of content and the use of online resources and digital textbooks as tools that facilitate the study of disciplines;
- 9.7% of respondents gave negative answers regarding this question.

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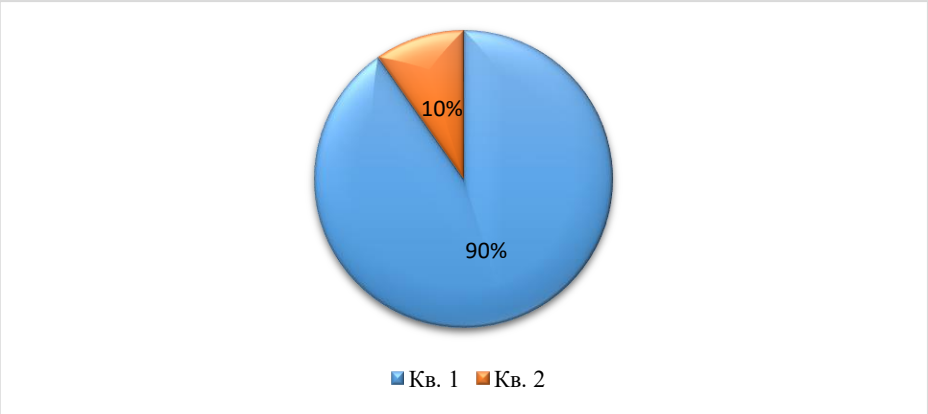


Fig. 3. Perceived effectiveness of online resources and digital textbooks.

The fourth question for the respondents concerned the impression of using smartphones during classes or other digital means (Fig. 4):.

- 32.3% of respondents believe that the possibility of using smartphones or other digital means has a positive effect on their level of knowledge;
- 29% of respondents noted that the classes became much clearer and more interesting;
- 19.4% believe that working with a textbook is better and more convenient, but digital tools should also be used;
- 19.3% of respondents did not support the use of gadgets in classes because, in their opinion, they negatively affect the level of their knowledge.

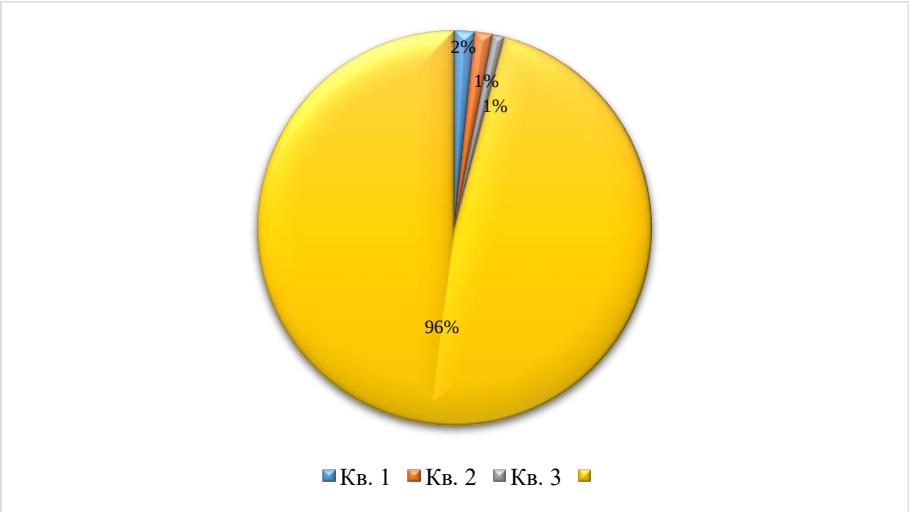


Fig. 4. The results of students' answers to the fourth question.

The purpose of the fifth question was to find out whether all respondents have the opportunity to work remotely in classes through distance learning platforms. The results proved that (Fig. 5):

- 96.8% of respondents have this opportunity;
- 3.2% of respondents do not have this opportunity.

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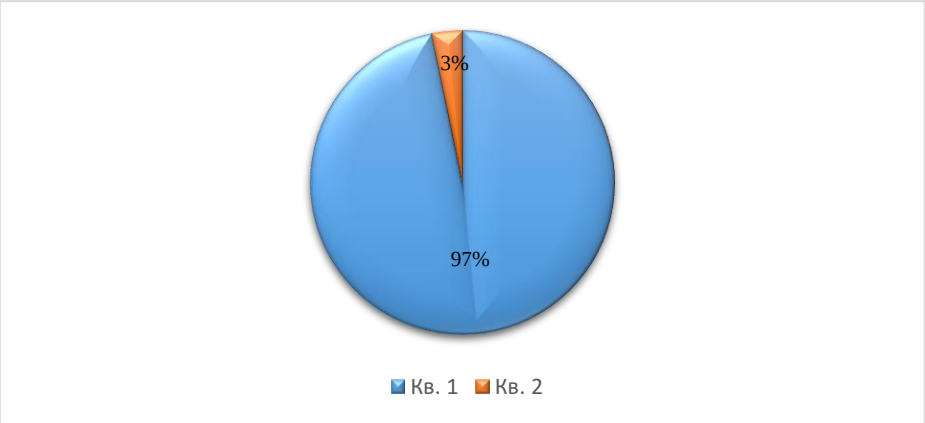


Fig. 5. Student attitudes towards integrating digital devices in education.

In the process of experimental research, it was concluded that the majority of teachers recognized the positive impact of using virtual reality technologies in the professional training of students and their impact on students' interest in the educational process.

A survey of students showed that most of them consider the use of virtual reality technologies in professional training to be a more interesting and effective process, which greatly facilitates the understanding of the subject and study.

The obtained data indicate the positive impact of using virtual reality technologies in professional training and their impact on students' interest in the educational process. Teachers and students highly appreciate the innovation, pointing to an increased understanding of the material and its interest. The improvement of students' results is evidenced by academic achievements when using innovative methods. Such research results serve as a basis for conclusions regarding the expediency of using virtual reality technologies in the professional training of students to influence students' interest in the educational process.

The practical significance of the obtained results lies in the conclusions made in the work and the proposals provided in the applied aspect, which aim at forming scientifically-based strategies and tactics, establishing new priorities, directions, and tasks for digital support in the implementation of electronic education. Additionally, the results of this research can be used in the professional training of specialists.

Theoretical provisions and practical developments can be used by specialists in the field of education, pedagogues-scientists, methodologists, and teachers in the process of teaching pedagogical, methodical, and informatics disciplines at the faculty of primary education of institutions of higher pedagogical education; to be used in the preparation of special courses, textbooks, methodological manuals and recommendations; by students when performing individual educational and research tasks, when writing coursework, master's theses, during pedagogical practice; by teaching staff of the system of postgraduate pedagogical education, in distance learning, in postgraduate pedagogical education.

An analysis of the implications of the results for educational practice and theory in the field of virtual reality in higher education is Application of virtual reality is an effective tool that requires proper use to achieve maximum results.

Despite the significant advantages of virtual reality, which were described above, certain limitations must be taken into account during its integration into educational settings. Educational virtual programs cannot completely replace traditional teaching in educational institutions, because they only simulate reality and objects in the digital space. However, their wide use is appropriate when studying the most complex topics and provides additional opportunities for in-depth learning of the material.

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Conclusions

Modern AR/VR technologies for modeling the production processes of specialists in socionomic specialties expand the boundaries of practical training of specialists in socionomic specialties. We found out the role of virtual reality technologies in the quality training of future specialists in socionomic specialties. The meaning and necessity of virtual reality technologies in the quality training of future specialists in socionomic specialties are revealed, and the experience of using virtual reality technologies in the quality training of future specialists in socionomic specialties is shown. The types of virtual reality are named.

The main environments for developing virtual reality applications are highlighted. With the help of virtual reality technologies, students of sociology majors can visit any place online. The advantages of virtual reality formats in the training of future specialists in socionomic specialties are highlighted and analyzed.

To verify the results of the adopted teaching methodology, a study was conducted with the participation of university students. They were divided into two groups. The first group – the control – used only traditional teaching methods, and the second – the experimental – only virtual laboratory simulators. Both groups had the same amount of time to complete the tasks. Students of higher education passed a knowledge test before and after the experiment, to objectively assess the knowledge they received.

In the process of experimental research, it was concluded that the majority of teachers recognized the positive impact of using virtual reality technologies in the professional training of students and their impact on students' interest in the educational process. The majority of teachers noted an increase in student interest when using virtual reality technologies. A survey of students showed that most of them consider the use of virtual reality technologies in professional training to be a more interesting and effective process, which greatly facilitates the understanding of the subject and study.

The obtained data indicate the positive impact of using virtual reality technologies in professional training and their impact on students' interest in the educational process. Teachers and students highly appreciate the innovation, pointing to an increased understanding of the material and its interest. Such research results serve as a basis for conclusions regarding the expediency of using virtual reality technologies in the professional training of students, their impact on students' interest in the educational process, and indicate their importance for improving the quality of education of future specialists in socionomic specialties.

The prospects for further research of the proposed problem involve clarifying the degree of implementation of virtual technologies in the educational activities of Ukrainian educational institutions of various levels, as well as identifying the attitude of teachers to the implementation of mixed reality technologies in the educational process.

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The use of mobile applications in higher education institutions to enhance the quality of the educational process

Застосування мобільних додатків у закладах вищої освіти для підвищення якості освітнього процесу

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Written by:
Olena Dorofeyeva[1]
https://orcid.org/0000-0002-8913-806X
Liubomyra Iliichuk[2]
https://orcid.org/0000-0003-4274-6903
Tetiana Melnyk[3]
https://orcid.org/0000-0002-2258-7389
Svitlana Taratuta[4]
https://orcid.org/0000-0002-9236-1123
Kyrylo Tulin[5]
https://orcid.org/0000-0002-4895-7296

Abstract

The article reveals the possibilities of mobile applications and experimentally proves the practicality of their use in the professional training of specialists. The popularity and significance of various mobile applications in the modern educational process have been demonstrated. The spectrum of mobile applications was analyzed, the content of mobile applications was revealed, and the most effective of them were considered, which can be useful in teaching pedagogical, natural, and humanitarian disciplines and can be used in distance learning conditions to support and motivate learning. The didactic principles that educational mobile applications must comply with are highlighted, and their advantages and disadvantages are shown. Specific forms, methods, and ways of introducing mobile learning into the educational process of a higher school

Анотація

У статті розкрито можливості мобільних додатків та експериментальним шляхом доведено доцільності їх використання у процесі професійної підготовки фахівців. Доведено популярність та розкрито значущість в сучасному освітньому процесі різноманітних мобільних додатків. Проаналізовано спектр мобільних додатків, розкрито зміст мобільних додатків, розглянуто найбільш дієві з них, які при викладанні педагогічних, природничих, гуманітарних дисциплін можуть бути корисними і які можна використовувати в умовах дистанційного навчання для підтримки та мотивації навчання. Виокремлено дидактичні принципи, яким повинні відповідати освітні мобільні додатки та доведено їх переваги і показано недоліки. Розглянуто конкретні форми, методи, способи

[1] Candidate of Philological Sciences (Ph.D. in Philology), Associate Professor of the Department of Foreign Language Education and Crosscultural Communication, Khmelnytskyi National University, Ukraine. WoS Researcher ID: KII-1097-2024
[2] Candidate of Pedagogical Sciences, Associate Professor, Associate Professor of the Department of Primary Education, Vasyl Stefanyk Precarpathian National University, Ukraine. WoS Researcher ID: AHE-9858-2022
[3] Candidate of Philology, Associate Professor at the Department of German Philology, Translation and World Literature, Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Ukraine. WoS Researcher ID: M-3637-2018
[4] Candidate of Philology, Associate Professor at the Department of German Philology, Translation and World Literature, Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Ukraine. WoS Researcher ID: M-3645-2018
[5] Doctor of Philosophy in Education/Pedagogy, Assistant of the Department of Pedagogy, Taras Shevchenko National University of Kyiv, Ukraine. WoS Researcher ID: KQU-6456-2024

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were considered, which should be actively applied by teachers in the educational process of a higher school. The conducted experimental research on the importance and necessity of using mobile applications in education shows that mobile learning has become popular among young people and most university students are psychologically and technically ready for the use of educational mobile programs in education and require the mandatory use of mobile applications in the educational space of a higher school.

Keywords: mobile applications, institutions of higher education, mobile learning, training of a highly qualified specialist, modernization of the education process.

упровадження в освітній процес вищої школи мобільного навчання, які варто активно застосовувати викладачам в освітньому процесі вищої школи. Проведене експериментальне дослідження, щодо важливості та необхідності використовування мобільних додатків в освіті свідчить, що мобільне навчання стало популярним серед молоді і більшість студентів університетів психологічно і технічно готові до використання в освіті навчальних мобільних програм і потребують обов'язкового застосування в освітньому просторі вищої школи мобільних додатків.

Ключові слова: мобільні додатки, заклади вищої освіти, мобільне навчання, підготовка висококваліфікованого спеціаліста, модернізація процесу освіти.

Introduction

Integrating mobile applications into the educational process has become a significant subject of interest in recent years. This interest is due to the rapid development of mobile technologies and the spread of smartphones and tablets, which are now widely distributed among users of all ages. The effectiveness of mobile applications in education is multifaceted and covers various aspects such as academic performance, motivation, and learners' engagement. The introduction of mobile applications in education has brought significant results. Research has shown that mobile learning can increase the availability and flexibility of educational resources. Students can access study materials anytime, anywhere, which is advantageous for those juggling their studies with other responsibilities. Such convenience can contribute to increasing the time for studying and more consistent assimilation of course materials. In addition, mobile applications often contain interactive and multimedia elements such as videos, quizzes, and games, making learning more interesting and enjoyable than traditional textbooks.

Integrating mobile applications into the educational process is an important step in modern pedagogy, reflecting digital technologies' comprehensive role in contemporary society. While smartphones and tablets are becoming more common among students, using these devices for educational purposes is not only a logical development but also a necessary adaptation to the changes in the educational process. The transition to a digital educational environment opens up unique opportunities for improving the educational process, making it more interactive, accessible, and adapted to individual needs. However, transitioning from traditional methods to technology-driven education is fraught with challenges and uncertainties that must be resolved to fully realize the potential benefits (Blazhko et al., 2023).

Despite promising advantages, integrating mobile applications into the educational process is also associated with several significant challenges. One of the main challenges is the need for adequate infrastructure to support the mass use of these technologies. Schools and educational institutions should invest in providing stable Internet connections, sufficient digital devices, and technical support to ensure that all students can take advantage of mobile learning. In addition, educators must be properly trained to effectively incorporate mobile applications into their teaching strategies (Leshchenko et al., 2022).

Mobile learning with the necessary use of mobile applications is a modern direction in the educational process, which aims to create an innovative new academic environment. Due to the constant growth of the functionality of mobile devices, and the prevalence of mobile technologies in recent years, UNESCO experts suggest using the potential of mobile applications in the field of education to make education accessible and improve its quality, as well as to build an individual educational trajectory for a student of higher education (UNESCO, 2013).

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The use of mobile applications in higher education institutions to improve the quality of the educational process is currently a topical issue of the theory and methodology of learning in the educational process. Based on this, we considered the following questions in the article:

1. The popularity and significance of various mobile applications in the modern educational process.
2. Didactic principles to which educational mobile applications must comply and their advantages and disadvantages.
3. Forms and methods, ways of implementing mobile learning in institutions of higher education that should be actively implemented.
4. Experimentally tested the use of mobile applications in institutions of higher education to improve the quality of the educational process.

Literature Review

Scientists from different countries are investigating using mobile learning tools in the educational process. This problem is also important for practitioners, as it is widely discussed in virtual teaching communities, at meetings, conferences, and on the pages of the methodological press. Scientists analyze the ways, methods, and specifics of the practical implementation of digital technologies in the educational process, offer their vision of mobile learning, define its essence, and convince of the need to use it in the educational process of a higher school. However, researchers have not sufficiently disclosed the specifics of using mobile applications.

The problem of training specialists to use mobile applications in higher education is quite complex, multifaceted, and interdisciplinary. Different scientists joined its solution. Thus, the issues of mobile applications in education were studied in the works of the scientists mentioned below.

The practicality of using mobile learning tools, taking into account the modern development of society, in classes in higher education institutions T. Leshchenko, O. Shevchenko, & M. Zhovnir (2022) is shown. Based on the problems of organizing the educational process, considering the tendency of students to switch to mobile portable devices (tablets, smartphones) from personal stationary computers, the relevance and effectiveness of using mobile learning tools in the educational process of higher education has been proven. Early author options for using mobile learning tools for performing practical tasks, independently mastering the material, and repeating the material outside the classroom using target platforms; smartphones. For the organization of joint activities of higher school students, using mobile devices as productive and convenient tools for accessing cloud services is proposed. L. Blazhko, I. Rassokha, & S. Rendiuk (2023) also revealed and substantiated the concept of "mobile learning", proposed their own interpretation of this term, and analyzed the directions and features of its use in modern higher education. The advantages and disadvantages of using mobile applications and electronic devices in classes in higher education are shown, which allows you to quickly check knowledge, use it for distance learning, and build the necessary schedules, to significantly increase the productivity of independent and educational work, accelerate and facilitating the acquisition of knowledge by students. Insufficient distribution in higher education institutions has been proven and said about the inadequate availability of mobile learning and mobile phones among students. The didactic principles that mobile applications must comply with are substantiated. N. Hrechanyk, O. Vasiuk, L. Matsenko, N. Folomieieva, O. Koriakin, & S. Vyhovska (2023) presented the author's vision of ways to solve educational problems and modernize higher education through the use of mobile applications and electronic devices in higher education classes; found out the possibilities of integrating digital technologies into education; identified global factors and modeled the process of transformation of today's higher education, indicated the path of development on which the global education industry is currently moving; presented a holistic vision of transformational processes in higher education.

The general methodology of research related to the use of mobile applications by physical culture teachers is highlighted in the works of O. Dyshko, V. Kovalchuk, & N. Tabak (2022). They analyze the effectiveness of future physical education teachers' use of mobile applications during students' study of tourism disciplines. The theoretical approach to the effectiveness of the use of information and communication technologies in the educational process is substantiated. It has been proven that in the context of the introduction of ICT, mobile applications are an important tool in the academic space of distance and face-to-face forms. The advantages and disadvantages of using mobile applications and electronic devices in

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classes in higher education to increase the effectiveness of education are shown. The most effective mobile technologies in demand in the educational process are determined.

Preparing future teachers to use mobile applications for learning foreign languages is a new aspect of their professional training. It should be noted that the traditional approaches used for training foreign language teachers are not always appropriate in the context of the activity of a primary school teacher. That is why an important scientific task is the search for innovative technologies for teaching teachers, considering the latter's need to teach foreign languages. Considering this problem, scientists L. Moroz, V. Kovaliuk, & I. Maslo's (2023) research is devoted to using mobile applications, particularly, in learning English. The authors reveal the concept of "mobile learning" as an important educational tool in learning foreign languages. To intensify and organize the independent work of higher education students, attention is focused on the implementation of interactive technologies in the learning process, which is a promising direction in the study of languages; the experience of using mobile applications in the independent work of students is shown; an overview of mobile applications for learning English is provided.

Applying mobile applications in teaching the natural and humanitarian cycle disciplines was actively researched by A. Sustretov, V. Ignatiev, & I. Bryukhovetska (2023). They showed the role of the digital revolution, which transforms education through the use of information and communication technologies (ICT) to increase motivation and improve the learning outcomes of students; showed the influence of the penetration of mobile applications and mobile devices into education, which provides direct access to information for young people to improve the knowledge and skills of higher education seekers by introducing mobile devices into the educational process; the role of synchronizing interaction between students of education, involvement of mobile applications for additional information is substantiated. Mobile applications are suggested for studying in distance learning conditions and increasing students' motivation. The advantages that make mobile applications attractive to education seekers are identified.

The analysis of scientific sources gives grounds for the conclusion that the use and development of mobile applications, educational mobile programs, testing programs, electronic textbooks will contribute to increasing the level of academic achievements of students, will create conditions for self-education and distance education, will help activate the cognitive activity of students of higher education, solve the problem of access to new sources, will form the student's interest in the subject, provide access to a variety of information in combination with telecommunication technologies, develop independent work, make the transition to continuous education. Therefore, with the rapid development of the mobile Internet, mobile communication, mobile application markets, and multimedia services, there is a need to supplement the methodological systems of the educational process with mobile learning technologies in higher education institutions.

However, even though various aspects of vocational training specialists are constantly in the circle of scientific interests of scientists, insufficient attention is paid to the issue of training specialists to use mobile applications. In addition, the relevance of the identified problem is enhanced by several contradictions between:

- A public order for the training of teachers capable of
- Innovative activity in the educational process, and the insufficient focus of higher education institutions on solving this problem;
- The objective need for training specialists in the use of mobile applications and its insufficiently effective implementation in practice in higher education institutions;
- The necessity of forming the readiness of specialists to use mobile applications and the lack of development of content-methodical provision of such training.

So, the objective need to solve the specified problem, its insufficient theoretical and practical development, and the need to overcome the specified contradictions determined the choice of the topic of our article.

The article aims to reveal the possibilities of mobile applications and to prove experimentally the practicality of their use in the professional training of specialists.

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Methodology

The methodological principles of the research are leading provisions of the theory of scientific knowledge; general scientific principles of historicism, systematicity, and scientificity; conceptual provisions of pedagogical, psychological, and sociological sciences; ideas of comparative research experience based on the simultaneous study of pedagogical, socio-cultural and economic phenomena; philosophical and pedagogical ideas of the development of modern education.

To achieve the goal, the research used the following methods:

- Theoretical – analysis of the subject of study, abstraction; definitive analysis of the problem to reveal the possibilities of mobile applications and the practicality of their use in the process of professional training of specialists;
- Empirical – the organization of observation of the object of research to ensure the profiling of the educational process and establish the effectiveness of the capabilities of mobile applications and the practicality of their use in the process of professional training of specialists,
- Special – design based on the prognosis of the main parameters of the state and development of mobile applications for the development of options for strategies for their use in the process of professional training of specialists; analysis of the specifics of the dislocation of higher educational institutions and its influence on the disclosure of the possibilities of mobile applications in the process of professional training of specialists, organization of the educational process; a pedagogical experiment to check the effectiveness of mobile applications and the practicality of their use in the process of professional training of specialists;
- Statistical – processing of research results (quantitative and qualitative data collection analysis).

The pedagogical experiment was implemented in three stages: preparatory, main, and final.

At the preparatory stage, the purpose and tasks of the research were defined, the experimental plan was developed, methods of measurement and processing of results were selected, control and experimental groups were selected, and their homogeneity was checked.

At the main stage, an experiment was conducted.

At the final stage, the experiment's results were analyzed, their reliability was confirmed, and conclusions were drawn about the pedagogical effect of the experiment.

The reliability and validity of the obtained results, and the objectivity of their assessment were ensured by the methodological soundness of the initial positions and the qualitative mechanism for evaluating the quality under study, the use of a complex of complementary research methods, and the involvement of a group of respondents from a higher educational institution in the analysis of its results.

To assess the homogeneity of experimental and control data, statistical processing was performed using MS Excel and SPSS (Statistical Package for Social Science).

An experimental study was conducted. We were interested in the opinions of teachers of higher education institutions regarding the use of mobile applications in universities. A survey was conducted among teachers of higher education institutions, in which 23 teachers of higher education institutions took part – teachers aged 25–67 years.

As a result of the survey of teachers of higher education institutions, it was established that most teachers of higher education institutions use mobile applications as educational tools in distance and face-to-face learning and understand their importance for education and human life.

To identify the effectiveness of the implementation of mobile applications in the educational process of a higher school, we conducted testing among students who were offered 25 test questions of visual recognition and 25 test tasks). To carry out the research, students were divided into groups:

- Control (n=28 people), students studied according to the traditional scheme of the educational space;

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– Experimental (n=27 people), the educational process of the higher school involved the introduction of mobile applications.

Students had to answer the proposed test tasks by choosing the correct answer.

Levels of mastery of professional-oriented knowledge of higher education students corresponding to the total number of points were determined: high, average, and low.

The results of the visual recognition tests and the test questions indicate that at the end of the pedagogical experiment, better dynamics were observed in the experimental group.

The data of the experiment, thus, confirm the effectiveness of the use of mobile applications in the educational process of the higher school during the training of specialists in various fields.

We conducted an anonymous survey of higher education students to determine the place of mobile learning and mobile applications in human life and education. The fact that the study was anonymous contributed to obtaining more truthful and open statements.

When determining the sample of subjects, the general specificity of the research subject was considered. The total volume of the sample is 140 subjects. The criteria of meaningfulness, representativeness, and equivalence were considered when forming the sample. The sample was composed by random selection using the technical procedure for calculating the selection step.

Research relies heavily on the accuracy and reliability of the data. In research work, the quality of data collection and analysis adds weight to the study and contributes to the formation of sound conclusions, which is the key to academic success.

The following digital data collection tools were useful in the study:

– Google Forms – a simple survey tool that allows you to collect data from respondents, create different types of questions, and collect answers in spreadsheets.
– SurveyMonkey – a modern survey tool that offers a wide range of customization options and analytical tools for analyzing the collected data.
– JSTOR, Google Scholar, and other academic search engines provide access to scholarly articles, books, and other educational resources that may be useful for literature review and theoretical data collection.
– Zotero or Mendeley – bibliography management programs that help organize research materials, store references, and format bibliographies and citations according to different citation styles.
– Microsoft Excel or Google Sheets – spreadsheets are useful for organizing and analyzing collected data when working with quantitative data.
– SPSS, R, or Python for more advanced data analysis, statistical analysis, and processing of volumes of data.

Results and Discussion

The popularity and significance of various mobile applications in modern education.

The modern educational process puts mobile communication first in the educational process. Therefore, M-learning consists of the wide use of all the possibilities of mobile applications in the professional training of specialists. Mobile phones, tablets, and smartphones are now considered the ideal technical tools of the educational process, as they provide multi-way and two-way communication combining mobile technologies and learning strategies (Kuchai et al., 2022).

You can create and open multimedia files when learning using mobile devices, access adapted reference and learning resources via the Internet, exchange information for educational purposes, and take information from specialized sites that contain practical tasks, online tests, etc. The popularity of various mobile applications is growing along with the spread of mobile "devices" (Lerma-Noriega et al., 2023).

An autonomous software product developed specifically for mobile devices is a mobile application that aims to optimize user life tasks or solve an educational problem. A mobile application is designed for a

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given platform (iOS, Android), the mobile application is distributed through special application stores (Google Play, Apple App Store) and installed on the device exactly like a computer program (Bilous, 2018). For mobile electronic devices, learning how to use applications in modern conditions of the educational process in institutions of higher education is especially relevant (Correa Cruz et al., 2017). A large number of programs are available to users of mobile devices to study any subject. The teacher's task is to individualize the learning process and help students choose products that will maximally contribute to learning designed the problem (Moroz et al., 2023).

Having analyzed the range of mobile applications, we claim that there are mobile applications that can be useful in teaching pedagogical, natural, and humanitarian disciplines, and that can be used in distance learning conditions to support and motivate learning:

- ***Khan Academy Biology***: the application contains interactive video classes and tasks, and other resources for studying pedagogical, natural, and humanitarian disciplines;
- ***iNaturalist***: allows students and any users to identify animals, insects, plants, and other wildlife objects using the phone's camera;
- ***Khan Academy Chemistry***: the application offers resources for studying chemistry, including innovative video lessons, interactive tasks, etc.;
- ***PhET Interactive Simulations***: to facilitate the understanding of chemical processes, the application offers interactive simulations;
- ***Chemistry 3D***: the application allows students of higher education to study chemical structures and will enable them to reproduce reactions in three-dimensional space;
- ***Physics Sandbox***: with the help of the application, users have the opportunity to experiment with various physical phenomena;
- ***Simulations Plus***: with the help of the application, interactive simulations are carried out, which help the students of the educational space to understand and reproduce physical processes;
- ***Khan Academy Physics***: the application offers interactive tasks, innovative video lessons, and other new resources for learning physics;
- ***The History Channel App***: the application includes historical news, articles about history, and other resources in its content;
- ***Khan Academy History***: with the help of the application, users have the opportunity to use interactive tasks, video lessons for studying history, and other resources in the educational space;
- ***Crash Course World History***: offers video classes on world history in an accessible form (Sustretov et al., 2023).

In the educational process of higher school, the use of mobile technologies is a new trend, so the theoretical base is only at the stage of development. In education, the research concerns specific scenarios of using mobile applications and mobile technologies (Shetelya et al., 2023).

Let's consider the most effective of them we offer in higher education.

1. Microblog – mobile learning scenario. The use of microblogging during classes by higher education students allows for getting answers to the questions posed, asking questions to the teacher, and discussing topics in a group, which improves the interaction between teachers and students and makes the educational process dynamic and more interactive (Tejada Campos & Barrutia Barreto, 2021).
2. Augmented reality applications, showing certain processes and concepts in a virtual environment, help to understand them better. An example can be applications that demonstrate the anatomical structures of the human body in 3D format, which will help students of socionomic specialties to understand better the interaction between organs and the structure of the human body:

    - The Anatomy 4D application provides an opportunity to see various parts of the human body in augmented reality mode, when a student can scan, for example, a poster with a skeleton image or another specific object using the camera of his tablet or smartphone, and the student of higher education sees virtual models on the screen, which can be explored in detail and rotated as convenient for the student;
    - Anatomy AR is an augmented reality application that allows users to display various components of a certain object on their screen and explore it innovatively.

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3. Simulation mobile applications offer simulation games to help higher education aspirants learn various procedures and practice skills, etc.:

   – Surgery Squad is a simulation game that aims to help higher education students feel like working specialists in an interactive professional space. Graduates can perform various operations using various procedures and tools in real-time during real operations (Leshchenko et al., 2022).

Mobile applications have a high motivational potential, accommodating many forms and topics so that they can be used both for work at universities and for independent work of higher education students.

4. Free mobile applications within the curriculum developed by the British Council are designed to work on the development of grammatical skills:

   – ***Learn English Elementary Podcasts, Learn English Audio & Video, Learn English Great Videos*** – application to improve the quality of the educational process of these free mobile applications in higher education institutions, developed by the British Council within the curriculum, where the best video materials and podcasts are presented for learning the English language is of great importance for the educational process of the higher school. The advantages of these programs are additional functionalities (interactive glossaries of keywords, interactive texts of audio recordings, exercises for understanding each part of the information material), which allow you to replenish the vocabulary, improve the skills of aural perception of language, present materials of different levels of complexity;
   – ***Two Minute English, Puzzle English, Real English*** – these mobile applications are based on learning, present materials of different levels of complexity, contain a huge number of tasks and resources for work, allow to improve the skills of listening to the language, are a significant resource for students of higher education and language teachers interest, since they are also aimed at the development of speaking skills of students of higher education;
   – ***Learn English Grammar*** (British Council) – a mobile application for the development of grammar skills, which presents grammar exercises of four levels of difficulty, designed to fill the gaps in the student's knowledge, offers a multiple choice of tasks, which uses 10 types of exercises, allows comparing answers and questions ;
   – ***Learn English Grammar*** – a mobile application that is among the top ten mobile applications in more than 40 countries of the world, and 9 countries of the world it ranks first in the "Education" category AppStore;
   – ***Johnny Grammar's Word Challenge*** mobile app by the British Council – to help with quality testing of spelling, usage, ability, and vocabulary in spoken English to test your general grammar level – presents a quiz for English language learners. Tests, within three levels of difficulty, are given by categories (Words, Spelling, Grammar);
   – ***EnglishGrammarTest*** – a convenient mobile application for checking knowledge of English grammar, which offers 60 tests dedicated to a certain separate grammatical topic. In the mobile application, after completing the test, a clear and simple explanation of errors is offered, a list of incorrect and correct answers is provided, useful for self-checking;
   – ***MyWordBook*** is an available mobile application on the British Council website, presented as an interactive notebook, and serves to develop and activate the student's linguistic skills within the studied topics. Vocabulary in the mobile application is grouped into sets of interactive flashcards, presented in random order and thematic groups divided by levels of complexity.

Each interactive flashcard has fields for notes, an image, an audio example, an example of use, a translation, and a definition from the CambridgeUniversityPress dictionary. The "Practice" rubric contains five types of tasks for independent work of students of higher education, to replenish vocabulary, after completing the tasks, the user can move the word to the list of learned vocabulary (Moroz et al., 2023).

Didactic principles to which educational mobile applications must comply and their advantages and disadvantages.

Let's consider the main didactic principles that educational mobile applications must comply with:

1) Systematicity and purposefulness (revision of goals after achieving the goal by higher education seekers, clear setting of positively short-term formulated goals);

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2) Individual approach (choice of the level of difficulty of tasks by students of higher education, possibility of students choosing the content of studies taking into account their interests);
3) Independence and activity (the possibility of higher education students to study independently and at a time convenient for them, in the process of group training, to show initiative with other subjects);
4) Accessibility (creating free access to programs and educational information using mobile technologies) (Horbatiuk & Tulashvili, 2013).

Let's highlight the main advantages of using mobile applications:

- Equal access to higher professional education for all participants in the educational process;
- In the process of interaction with students, feedback acceleration;
- Due to the motivated use of the mobile technology system, which is widespread – personalization in obtaining information;
- During the evaluation of educational achievements and monitoring of knowledge of education seekers – ensuring efficiency of the educational process, rational control of success of higher education seekers;
- Efficiency of time allocation during classroom learning of new material;
- Learning mobility;
- Due to adequate synchronization of mobile applications and use of various mobile devices – continuity of education;
- Effectiveness of the communication process of higher education applicants;
- Rational control of the success of education seekers (Leshchenko et al., 2022);
- Innovativeness of technologies;
- The possibility of using mobile applications as an additional means of the educational process;
- The possibility of using portable devices for educational purposes;
- The possibility to download the necessary professional material for solving tasks at a time convenient for those seeking higher education with the help of mobile applications;
- The possibility of quick access to the calculation of formulas, the construction of tables and graphs;
- Mobile applications help students to adapt to the educational process in the information space;
- The possibility of simultaneous interaction with a group of people or with one person (Rodríguez-Sarmiento, 2021).

Disadvantages of implementing mobile applications include:

1) Insufficient "technical" training in the creation of mobile applications for teachers of higher education institutions;
2) Shortage of tools for the development of mobile applications and mobile devices of high-quality educational full-featured content;
3) Additional costs for installing specialized mobile applications with advanced calculation capabilities;
4) The battery capacity of mobile devices and the limited size of displays, which is not always convenient for constructing graphs, mathematical functions, and solving complex equations;
5) Incompatibility with other mobile applications of some mobile devices;
6) Limited battery life, which means a limitation in the period, which with long-term use is a significant drawback for full-fledged long-term performance of the task (Blazhko et al., 2023).

Forms, methods, and ways of implementing mobile learning in institutions of higher education that should be actively implemented.

Let's consider specific forms, methods, and ways of introducing mobile learning into the educational process of a higher school, which should be actively used by teachers:

- The use of a ***mobile phone*** as a means of access to the global network, which allows you to organize instant access to specialized sites that offer practical tasks, tests, e-learning courses, additional educational materials (video files, photos, drawings, sound files, etc.) and give students have the opportunity to use wide opportunities to control the entire learning process, transfer of information materials, help in solving didactic problems;
- To view and ***open files of office programs*** – using special programs for mobile phone platforms (Excel, PowerPoint). The student has the opportunity to view educational versions adapted specifically for the

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phone screen, having in the memory of the mobile phone files with a convenient interface, convenient scroll bars, a font that provides educational information in an interesting form;

- Specialized electronic ***textbooks and courses*** adapted for viewing on mobile phones. Applicants of higher education are offered to download applications containing information (electronic textbooks), and subject tests necessary for successful modern education to their phones;
- Reading information using ***QR codes***, when each code is in different places, and which can be used as a warm-up, a quest, or a quiz in constant motion. Students of higher education are motivated to complete tasks, use phones, pre-installed the QR-code Reader program;
- ***Learningapps.org*** is a universal tool that allows using a mobile gadget on any educational subject at all lesson stages. This site has many completed tasks that should be used in the educational and scientific activities of the student. Higher education students use the constructor on the website and create their own exercises.
- "***Word clouds", virtual boards, intellectual maps, playlists,*** and ***Google services*** – are invaluable for the educational process of a higher school – students of higher education are motivated to perform tasks, the method of application of which consists of a special visualization and method of presenting text information. In the form of a set of keywords, a text cloud, the researched educational object is described, and inscribed in a graphic figure. Such an educational approach facilitates the assimilation of new material because a higher education student associates a picture with a set of words;
- ***Microblog*** – a mobile learning scenario enables students to navigate the flow of professional terminology, receive answers to questions, post didactic material that is originally designed, discuss topics in a group, and ask questions to the teacher, which makes the educational process dynamic and more interactive and leads to interaction between students and teachers (Prado Ortega et al., 2023).

Thanks to the use of mobile learning tools, mobile applications, and mobile technologies, new forms of joint work between students of higher education and teachers are emerging, there is a rethinking of teaching methods, the interaction of methods and forms of informal and formal education, and the diversification of educational programs (Leshchenko et al., 2022).

Therefore, the constant and active use of educational mobile applications "leads to a change in the content of education, learning technology and in the relationship between the participants of the educational process, allows to individualize learning, make it more adequate to the abilities of students" (Shyshenko et al., 2021). With the help of mobile applications, it is possible to automate the learning process of introducing new approaches to the presentation of new material, by redistributing learning time, using video lessons, electronic libraries, and mobile technologies in free access and with all sources of the necessary information (Shuliak et al., 2022).

Experiment.

The results of an internet survey regarding the dynamics of using mobile and computer technologies are interesting and predictive. The results of an online study indicate the popularity of mobile portable devices. In 2013, the number of personal computers and mobile phones in the ratio averaged 34% and was almost the same.

In 2019, we are observing a change in the situation.

- The share of personal computers decreased and amounted to 23%;
- The number of portable mobile devices increased to 72%.

We can say, observing such dynamics, that the use of mobile devices is growing steadily – by 5% per year. And shortly, this trend will significantly affect education development, because mobile device use will continue to increase. The dynamic development of portable mobile devices, particularly smartphones, has created opportunities for improving the quality of education, which are unprecedented based on their use in the educational process of higher education (Nestorenko & Ostopolets, 2022).

Given the relevance of our chosen research topic now and in the future, we conducted an experimental study.

To achieve the goal, the research used the following methods:

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- ***Theoretical*** – analysis of the subject of study, abstraction; definitive analysis of the problem to reveal the possibilities of mobile applications and the practicality of their use in the process of professional training of specialists;
- ***Empirical*** – the organization of observation of the object of research to ensure the profiling of the educational process and establish the effectiveness of the capabilities of mobile applications and the practicality of their use in the process of professional training of specialists,
- ***Special*** – design based on the prognosis of the main parameters of the state and development of mobile applications for the development of options for strategies for their use in the process of professional training of specialists; analysis of the specifics of the dislocation of higher educational institutions and its influence on the disclosure of the possibilities of mobile applications in the process of professional training of specialists, organization of the educational process; a pedagogical experiment to check the effectiveness of mobile applications and the practicality of their use in the process of professional training of specialists;
- ***Statistical*** – processing of research results (quantitative and qualitative data collection analysis).

We were interested in the opinions of teachers of higher education institutions regarding the use of mobile applications in universities. A survey was conducted among teachers of higher education institutions, in which 23 teachers of higher education institutions participated – teachers aged 25–67 years.

As a result of the survey of teachers of higher education institutions, it was established that most teachers of higher education institutions use mobile applications as educational tools in distance and face-to-face learning and understand their importance.

In particular, the following results were obtained:

- 89% of teachers of higher education institutions believe that mobile applications increase the motivation to study of students of higher education;
- 75% of teachers of higher education institutions recommend using mobile applications in the process of teaching professional disciplines;
- 71% of higher education institutions teachers use mobile applications as educational tools in distance and face-to-face education.

To identify the effectiveness of the implementation of mobile applications in the educational process of a higher school, we conducted testing among students who were offered 25 test questions of visual recognition and 25 test tasks). To carry out the research, students were divided into groups:

- Control group (n=28 people), students studied according to the traditional scheme of the educational space;
- Experimental (n=27 people), the educational process of the higher school involved the introduction of mobile applications.

Students had to answer the proposed test tasks by choosing the correct answer.

Levels of mastery of professional-oriented knowledge of higher education students corresponding to the total number of points were determined: high, average, and low.

Research at the ascertainment stage of the experiment made it possible to find out that at the beginning of the pedagogical experiment, there were no significant differences between the indicator of mastering knowledge (professionally oriented) among the future specialists of the experimental and control groups, which indicates the homogeneity of the control and experimental groups.

Let's emphasize the changes observed after the pedagogical experiment's end.

The results of the test questions show that:

With a low level of mastery of (professionally oriented) knowledge, the number of higher education graduates has decreased:

- In the control group by 21.2%,

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– In the experimental group – by 41.1%.

The number of respondents with an average level of mastery of knowledge (professionally oriented) increased:

– In the control group by – 12.3%,
– In the experimental one – by 20.9%;

With a high level of mastery of knowledge (professionally oriented), the number of respondents increased:

– In the control group – by 11.1%,
– In the experimental group – by 25.2%.

The results of the visual recognition tests and the test questions indicate that at the end of the pedagogical experiment, better dynamics were observed in the experimental group.

The data of the experiment, thus, confirm the effectiveness of the use of mobile applications in the educational process of the higher school during the training of specialists in various fields.

We conducted another anonymous survey of higher education students to determine the place of mobile learning and mobile applications in a person's life and education. The fact that the study was anonymous contributed to obtaining more truthful and open statements.

140 students of higher education 1-3 years participated in the survey. As a result of an anonymous survey of higher education students, we received the following answers from the respondents.

1 question "Do you use reference books, dictionaries, e-books, access the Internet, play audio files?"

– 100% of respondents use handbooks, dictionaries, e-books, access the Internet, and play audio files using mobile phones;

2 question "Do you use mobile applications with the help of equipping mobile phones?"

100% of respondents use the most popular mobile applications by equipping their mobile phones, including:

– 59% of respondents use game programs with the help of mobile applications;
– 75% of respondents use mobile applications for shopping (they find goods and buy them on the Internet all over the world);
– 98% of respondents use mobile applications to watch movies together, communicate on social networks, etc. (they use applications as a way of entertainment and life);
– 98% of respondents use mobile applications to acquire new knowledge and skills using educational programs;
– 14% of respondents book accommodation, download maps, etc. with the help of mobile applications to facilitate travel;
– 21% of respondents use mobile applications to order food and drinks;
– 16% of respondents use mobile applications to scan barcodes, master, and use healthcare applications, i.e., service programs.

3 question "Are mobile applications the dominant means of learning for you?"

– 71% of respondents gave a positive answer;
– 29% of respondents gave a negative answer. This indicates the prevalence of mobile applications among students of higher education.

4 question "How often do you use mobile applications for educational purposes to improve your knowledge and skills?"

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– 54% of respondents use mobile applications often (more than four times a week) to improve their knowledge and skills.

The analysis of respondents' answers regarding the importance and use of mobile applications shows that mobile learning has become popular among young people. Most university students are psychologically and technically ready to use educational mobile programs in education and require mandatory use in the academic space of a higher school.

Recommendations for teachers and students for using educational mobile applications in education.

Developed recommendations for teachers and students for the use of educational mobile applications in education:

– Mobile applications selected and offered to students must be available for use during the learning process;
– Teachers and students should be thoroughly familiar with the operation of mobile applications, know the final purpose of the application, its functions, and settings;
– Teachers and students should use mobile applications not as a replacement, but as a supplement to traditional education;
– Teachers and students should be able to choose a mobile application that meets the purpose of learning and is best suited to the discipline being studied;
– Teachers and students must use mobile applications to organize discussions at lectures to express their opinions and arguments; to study new material to provide higher education students with access to interactive simulations, and video classes, i.e. to resources that can help them understand complex processes and concepts; for project work; to consolidate knowledge;
– Teachers and students should evaluate the effectiveness of using mobile applications in the process of reflection to achieve learning goals and help in the educational process.

The research concept is based on the main scientific provisions of innovation, laws, and principles of innovative educational processes, which at the methodological, theoretical, and practical levels determine the conceptual foundations of the technology of implementing mobile applications in educational institutions.

The practical significance of the research results lies in the implementation of the technology of implementing innovations in the practice of educational institutions, in the possibility of applying the research results for scientific-methodical and informational-consultative support of the innovative activity of teachers, and in the development of their innovative competence.

The developed materials and digital content can be applied in primary school teacher training as separate modules of educational disciplines, in formal and informal education of students of higher education institutions, and the system of postgraduate pedagogical education.

Conclusions

The popularity and significance of various mobile applications in the modern educational process have been proven. The spectrum of mobile applications was analyzed, the content of mobile applications was revealed, and the most effective of them were considered, which can be useful in teaching pedagogical, natural, and humanitarian disciplines, and which can be used in the conditions of distance learning to support and motivate learning.

The didactic principles that educational mobile applications must comply with are highlighted, and their advantages and disadvantages are shown.

Specific forms, methods, and ways of introducing mobile learning into the educational process of a higher school were considered, which should be actively applied by teachers in the educational process of a higher school.

An experimental study was conducted. We were interested in the opinions of teachers of higher education institutions regarding the use of mobile applications in universities. A survey was conducted

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among teachers of higher education institutions, in which 23 teachers of higher education institutions participated – teachers aged 25–67 years.

As a result of the survey of teachers of higher education institutions, it was established that most teachers of higher education institutions use mobile applications as educational tools in distance and face-to-face learning and understand their importance for education and human life.

To identify the effectiveness of the implementation of mobile applications in the educational process of a higher school, we conducted testing among students who were offered 25 test questions of visual recognition and 25 test tasks). To carry out the research, students were divided into groups: control and experimental. Students had to answer the proposed test tasks by choosing the correct answer.

The results of the visual recognition tests and the test questions indicate that at the end of the pedagogical experiment, better dynamics were observed in the experimental group.

The data of the experiment, thus, confirm the effectiveness of the use of mobile applications in the educational process of the higher school during the training of specialists in various fields.

We conducted another anonymous survey of higher education students to determine the place of mobile learning and mobile applications in a person's life and education. The fact that the study was anonymous contributed to obtaining more truthful and open statements.

The conducted experimental research on the importance and necessity of using mobile applications in education shows that mobile learning has become popular among young people and most university students are psychologically and technically ready for the use of educational mobile programs in education and require the mandatory use of mobile applications in the academic space of a higher school.

Recommendations for using educational mobile applications in education have been developed for teachers and students.

Further research is needed to substantiate the didactic principles that educational mobile applications should meet.

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Formation of students' language competencies through the use of innovative technologies

Формування мовних компетенцій студентів шляхом застосування інноваційних технологій

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Written by:
Olena Balalaieva[1]
https://orcid.org/0000-0002-2675-5554
Svitlana Sichkar[2]
https://orcid.org/0000-0001-6262-2831
Maryna Zembytska[3]
https://orcid.org/0000-0002-6671-9937
Kateryna Shapochka[4]
https://orcid.org/0000-0002-4827-599X
Nataliia Ababilova[5]
https://orcid.org/0000-0002-9454-6674

Abstract

The article reveals the importance of podcasting; the most effective tasks for the formation of students' language competencies through the use of innovative technologies are singled out; the necessary preconceptions and main linguistic didactic tasks were identified for assimilation of knowledge and formation of linguistic competencies of students, the solution of which contributes to the introduction of information technologies of education into professional activity. The purpose of the study is to develop students' language competencies through the use of innovative technologies. The methodological foundations of the research are leading propositions of the theory of scientific knowledge; general scientific principles of historicism, systematicity, and scientificity; conceptual provisions of pedagogical, psychological, and sociological sciences; and ideas of the development of modern education. The results of

Анотація

У статті розкрито вагомість подкастингу; виокремлено найбільш дієві завдання для формування мовних компетенцій студентів шляхом застосування інноваційних технологій; виявлено необхідні передуми та основні лінгводидактичні завдання з метою засвоєння знань і формування мовних компетенцій студентів, вирішення яких сприяє впровадженню інформаційних технологій навчання в професійну діяльність. Метою дослідження є формування мовних компетенцій учнів шляхом використання інноваційних технологій. Методологічними засадами дослідження є: провідні положення теорії наукового пізнання; загальнонаукові принципи історизму, системності, науковості; концептуальні положення педагогічних, психологічних, соціологічних наук; ідеї розвитку сучасної освіти. В результатах статті показано роль графічного інтерфейсу у

[1] Candidate of Pedagogical Sciences, Associate Professor, Department of Journalism and Linguistic Communication, National University of Life and Environmental Sciences of Ukraine, Ukraine. WoS Researcher ID: H-8629-2018
[2] Candidate of Philological Sciences, Associate Professor of the Department of Applied Linguistics, Foreign Literature and Journalism, Pavlo Tychyna Uman State Pedagogical University, Ukraine. WoS Researcher ID: HZM-1269-2023
[3] Candidate of Pedagogical Sciences (Ph. D. in Pedagogy), Associate Professor at the Department of Foreign Language Education and Cross-Cultural Communication, Khmelnytskyi National University, Ukraine. WoS Researcher ID: HIK-0164-2022
[4] Candidate of Pedagogical Sciences, Associate Professor, Associate Professor of the Department of Primary and Preschool Education, Mykolaiv V. O. Sukhomlynsky National University, Ukraine. WoS Researcher ID: AAA-2471-2021
[5] Candidate of Pedagogical Sciences, Associate Professor, Associate Professor of the Department of English Philology and Translation, Petro Mohyla Black Sea National University, Ukraine. WoS Researcher ID: AAP-1613-2020

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the article show the role of the graphical interface in the formation of language competencies of higher education students; the essence and principles are revealed; the need to introduce STEM technologies, gamification, and virtual whiteboards into the educational process is emphasized. Summarizing the results of the experimental study made it possible to conclude the effectiveness of the developed system of forming students' language competencies through the use of innovative technologies.

Keywords: language competencies, students, innovative technologies, podcasting technology, multimedia software, graphical interface, STEM technologies.

формуванні мовних компетенцій студентів вищої школи; розкрито сутність, принципи; наголошено на необхідності впровадження в освітній процес STEM-технологій, гейміфікації, віртуальної дошки. Узагальнення результатів експериментального дослідження дало змогу зробити висновок про ефективність розробленої системи формування мовних компетенцій учнів шляхом використання інноваційних технологій.

Ключові слова: мовні компетенції, студенти, інноваційні технології, технологія подкастингу, мультимедійні програмні засоби, графічний інтерфейс, STEM-технології.

Introduction

In today's society, rapid information-technological, cultural-educational, and socio-economic changes lead to an urgent need to train multi-disciplinary specialists who can first, in the conditions of intensive accumulation of factual information, effectively assimilate knowledge, and then use it competently and rationally. At the time – the formation of a professional, a comprehensively developed personality, who skillfully operates professional tools and strives for self-realization and professional growth, can use the learned theory in practical activities (Leshchenko & Zhovnir, 2020).

No educational technology can be considered universal. In modern conditions, the organization of the educational process requires a creative approach and a combination of various technologies to use each of them. That is why today's education is based on a creative combination of innovative and traditional forms, methods, means, and methods of learning. The teacher's ability to form students' language competencies through the use of innovative technologies, using various learning technologies, allows him to approach the organization of educational activities of students of higher education creatively, in specific conditions to choose exactly the learning technology that will ensure the assimilation of knowledge in the best way, will contribute to the formation of skills and abilities at a minimum expenditure of time and effort. In the process of forming students' language competencies through the use of innovative technologies, it is most appropriate to use such technologies, with the help of which students of higher education have a desire to achieve success and learn throughout their lives, develop their competence, act in the context of multicultural communication and globalization (Khrystych & Borysova, 2022).

The problem of forming students' linguistic competencies through the use of innovative technologies requires special attention. This leads to the search for new educational paradigms and concepts, principles, and approaches to the organization of the educational process, as well as methods, forms, and means of teaching students, the introduction of technological innovations that will contribute to the improvement of the quality of foreign language education. The organization of student education with the use of technological innovations will contribute to the formation of basic competencies, readiness to use technological innovations in future professional and pedagogical activities, and the development of universal social skills ("soft skills") at the European level.

Even though various aspects of professional training of teachers are constantly in the circle of scientific interests of scientists, insufficient attention is paid to the issue of the formation of language competencies of students through the use of innovative technologies. In addition, the relevance of the identified problem is enhanced by several contradictions between:

- A public order for the training of teachers capable of innovative activity in the educational process, and insufficient focus of higher education institutions on solving this problem;
- The objective need to train specialists for the use of innovative foreign language teaching technologies is not enough for its effective implementation in practice in institutions of higher education;
- The necessity of forming the readiness of specialists to use innovative foreign language teaching technologies and the lack of development of content-methodical provision of such training.

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Therefore, the objective need to solve the specified problem is insufficient theoretical and practical development, the need to overcome the mentioned contradictions determined the choice of the topic of the article.
The development of the formation of language competencies of students through the use of innovative technologies is currently an urgent issue of theory and teaching methods in the educational process. Based on this, we considered the following questions in the article:

1. Analysis of the categorical apparatus of research and its importance for taking into account the system-technical and didactic factors of the formation of students' language competencies through the use of innovative technologies.
2. Podcasting technology is a promising means of learning.
3. The most effective tasks for the formation of language competencies of students are through the use of innovative technologies.
4. Multimedia software tools for the formation of language competencies of students.
5. Necessary prerequisites and main linguistic didactic tasks for assimilation of knowledge and formation of linguistic competencies of students through the use of innovative technologies, the solution of which is facilitated by the introduction of educational information technologies.
6. The role of the graphic interface in the formation of language competencies of students.
7. The essence, principles, and laws of usability. It is necessary to observe the principles and laws of usability.
8. Introduction of STEM technologies, gamification, and virtual blackboard in education to form students' language competencies.
9. An experimental study of the formation of students' language competencies through the use of innovative technologies.

The purpose of the study: the formation of students' language competencies through the use of innovative technologies.

Literature Review

Research by scientists, both theoretical and experimental, carried out in recent years, allows to implementation of a scientific approach to the interpretation and formulation of innovative and traditional learning technologies, as a means of forming students' language competencies through the use of innovative technologies in the education process.

The theoretical analysis of the problem shows that the implementation of innovative pedagogical technologies has been the subject of research by a wide range of scientists.

The historical and pedagogical understanding of the theory and practice of innovation processes in general educational institutions, which allows for objectively evaluating and creative use of the acquired innovative experience in modern conditions, is represented in the works of T. Leshchenko, & M. Zhovnir (2020). They are dedicated to the search for innovative approaches, and effective ways that can compete with traditional methods in providing educational information, and expanding and supplementing their register. The goal of such transformations is purposeful innovative training of future competitive specialists in various specialties. The value and necessity of systematic use of educational resources, innovative didactic methods, and forms of work, which will ensure quality training of future specialists, are substantiated. Scientists substantiated and showed the importance of podcasting technology.

Fundamental changes in the education system are brought about by the development of digital technologies. Scientists agree that the rapid use of digital technologies was influenced by an important factor, the COVID-19 crisis. In connection with the pandemic, the search for new learning technologies is emphasized by M. Simpioni Carraro, E. Ostemberg, & P. Kohls dos Santos (2020): "In conditions of cataclysms, when classroom work becomes impossible, innovative technologies for distance learning come to our aid". As noted by N. Khrystych, & O. Sklyarenko (2020), "determining the priority of the person and rethinking universal human values in the conditions of the Covid-19 pandemic requires the search for innovative approaches to the organization of the educational process, the introduction of innovative pedagogical technologies that will contribute to the solution of educational problems in the conditions of various forms of education".

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The issue of the introduction of innovative technologies in the educational process in general and the teaching of foreign languages, in particular, was analyzed in scientific publications by K. Klymova (2010). The analysis of the student's speech qualities and the outline of the linguistic, philosophical, psychological, and pedagogical foundations of the problem made it possible to identify the optimal (innovative and traditional) methods, forms, means, and methods of learning and to introduce them into the educational process of the higher school. The developed sets of tasks are of interest because they are aimed at optimizing quasi-professional, developmental-educational, educational-cognitive activities. Practical aspects of the use of multimedia technologies were studied by A. Klymenko, N. Zakordonets, & I. Shymkiv (2017). In institutions of higher education in the process of teaching foreign languages, the feasibility of using Prezi, PowerPoint, and Google Slides has been shown.

The justification of the ways and methods of using various methods and innovative learning technologies and the formulation of general conceptual provisions regarding the organization of educational activities are presented in the studies of Makovii, M., Salnyk, I., Shlianchak, S., Lukianykhin, V., & Sanakuiev, M. (2022). The authors declare that the digitalization of education is an important element of the development of Ukrainian society because the skillful use of digital technologies expands the outlook and professional skills of participants in the educational process.

The issue of professional competence and innovative activity of teachers of higher education is relevant at the current stage. This significance arises primarily from the evolution of the perception of teachers as participants in the educational process. There is a growing belief that teachers do not only dominate the organization of the educational process but rather take on a role similar to that of administrators. The question of professional competence and innovative activity becomes key since the changing perception of the role of the teacher also changes the understanding of the specific qualities necessary for effective interaction with students. The purpose of this study Kutsak, L., Zaskalieta, S., Hamorak, H., Hreniuk, L., & Parshuk, S. (2023) is to clarify the components of professional competence and innovative professional activity in the context of teachers of higher education institutions.

Therefore, scientists, having researched to determine the ways of forming students' language competencies during the use of innovative technologies, proved the importance of cooperation and evaluation methods and singled out the factors preferred by students that contribute to the intensification of the teaching process in the context of mixed learning.

Most researchers, considering various aspects of the problem of the formation of student's language competencies through the use of innovative technologies, consider it necessary to use the latest information technologies in the educational process, note the need to increase the role of electronic teaching aids and focus attention on the combination of interactive teaching methods with the use of technical teaching aids (Internet networks, multimedia, computer)

The above obligates scientists and teachers, firstly, to consider the possibilities of developing new educational concepts, and innovative learning technologies to speed up the process of training specialists for innovative activities, which will to some extent contribute to the realization of the socio-economic and cultural development of society; secondly, to actualize scientific research aimed at theoretical substantiation and testing of new approaches, didactic models and systems for the use of technological innovations in the future professional and pedagogical activities of specialists.

Methodology

The methodological foundations of the research are leading propositions of the theory of scientific knowledge; general scientific principles of historicism, systematicity, and scientificity; conceptual provisions of pedagogical, psychological, and sociological sciences; ideas of experience based on the simultaneous study of pedagogical, socio-cultural and economic phenomena; philosophical and pedagogical ideas of the development of modern education.

In the process of scientific research, the following research methods were used:

– ***Theoretical***: analysis, systematization, comparison of educational, scientific, and methodological literature on the subject of research, which allows to outline the directions of development of advanced progressive ideas in this field, to clarify the main issues of the research problem, the level of scientific

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development; generalization of the formation of language competences of students through the use of innovative technologies in the educational environment of continuous education;

- ***Empirical***: survey, indirect and direct observation, questionnaires, and testing, which allows generalizing and systematizing statistical and analytical material; a pedagogical experiment to reveal the real state of formation of students' language competencies through the use of innovative technologies;
- ***Mathematical***: (mathematical analysis, processing of melons, ranking);
- ***Statistical***: for statistical digital processing, summarization of the results obtained during the experimental work.

The implementation of the pedagogical experiment was carried out in three stages: preparatory, main, and final.

At the preparatory stage, the purpose and tasks of the research were determined, the experimental plan was developed, methods of measurement and processing of results were selected, control and experimental groups were selected, and their homogeneity was checked.

At the main stage, an experiment was conducted.

At the final stage, the results of the experiment were analyzed, their reliability was confirmed, and conclusions were drawn about the pedagogical effect of the experiment.

The reliability and validity of the obtained results, and the objectivity of their evaluation were ensured by the methodological validity of the initial positions and the qualitative mechanism of the assessment of the quality under study, the use of a complex of complementary research methods, and the involvement of a group of respondents from a higher educational institution in the analysis of its results.

To assess the homogeneity of experimental and control data, statistical processing was performed using MS Excel and SPSS (Statistical Package for Social Science).

Research relies heavily on the accuracy and reliability of the data. In the framework of research work, the quality of data collection and analysis not only adds weight to the research but also contributes to the formation of sound conclusions, which is the key to academic success.

The following digital data collection tools were useful in the study:

- Google Forms – a simple tool for creating surveys that allows you to collect data from respondents, create different types of questions, and collect answers in spreadsheets.
- SurveyMonkey – a modern survey tool that offers a wide range of customization options and analytical tools for analyzing the collected data.
- JSTOR, Google Scholar, and other academic search engines provide access to scholarly articles, books, and other academic resources that may be useful for literature review and theoretical data collection.
- Zotero or Mendeley – bibliography management programs that help organize research materials, store references, and format bibliographies and citations according to different citation styles.
- Microsoft Excel or Google Sheets – spreadsheets are useful for organizing and analyzing collected data when working with quantitative data.
- SPSS, R, or Python for more advanced data analysis, statistical analysis, and processing of volumes of data.

When determining the sample of subjects, the general specificity of the research subject was taken into account. The total volume of the sample is 536 subjects. When forming the sample, the criteria of meaningfulness, representativeness, and equivalence were taken into account. The sample was formed by random selection using the technical procedure for calculating the selection step.

During the experimental work, two groups of respondents were selected by random sampling and their equalization was carried out. This approach made it possible to form experimental and control groups and to measure the entry level of students' linguistic competence formation through the use of innovative technologies in future professional activities.

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A pilot survey was conducted at the ascertainment stage, which showed that the majority of respondents (77.6%) had a positive attitude towards the introduction of innovative learning technologies into the educational process, but a small number of respondents (22.4%) were familiar with innovative technologies, their types and the essence of implementation in the educational process.

In the experimental group, we implemented a system of forming students' language competencies by using innovative technologies and started the formative stage of the experiment.

In the experimental group, several measures were implemented to implement the organizational and motivational component of the system, the content component, the procedural component, and the result-evaluation component.

The generalization of the results of the experimental study made it possible to conclude the effectiveness of the developed system of forming students' language competencies through the use of innovative technologies.

The statistical significance of the research results was determined using the Pearson chi-square test.

The research consisted of collecting data on the level of formation of students' language competencies by applying innovative technologies using research methods: testing, interviewing, and conversations.

The experiment was conducted at the National University of Life and Environmental Sciences of Ukraine, Pavlo Tychyna Uman State Pedagogical University. The conduct of the experiment is permitted by the scientific councils of the universities in order not to violate ethical considerations in institutions of higher education.

Results and Discussion

Analysis of the categorical apparatus of research and its importance for taking into account the system-technical and didactic factors of the formation of students' language competencies through the use of innovative technologies.

Nowadays, we are talking about the rapid formation of the network paradigm of digital and information and communication technologies. We take into account the fact that modern society and educational activities are gradually transforming into a new social structure that depends on the global digitalization of all relations and spheres. The formation of the information society and innovative human activity, in particular communication, is being technologized, promoting the formation of students' language competencies through the use of innovative technologies and didactically motivated transformation of Internet resources. Therefore, modern institutions of higher education gradually become a place for the introduction and creation of innovations, rational synthesis of means and resources, combination of practice and science to create a new scientific and educational field, and implementation of joint educational and scientific projects. The prospect of developing state-of-the-art educational programs and building personalized educational trajectories has appeared. The educational space increasingly uses non-traditional, along with traditional education, which can be explained by the growth of competencies for innovations that increase the effectiveness of the educational space and intensify the learning process. The variety, wealth, and constant search for effective new innovative technologies and means testify to the important role of the information space in the life of a modern person (Leshchenko & Zhovnir, 2020).

So, we are talking about the importance of digitalization of domestic educational services in general and the formation of students' language competencies through the use of innovative technologies, in particular. The dynamism of the introduction of innovative technologies into all spheres of life determines the constant improvement of educational activities. In modern education, the terms "innovative" and "innovation" refer to a certain aspect of the educational process and mean innovation. Innovative technologies embody developing original educational and educational goals, non-standard approaches, methods, and forms of education in the organization of educational activities of students of higher education (Kuchai et al., 2017). When studying an educational subject to achieve educational goals, the concept of "learning technology" includes in its content the sequence of actions of the student and the teacher, which involves the use of a certain set of means, forms, techniques, methods of learning to implement the content of the educational process. At the current stage of education development, programmed, problem-based, explanatory

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illustrative, and differentiated learning are considered the most common traditional technologies (Khrystych & Borysova, 2022).

For the formation of language competencies of students of higher education, the problem of the realization of the linguistic personality emerges, which, in turn, involves the harmonious development of skills in the main types of speech activity – reading, listening, writing, and speaking. This is the student's ability to understand written and oral speech; in compliance with the requirements of speech etiquette, and maintain a dialogue; it is expedient and correct to analyze texts, to express one's opinions; to independently create in various spheres of communication, dialogical and monological expressions of various styles, genres, types, speech, especially educational and professional; use varieties of listening and reading; to improve and evaluate own speech activity. In the formation of language competencies of students, it is important and necessary to use innovative technologies, rational use of ICT, in particular, educational electronic resources, bold experiments of innovative teachers with multimedia educational technologies 2:0 and 3:0, which will become a productive addition to traditional alternative visualizations (Leshchenko & Zhovnir, 2020).

Having conducted a comparative analysis of classes using innovative technologies and traditional classes, we say that the choice of learning technology is one of the most difficult and important elements of a teacher's educational activity. When implementing it, the teacher should always proceed from the fact that each of the innovative technologies is focused on a certain range of didactic tasks and at the same time does not exclude an indirect solution and technical conditions (provision of Internet coverage, power of the electrical network, availability of information and communication tools for learning, creation of home conditions of a comfortable workplace of the student, etc.). Therefore, it is necessary to creatively and reasonably evaluate the possibilities of a specific innovative learning technology, know its weaknesses and strengths, and on this basis choose the optimal combination of innovative technologies according to a specific student, a specific institution of higher education, or a specific group. It should be noted that training with the correct use of innovative technologies is qualitatively superior to classical education (Okoye et al., 2023).

Communicative modern distance learning space, which is necessary nowadays, offers various platforms: Moodle, Microsoft Teams, CiscoWebEx, Google Meet, Google Classroom, Zoom, Google Hangouts, Kohoot, etc.

Students of higher education can use any resource (X, educational websites, blogs, YouTube, podcasts, mobile applications, bookmarks, etc.), which at the same time are means of developing motivational activity of the student and are means of learning. Students of higher education can present the studied material as a scribe presentation, PowerPoint presentation, "mind map", "case method", "brainstorming", "open microphone", competition with practical tasks with their further discussion, role play, etc. When choosing that modern innovative technology, the teacher must take into account system-technical and didactic factors:

1) *system engineering:*

- Software;
- Information and communication support;
- Hardware (computers, servers, network equipment, video conferencing equipment, etc.);
- High-quality electronic educational resources;
- In case of technical problems – service support;
- Technical capabilities of universal access to electronic educational resources;

2) *didactic:*

- Compliance with the goals of the educational process;
- The degree of difficulty of the educational material;
- Informational content;
- The level of intellectual and creative abilities of higher education students;
- Availability of training facilities;
- The level of basic language training of higher education applicants;
- The rationality of spending time (Khrystych & Borysova, 2022).

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Podcasting technology is a promising means of learning.

In recent years, the terms "podcast" and "podcasting" have been used actively in the educational space. Podcasting is a modern multifaceted phenomenon that is at the stage of formation and development. The technological capabilities of the network became the prerequisite for its active development and emergence. The small number of generally accepted definitions and the discussed considerations of this phenomenon speak of the novelty and relevance of the problem of researching digital educational innovations (Collado-Ruano et al., 2020).

We consider the podcast to be one of the promising means of learning in the institution of higher education, as a regularly updated series of files that are published on the Internet at one address or a separate file, which makes it possible to implement the principles of individualization, communicative orientation, interactivity, authenticity, intensive use of the background knowledge of the acquirers higher education. We consider a podcast, the purpose of which is further repeated playback on modern gadgets – tablets, personal computers, smartphones, portable players, etc., to be a digital media file hosted on the Internet (Miotto et al., 2022).

The possibility of downloading and subscribing to the media files considered by educators indicates that it is thanks to the innovative education system that it is possible to apply the main principles of building a network of podcasts on the Internet. It is podcasts that help students develop their speaking skills; improve pronunciation skills; and make it possible to form the ability to perceive speech by ear. All this prepares future competitive specialists for professional communication. In addition, this innovation contributes to the selection of the necessary data from the information flow, the formation of skills in searching for the necessary information in various sources, their systematization, the transformation of a certain type of information into another (virtual to verbal) and vice versa, the selection of the main and basic information in the information message, and the definition of the presentation form information (Budnyk et al., 2022).

Podcasting technology actively helps in obtaining new information, mastering and operating the toolkit of student training, forming an adequate perception by the student of the higher axis of the content of the message, understanding the core goals of communications and the direction of the information flow, etc.

The rational and systematic use of educational records by a speech teacher will ensure the ability of those who have obtained a higher position to differentiate the secondary and the main in what they have heard, to divide the text into meaningful parts, to clearly define the topic of the message, to establish content parallels and logical connections, to outline the main idea of the message (Kuznetsova et al., 2023).

The development of auditory receptive skills of working with grammatical, phonetic, and lexical material will be strengthened by well-chosen podcasts, and most importantly, they will contribute to the ability to understand what is listened to.

The teacher, in the process of working with podcasts, should take into account the duration of the recording, and the pace of its reading by the author. Inconsistency with the specified level of language proficiency will significantly reduce the educational benefit of the technology used or reduce its effectiveness.

Information-rich short messages lasting up to 5 minutes, and discussions of certain issues lasting up to 30 minutes are the material of podcasts. Podcasts are accompanied by messages, links to articles, or text that contain their transcript or are tangential to the podcast topic.

The task of the teacher is to develop a system of innovative tasks and exercises for the podcast, which correlates with the level of mastery of the language studied by students of higher Ossetia.

Ranked work with the podcast is justified.

For the first set of exercises (preparation for listening to the material), tasks are offered that involve a preliminary discussion of the topic, working out active grammatical constructions, new vocabulary, etc., which will ensure monitoring of listening skills.

For the second set of exercises, it is worth appealing to the tasks (after listening to the files) that determine the level of mastery of grammatical constructions and processed verbal material.

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The most effective tasks for the formation of language competencies of students are through the use of innovative technologies.

We consider the following to be the most effective tasks for the formation of student's language competencies through the use of innovative technologies:

- Insert the missing words in the sentences after listening to the podcast;
- Write down the most used phrases and words in the podcast after listening to the podcast;
- After listening to the podcast, say what definitions it presents for the suggested phrases;
- Find the equivalent of certain words after listening to a podcast, in a parallel column, and others.

Creative tasks and exercises for the development of monologic and dialogic writing, speech, the ability to discuss, etc. are methodologically motivated and important for the formation of students' language competencies through the use of innovative technologies. The exercises of the post-text stage of the formation of students' language competencies through the use of innovative technologies are primarily aimed at the development of communication skills. Students can be asked to answer a question, complete a sentence, choose a statement that is incorrect or correct, choose illustrations for a podcast, match parts of a sentence, choose subheadings or a heading from the options provided, write a simple outline, take a multiple choice test, and more.

Podcasting technology can be used actively and productively, alternately or in parallel with common means of communication (chat, blog, forum, social networks, e-mail, etc.) both in extracurricular activities and in the educational process (Leshchenko & Zhovnir, 2020).

Tasks performed in classes at institutions of higher education using innovative technologies have the following advantages:

- Enable students of higher education to use all resources for acquiring knowledge;
- Provide positive motivation in the learning process;
- Diversify the forms of classes;
- Provide new opportunities for the formation of linguistic and professional skills, activate the process of mental processing of information;
- Develop the skills of independent work of students of higher education;
- Optimize the ratio of independent work and classroom work;
- Provide conditions for the automation of monitoring, correction, and assessment of knowledge of higher education students (Shuliak et al., 2022).

Multimedia software tools for the formation of language competencies of students.

To form students' linguistic competencies through the use of innovative technologies, primarily, it was carried out by using the possibilities of multimedia tools. Multimedia software made it possible to visualize abstract information and simulate complex real processes and situations due to the integration of graphic, text, sound, and video information.

In solving the problem of forming students' language competencies through the use of innovative technologies, a promising and effective approach to student training is the development of electronic educational aids, which provide various references to tables, applications, tutorials, schemes; graphic and textual material is accompanied by audio and video materials, which optimizes and facilitates the process of performing and understanding textbook tasks (Yemelyanova et al., 2023).

For the introduction of multimedia tools in the learning process, it is necessary to use appropriate technical support. For this purpose, based on the Moodle virtual learning environment, the e-learning system was used. A platform was created, which was used as a tool and a means of learning for solving professional tasks focused on innovative technologies of collaborative learning, and with the help of which, in the process of jointly solving educational tasks, training and mutual exchange of knowledge was organized.

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The platform allowed:

- It is convenient to present the entire educational course of the discipline;
- Providing students with higher education with educational aids in electronic format;
- Execution at a high level and in an interesting format of independent work;
- Innovative presentation of organizational material;
- Use of hyperlinks, audio materials, and visual aids;
- Implementation of qualified monitoring;
- Obtaining grades and recording them in the electronic journal (Lukyanova & Nikiforova, 2019).

Necessary prerequisites and main linguistic didactic tasks for assimilation of knowledge and formation of linguistic competencies of students through the use of innovative technologies, the solution of which is facilitated by the introduction of educational information technologies.

The necessary prerequisites for the assimilation of knowledge and the formation of language competencies of students through the use of innovative technologies include:

- A positive attitude to the process of forming students' language competencies through the use of innovative technologies (high pace of educational work, constant attention, interest in the subject);
- Processes of sensory direct familiarization with the material (interactive learning technologies, schematic visualization);
- The process of thinking (comprehension and understanding of the material, activation of abstract and concrete, artistic and conceptual perception, thinking);
- Retention of acquired information and memorization, the ability to reproduce material with the detection of individual speech abilities.

These prerequisites encourage active speech activity, and assimilation of students' linguistic theory; contribute to the emergence of learning motives, and ensure the development of linguistic personality. The introduction of educational information technologies significantly contributes to the realization of prerequisites (Correa Cruz et al., 2017).

Student youth today feel free to use the Internet, armed with the most modern mobile communication devices that combine the functionality of a personal computer and a mobile phone, and easily navigate various search programs. Therefore, a necessary condition for the formation of language competencies of students in higher education at the current stage is the use of various means of modern information and communication technologies in classes.

We define the necessary linguistic and didactic tasks, for the solution of which it is important to introduce information technologies into the process of forming students' language competencies:

1) Increasing the motivation to learn the language;
2) Increasing students' activity in the process of language learning;
3) Formation of stable motivation of cognitive activity with the aim of formation of language competencies of students;
4) Development of student's abilities and readiness for independent education;
5) Formation and development of skills and abilities in all types of speech activity;
6) Intensification of the educational process;
7) Helping students develop self-esteem;
8) Individualization of education to form students' language competencies (Borysenko et al., 2022).

Language learning with the use of information technologies includes:

- Electronic encyclopedias and dictionaries, text computer editors;
- Professionally-oriented language material;
- Language learning tools (programs and online applications) aimed at studying pronunciation, phonetics, vocabulary, sentence analysis, and grammar;

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- An online environment for the formation of language competencies of students through communication between students of higher education and with the teacher through social networks, e-mail, video conferences, etc.);
- Game forms of education (Romanukha et al., 2019).

The role of the graphic interface in the formation of language competencies of students.

Using a smartphone or a computer, a student processes large volumes of information through the graphic interface of the screen and can no longer imagine his activity in another mode. Over time, a person transfers the laws of information circulation and the principles of work in the information environment to his being. The projection of the graphic interface becomes for the student a code for understanding the work of the educational environment, a code for understanding any information in the world (Puhach et al., 2021).

Reasons for the rapid spread of graphical interface principles:

- Schematism;
- Semiotic coding of information;
- Clustering of information placement.

A graphical interface is a type of interface that contains more complex structured information and in which interface elements (menus, buttons, lists) are presented in the form of graphic images.

The advantages of the graphical interface in:

- Friendliness and versatility in terms of updating,
- Ease of information perception;
- Systematization of information,
- The possibilities of choice, taking into account the psychological characteristics of the student of higher education, a wide palette of symbols, and color gamut.

The essence, principles, and laws of usability. It is necessary to observe the principles and laws of usability.

Consider the following provisions:

1) The learner uses the product for greater productivity;
2) Usability means the need to focus precisely on the user who seeks to perform tasks and decides for himself whether the product is of high quality.

Usability focuses on creating only high-quality user experience and begins with a philosophy – the belief that the project presented to the user of the educational space meets his needs. Certain methods and technology are needed to achieve the real goal of usability, which chooses the right methods to solve the problem, takes into account the circle of people who use the product and answers questions about their goals and needs (Hepp et al., 2015). Usability is a multi-component concept and is associated with five features:

1) Efficiency,
2) Learning ability,
3) Satisfaction,
4) Memorization,
5) Errors.

So, usability, a measurable characteristic that is present in all products to varying degrees, describes ways of effective interaction of the user with the product.

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Introduction of STEM technologies, gamification, and virtual blackboard in education to form students' language competencies.

Formation of a competitive specialist, one of its most productive ways is the implementation of STEM technologies in education to form students' language competencies. This educational approach involves active use of the latest technologies, integration of various sciences, and movement from practice to theory. It is appropriate to use specially created tools during the study of individual disciplines in the educational process of a higher school (Tkachenko, 2015). An example could be GeoGebra, a user-friendly and feature-rich math visualization program that has “become the leading provider of dynamic mathematics software used to support science, technology, engineering, and mathematics (STEM) education and innovation in teaching and learning around the world” (Pabon Gomez et al., 2023). Students of higher education have the opportunity to review the projects of others and develop their resources.

We have the opportunity to use basic programs that are available on smartphones during STEM classes. To perform exercises in rhetoric, you will need a calculator (it will be needed in various statistical calculations), a timer and a voice recorder, and a camera (for capturing information in the form of video and photos, etc.); can become a convenient draft of notes in the phone (during the development of projects, creative group work, etc.).

Direct inclusion and binary lectures with students and teachers of other institutions of higher education, online lectures from another city or even country, during the presentation of the material a comment of a narrow-profile specialist – are gaining popularity in higher education and "in such cases, one cannot do without Skype. Currently, educational publications accompany separate sections or fragments of text with QR codes, which require a code scanner to work with" (Romanukha et al., 2019).

Computer games remain the most popular way of acquiring knowledge, recreation, and formation language skills for students – gamification of education, which, to diversify the educational process and increase the interest and activity of students, consists in the use of various game elements.

Let's name the most effective specific characteristics of computer games that attract students to the educational process:

1) Interesting design, which is typical for games;
2) Transparency of progress, unexpected rewards, accrual of bonuses;
3) Level structure, gradual transition from simple to complex, possibility to improve the result at any time and rework the game block;
4) Win-win nature of educational games;Construction of tasks to activate complex and associative thinking;
5) Conditional competition;
6) Shade of entertainment.

The game space is quite comfortable for students, it helps stimulate creativity, does not cause them questions and difficulties, increases general interest, and encourages complex thinking (Tkachenko, 2015). One of the forms of work with students in higher education is the use of a virtual whiteboard – created for placing images, notes, visual materials, and comments and working with them in "live" mode. The most popular platforms are WikiWall, Padlet, Educreations, and Scrumblr. The virtual board can become a structural core, and not just a tool for presenting information, a component of the lesson. You can offer students to pick practical examples from the theoretical material and place on the board any theoretical material in various information formats: videos, photos, audio tables, diagrams, links, etc., which makes it possible to work with one board during the lesson, gradually changing and adding components (Atencio et al., 2021).

An experimental study of the formation of students' language competencies through the use of innovative technologies.

During the experimental work, two groups of respondents were selected by random sampling and their equalization was carried out. This approach made it possible to form experimental and control groups and to measure the entry level of students' linguistic competence formation through the use of innovative technologies in future professional activities.

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A pilot survey was conducted at the ascertainment stage, which showed that the majority of respondents (77.6%) had a positive attitude towards the introduction of innovative learning technologies into the educational process, but a small number of respondents (22.4%) were familiar with innovative technologies, their types and the essence of implementation in the educational process.

In the experimental group, we implemented a system of forming students' language competencies by using innovative technologies and started the formative stage of the experiment.

In the experimental group, several measures were implemented to implement the ***organizational and motivational component*** of the system, aimed at stimulating the respondents' interest in the formation of students' language competencies and the practical significance of innovative learning technologies; formation of the need for the introduction of innovative experience; comparison of motives with aspirations, etc., and appropriate material and technical support for the implementation of innovative technologies in the educational sector is provided.

The didactic system of forming students' language competencies through the use of innovative technologies provided for the implementation of a ***content component*** that contributed to providing future specialists with a system of knowledge and revealed the essence of innovative learning technologies, their types, didactic opportunities, etc.

The ***procedural component*** ensured the involvement of students in the creation of innovative projects, the procedural component of the formation of students' linguistic competencies through the use of innovative technologies, the familiarization of future specialists with the experience of implementing innovative educational technologies, the inclusion of respondents in research activities, etc.

The ***result-evaluation component*** of the system contributed to the development and definition of diagnostic procedures for correction and evaluation of the educational process.

The formative stage of the experiment made it possible to identify positive dynamics for the future activity of the formation of students' language competencies through the use of innovative technologies. As a result, it made it possible to form students' readiness to use technological innovations.

EG respondents showed a high level – 31.62% and a sufficient level – 53.01%.

The CG respondents showed, respectively: a high level – 5.58% and a sufficient level – 7.44%.

The generalization of the results of the experimental study made it possible to conclude the effectiveness of the developed system of forming students' language competencies through the use of innovative technologies.

The statistical significance of the research results was determined using the Pearson chi-square test.

The research consisted of collecting data on the level of formation of students' language competencies by applying innovative technologies using research methods: testing, interviewing, and conversations.

The experiment was conducted in higher pedagogical educational institutions and included a total of 536 respondents of the educational and qualification levels "bachelor" and "master".

The results of diagnosing the qualities of the formation of students' linguistic competencies through the application of innovative technologies of master's students indicate that during the years of study, students in higher education institutions have gained experience in the use of literary norms of the modern language in pedagogical discourse, experience in professional communication. Master's degree students have developed abilities for thorough scientific research, and creative personal qualities. According to the data of testing, interviews, and conversations, none of the master's students showed a low level of formation of students' language competencies through the use of innovative technologies, compared to undergraduate students, where we observe – 6.7%.

And the quality of knowledge, abilities, and skills of masters was 73.3%, and their success rate was 100% (compared to future bachelors – 65.8% and 93.3%, respectively).

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So, the final stage of monitoring made it possible not only to diagnose but also to correct the process of forming students' language competencies through the use of innovative technologies.

We agree with the opinion of K. Klymova (2010) that the strategy for the development of higher education "presupposes the improvement of the quality of professional knowledge of students as tomorrow's specialists, competitive on the labor market and adapted to the modern conditions of the globalized space". Graduates of universities in which a high level of students' linguistic competencies have been formed through the use of innovative technologies have a significant advantage in employment and are in demand in the labor market.

We have found out that scientists have proven the importance of cooperation and assessment methods and have singled out the factors preferred by students that contribute to the intensification of the educational process in the context of modern learning. Scientists consider it necessary to use the latest information technologies in the educational process, note the need to increase the role of electronic learning tools, and focus attention on the combination of interactive teaching methods with the use of technical learning tools (Internet, multimedia, computer networks). The theories and conclusions presented in the reviewed literature, both theoretical and experimental, made it possible to implement a scientific approach to the means of forming students' language competencies through the use of innovative technologies in the education process.

We have revealed the significance of podcasting technology for the educational process; the most effective tasks for the formation of students' language competences through the use of innovative technologies are singled out; the essence of multimedia software tools for the formation of students' language competences is revealed; the necessary preconceptions and main linguistic didactic tasks were identified for the purpose of assimilation of knowledge and formation of language competences of students of various specialties through the use of innovative technologies, the solution of which contributes to the introduction of information technologies of education into professional activity; the role of the graphic interface in the formation of language competences of students of the higher school is shown; the essence, principles, laws of usability are disclosed; the need to introduce STEM-technologies, gamification, virtual blackboard into the educational process with the aim of forming language competences of students of higher education institutions is emphasized.

The generalized results of our experimental study are related to the problem presented in the introduction. After all, education today is based on a creative combination of innovative and traditional forms, methods, means, and methods of learning. And by applying various learning technologies, the future specialist, of any specialty, will be able to approach the organization of professional activities creatively, in specific conditions, and choose exactly the technology that will ensure the assimilation of knowledge, throughout life, the best and will contribute to the formation of skills and abilities with minimal expenditure of time and effort, which makes him a multidisciplinary specialist.

In the process of forming students' linguistic competencies through the use of innovative technologies, educators, by the forms of education, have to experiment with innovative communication means of education, radically changing the forms and methods, methods and methods of interaction of higher education students with the informational content of the educational component. This approach makes it possible to conclude the effectiveness of the developed system of forming students' language competencies, which is necessary for every person, that is, intended for the education of multidisciplinary specialists who prepare institutions of higher education through the use of innovative technologies, which was planned for the study.

The practical significance of the research results is: in the application of theoretical provisions and conclusions to future ways of using technological innovations in the process of learning foreign languages; in the implementation of several measures related to the implementation of the organizational and motivational component of the system, aimed at stimulating the interest of respondents in the formation of language competences of students and the practical significance of innovative learning technologies; in the implementation of various components that contributed to providing future specialists with a system of knowledge and revealed the essence of innovative learning technologies, their types, didactic possibilities, etc.

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The results can be used in the process of professional training of future foreign language teachers in higher education institutions, for the preparation of scientific and methodological support for the use of ICT by students of various specialties in higher education, in the self-educational activities of students and teachers of higher education institutions

Conclusions

An analysis of the categorical apparatus of the study was made and its importance for taking into account the system-technical and didactic factors of the formation of students' language competencies through the use of innovative technologies was shown.

The significance of podcasting technology for the educational process is revealed; the most effective tasks for the formation of students' language competencies through the use of innovative technologies are singled out; the essence of multimedia software tools for the formation of students' language competencies is revealed; the necessary preconceptions and main linguistic didactic tasks were identified for assimilation of knowledge and formation of students' linguistic competences through the use of innovative technologies, the solution of which contributes to the introduction of educational information technologies into professional activity; the role of the graphic interface in the formation of student's language competences is shown; the essence, principles, laws of usability are disclosed; the need to introduce STEM-technologies, gamification, virtual blackboard into the educational process to form students' language competences is emphasized.

During the experimental work, two groups of respondents were selected by random sampling and their equalization was carried out. This approach made it possible to form experimental and control groups and to measure the entry level of students' linguistic competence formation through the use of innovative technologies in future professional activities.

In the experimental group, we implemented a system of forming students' language competencies by using innovative technologies and started the formative stage of the experiment.

In the experimental group, several measures were implemented to implement the organizational and motivational component of the system, the content component, the procedural component, and the result-evaluation component.

The generalization of the results of the experimental study made it possible to conclude the effectiveness of the developed system of forming students' language competencies through the use of innovative technologies.

The statistical significance of the research results was determined using the Pearson chi-square test. The research consisted of collecting data on the level of formation of students' language competencies by applying innovative technologies using research methods: testing, interviewing, and conversations.

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Postcolonial perspectives in the 21st Century: a critical analysis of modern theories and methodologies

Постколоніальні перспективи у вивченні культурних та соціальних явищ: аналіз сучасних теорій та методологій

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Written by:
Nataliia Shakun[1]
https://orcid.org/0000-0003-2761-9965
Oleksii Kolievatov[2]
https://orcid.org/0000-0001-9418-7897
Maryna Olkhovyk[3]
https://orcid.org/0000-0003-2789-9194
Vitalitiy Goletc[4]
https://orcid.org/0000-0001-9308-1361
Nataliia Shcherbyna[5]
https://orcid.org/0009-0002-5573-0505

Abstract

The article is devoted to the analysis of modern theories of postcolonial perspective and methodologies applied for their research. The aim of the research is to analyze modern theories and methodologies in studying cultural and social postcolonial phenomena. Also, this research aims to outline methodologies used to investigate postcolonial theories; to introduce practical applications of postcolonial studies across cultural and social dimensions. The research is predominantly interdisciplinary and implies the use of a range of theoretical research methods (theoretical analysis of literature and scientific texts, historical research, discourse analysis, comparative analysis as well as synthesis and interpretation). The article provided the recent interpretation of the concepts of colonialism and

Анотація

Стаття присвячена аналізу сучасних теорій постколоніальних перспектив та методологій, які використовуються для їх дослідження. Метою дослідження є аналіз сучасних теорій і методологій у вивченні культурних і соціальних постколоніальних явищ. Завданнями дослідження є: окреслити методології, які використовуються для аналізу постколоніальних теорій, а також представити практичне застосування постколоніальних студій у культурному та соціальному вимірах. Розвідка є переважно міждисциплінарною і передбачає використання низки теоретичних методів дослідження. Вони включають теоретичний аналіз літератури та наукових текстів, історичний аналіз, аналіз дискурсу, порівняльний аналіз, а також синтез та

[1] PhD, Associate Professor, Head of Department of Philosophy and Social-Humanitarian Sciences, Chernihiv Polytechnic National University, Ukraine. WoS Researcher ID: GNK-0300-2022
[2] PhD in History, Associate Professor of the Department of Philosophy and Social Sciences, Educational-Scientific Institute of Economics, Chernihiv Polytechnic National University, Ukraine. WoS Researcher ID: G-7327-2016
[3] PhD, Associate Professor, Department of Philosophy and Cultural Studies, Faculty of Philology, T.H. Shevchenko National University "Chernihiv Colehium", Ukraine. WoS Researcher ID: GPP-4140-2022
[4] PhD in History, Associate Professor, Department of Law, Philosophy and Political Science, T.H. Shevchenko National University "Chernihiv Colehium", Ukraine. WoS Researcher ID: KTI-0406-2024
[5] PhD in History, Associate Professor of the Department of Pedagogy and Humanitarian Disciplines, The Academy of the State Penitentiary Service, Ukraine, Ukraine. WoS Researcher ID: KHU-4191-2024

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postcolonialism. It was found that the mid-20th century marked a shift in focus from colonial to postcolonial studies. The theoretical framework of postcolonial studies is analyzed from diachronic and synchronic tiers. The specifics of six main theories were revealed (postcolonial theory, critical theory, site-specific theory, decolonial theory, and creolization theory). They offer both strengths and weaknesses when analyzing the impacts of colonialism. The methodology of postcolonial studies is usually interdisciplinary and prefers examining the impacts of colonialism based on literary sources and cultural analysis. Other methodologies include: historical research, textual analysis, ethnographic methods, interviews, observations, and comparative analysis. The implications include improving the understanding of the existing socio-political and economic structure and developing effective strategies to overcome the contemporary issues that emerged as a result of colonialism and postcolonialism.

Keywords: postcolonialism, methodology, hegemony, stereotype, creolization, globalization.

інтерпретацію для формулювання висновків. У статті представлено визначення понять колоніалізму та постколоніалізму. Встановлено, що у середині XX століття відбулася зміна фокусу з колоніальних на постколоніальні дослідження. Теоретичну основу постколоніальних студій проаналізовано на діахронічному та синхронічному рівнях. Розкрито специфіку шести основних теорій (постколоніальна теорія, критична теорія, просторова теорія, теорія деколонізації та теорія креолізації). З'ясовані як переваги так і недоліки цих теорій. Методологія постколоніальних студій зазвичай є міждисциплінарною та вивчає вплив колоніалізму на основі аналізу літературних джерел та культурного аналізу. Інші методи включають: історичний аналіз, текстовий аналіз, етнографічні методи, інтерв'ю, спостереження та порівняльний аналіз. Практичне значення дослідження стосується вдосконалення підходів до аналізу існуючої соціально-політичної та економічної структури, розробки ефективних стратегій для подолання сучасної проблеми, які виникли в результаті колоніалізму та постколоніалізму.

Ключові слова: постколоніалізм, методологія, гегемонія, стереотип, креолізація, глобалізація.

Introduction

Colonialism as the maintenance of military, political, social, economic, and cultural domination over people by a foreign power has been located in the history of modernity and it was applied to many countries or geographical regions and socioeconomic or sociocultural situations (Chiorean, 2022). Since colonialism leads to the suppression and marginalization of indigenous cultures and identities, postcolonialism is an intellectual and cultural movement that critically examines and challenges the enduring impacts of colonialism, advocating for the reclaiming and revitalization of indigenous cultures and the addressing of social inequalities created by colonial histories (Bhandari, 2023; Green, 2023). While colonialism enforced cultural assimilation and social hierarchy to benefit the colonizers, postcolonialism seeks to dismantle these imposed structures, promoting cultural diversity, social justice, and the empowerment of formerly colonized peoples (Carey & Silverstein, 2020).

Colonial studies initially emerged from the colonial chronicles and documentation of geography, natural history, and indigenous cultures of the Americas by Gonzalo Fernández de Oviedo y Valdés (1478-1557) and José de Acosta (1539-1600). During the colonial period, literature often celebrated the colonial initiative. Early colonial studies included ethnographic and anthropological research conducted by Europeans in their colonies (Ma, 2023). These studies often reinforced stereotypes and justified colonial rule by portraying colonized peoples as "primitive" or "savage" (Mechkarini et al., 2023) Works Garcilaso de la Vega, El Inca (1539-1616), Samuel de Champlain (1574-1635), John Smith (1580-1631), Jean de Brébeuf (1593-1649), Jonathan Carver (1710-1780), and Alexander von Humboldt (1769-1859) depicted colonies as exotic lands to be civilized and exploited (Domínguez & Luoma, 2020). They referred to cultural assimilation, and political control as well (Ma, 2023; Nesterova, 2024).

The mid-XX century saw widespread decolonization, as many African, Asian, and Caribbean countries gained independence from the European colonial rule. This period marked a shift in focus from colonial to postcolonial studies. Decolonization was driven by nationalist movements, resistance to colonial rule,

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aspirations for sustainable leadership, and demands for self-determination (Abdel-Zahra Hassan et al., 2023). Key figures like Mahatma Gandhi and Kwame Nkrumah led these movements. In the 1950s and 1960s, Frantz Fanon's works provided a critical analysis of the psychological and cultural effects of colonialism. He emphasized the need for decolonization and the reclamation of indigenous identities (Sajed & Seidel, 2019). At the same time, Edward Said's "Orientalism" (1978) criticized Western representations of the East and argued that colonial discourse constructed the Orient as the "Other" to justify domination. This book laid the groundwork for postcolonial theory (Labelle, 2022). And Homi K. Bhabha introduced concepts like hybridity, mimicry, and the "Third Space" to explain the complex cultural interactions in postcolonial societies (Bhandari, 2022). Gayatri Chakravorty Spivak's ideas highlighted the marginalization of subaltern voices in colonial and postcolonial discourse (Piu, 2023).

Currently, postcolonial studies play a significant role in modern science since they critically examine the historical and ongoing impacts of colonialism on knowledge production and the dissemination of scientific theories. Ma (2023) denotes that postcolonial studies began as a movement against imperialism by directly addressing the consequences of colonial rule and advocating for the voices and experiences of colonized people. Some findings admit that postcolonial scholars advocate decolonizing knowledge and inclusion of non-Western epistemologies into modern scientific discourse (Abdi, 2020). This involves valuing traditional ecological knowledge, alternative medicinal practices, and other forms of understanding the natural world that have been marginalized by Western scientific paradigms (Soares et al., 2023; Pant et al., 2022). Additionally, postcolonial perspectives uncover ethical considerations and social justice as well as postcolonial scholars emphasize the importance of conducting research that benefits marginalized communities, avoids exploitation, and respects cultural differences (Pedroso et al., 2023). This approach stands for science that is inclusive, equitable, and responsive to the needs of diverse populations.

There are roughly 162 postcolonial states in Africa, Asia, the Caribbean, the Pacific, and Latin America that were colonized and have since gained independence (Albrecht, 2020). Eastern European countries such as Albania, Estonia, Latvia, Ukraine, Poland, Hungary were under Soviet influence or control during the Cold War and experienced the domination of the Soviet Union (Kołodziejczyk & Huigen, 2023). That is why postcolonial perspectives are crucial in modern scientific discourse because they describe cultural and social phenomena through the lens of foreign power dominance. And postcolonial analysis helps better understand how colonial legacies influence contemporary social structures, identities, and relationships. Moreover, this approach promotes a more inclusive and diverse understanding of global issues. Obviously, the analysis of modern theories and methodologies of postcolonial studies enriches the existing academic researches and establishes social justice by addressing historical injustices and advocating for more equitable future outcomes.

The current research is aimed at studying the specifics of six main theories were revealed such as postcolonial theory, critical theory, site-specific theory, decolonial theory, and creolization theory. Initially, the theoretical framework is presented where main concepts related to postcolonialism are revealed and the tiers of the research – diachronic and synchronic – are presented. The section Methodology describes interdisciplinary approach to the research and the methods used to achieve the research aim and objectives. The section Results and Discussion draws the attention towards the detailed explanation of modern theories in postcolonial perspectives as well as substantiated their implications within the scientific discourse. Here, the comparative analysis of theories related to contemporary postcolonial studies was conducted as well. In conclusion, main findings are presented through the role of postcolonial studies in modern science.

Theoretical Framework

Investigating postcolonialism and its impact of colonialism on societies, cultures, and identities, led us to consider the theoretical framework of postcolonial studies from diachronic and synchronic tiers (Hantgan-Sonko, 2020; Loakes, 2022). A diachronic tier involves analyzing the historical development and evolution of colonial and postcolonial conditions over time (Bultmann, 2023; Hiltunen & Loureiro-Porto, 2020). This approach examines the temporal dimensions of colonialism, its enduring legacies, and the processes of decolonization and postcolonial reconstruction (Bartiza & Zrizi, 2022). Additionally, the recent findings show that diachronically postcolonial studies concern colonial institutions and structures, the organization of colonial governments, legal systems, and bureaucracies designed to maintain control and extract resources (Ohlsson & Mitchell, 2023). This tier also embraces cultural hegemony intended to assimilate and dominate colonized populations (Yu, 2022). It was found that diachronic postcolonial studies are aimed at the analysis of resistance and anti-colonial movements, post-independence challenges and

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neocolonialism (Zhang, 2023). Contemporary postcolonial issues include the impact of globalization on postcolonial societies, particularly cultural hybridization, migration, and transnational networks, national identity and cultural representation, and the politics of memory (Ahmad, 2022; Bartiza & Zrizi, 2022). Therefore, a diachronic framework in postcolonial studies allows for a comprehensive understanding of the temporal dynamics of colonial and postcolonial processes. It emphasizes the importance of historical context in analyzing contemporary postcolonial issues as well.

Stuart Hall, Achille Mbembe, and Leela Gandhi relied on diachronic approach to postcolonial studies. For instance, Stuart Hall explored how historical processes of colonization and migration shape contemporary cultural identities (Guermit et al., 2023). Achille Mbembe, the author of the book "On the Postcolony", analyzed the legacies of colonialism and the evolution of power and violence in postcolonial contexts (Adebanwi & Orock, 2022). In "Postcolonial Theory: A Critical Introduction," Leela Gandhi provided a comprehensive overview of postcolonial thought, including historical developments and the contributions of key theorists (Rana, 2021). Her work bridges the historical and contemporary aspects of postcolonial studies.

In contrast, a synchronic tier focuses on the analysis of postcolonial conditions at a specific moment in time rather than tracing their historical development (Loakes, 2022). This framework examines how various elements of culture, society, and politics interact simultaneously within a given temporal context, highlighting the complexities and dynamics of postcolonial realities as they exist in the present (Hantgan-Sonko, 2020). In other words, a synchronic tier of postcolonial studies characterizes postcolonial conditions which exist in the present moment (Hiltunen & Loureiro-Porto, 2020). Synchronically, postcolonial studies deal with contemporary cultural practices, community dynamics, including family structures and social networks, current political contexts, as well as economic conditions, development strategies, and challenges facing postcolonial states (Rana, 2021). According to Sadiq & Tsourapas (2021), synchronic approach is used to describe transnational connections, focusing on issues such as migration, diaspora, and globalization. When authors explain the simultaneous interactions of cultural, social, political, and economic elements, they interpret the complexities and dynamics of contemporary postcolonial phenomena.

Presently, synchronic postcolonial studies are represented by ideas of cultural hybridity (Azada-Palacios, 2022). Race and ethnicity are central to social hierarchies and interactions in postcolonial societies (Khattak & Khan, 2024). The recent studies explore how these identities are constructed and contested (Azada-Palacios, 2022). Moreover, colonial legacies influence contemporary gender roles and relations (Lamoureaux & Rottenburg, 2021). The feminist movement in postcolonial studies focuses on examining the intersections of gender, race, class, and colonial history. It addresses the unique experiences of women in postcolonial contexts, emphasizing the ways in which colonialism and patriarchy have shaped their lives and professional activity. A number of works are devoted to diaspora and migration exploring the experiences of diasporic communities and contemporary migration patterns (Ahmad, 2022). Other synchronic issues include long-term environmental consequences of colonialism (Domínguez & Luoma, 2020) and decolonization of education systems (Pedroso et al., 2023). The most prominent authors (Homi K. Bhabha, Gayatri Chakravorty Spivak, Ngũgĩ wa Thiong'o, Chinua Achebe, Paul Gilroy) in this field offer critical thoughts that help to analyze the complexities of postcolonial societies in the present moment (Abdullahi, 2022; Bhandari, 2022; Piu, 2023).

In postcolonial studies, both diachronic and synchronic tiers are important to analyze culture and society comprehensively (Hantgan-Sonko, 2020). The diachronic approach focuses on historical developments and transformations, tracing the evolution of cultural, social, political, and economic structures from the colonial period to the present. This approach allows scholars to understand how colonial legacies have persisted and influenced contemporary conditions. And the synchronic approach concentrates on examining postcolonial conditions at a specific moment in time. Together, these approaches offer a holistic understanding of postcolonial culture and society, and help to outline modern theories and methodologies in postcolonial studies.

Proceeding from this, the article is aimed to analyze modern theories and methodologies in studying cultural and social postcolonial phenomena. This research aims to address the following research objectives:

- To present the main theories in studying cultural and social postcolonial phenomena;
- To outline methodologies used to investigate postcolonial theories;

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- To introduce practical applications of postcolonial studies across cultural and social scientific dimensions.

Methodology

The research is predominantly interdisciplinary and is located at the intersection of literature, history, anthropology, sociology, and cultural studies. Logically, this implies the use of a range of theoretical research methods to achieve the research aim and objectives. Firstly, theoretical literary analysis was used that is a common method for studying postcolonial literature. It focuses on themes, narrative techniques, and the representation of colonial experiences. Additionally, we examined how the authors from colonized regions use literature to criticise colonialism and declare new cultural identity. Secondly, historical research was used to analyze historical documents, archives, and records to understand the historical context of colonial impacts. This method uncovered marginalized voices that have been excluded from dominant academic narratives.

Thirdly, discourse analysis examined how language shaped the power dynamics and social structures in postcolonial societies. We analyzed texts, speeches, and media representations to understand the ideologies of postcolonialism. Similarly, visual and media analysis was conducted to understand how colonialism and postcolonialism are portrayed and contested in films, TV shows, cartoons, documentaries, performances, and media materials. Fourthly, comparative analysis was used to examine similarities and differences between colonial and postcolonial experiences across different regions, cultures, and historical periods. It included comparative literature, comparative history, comparative cultural studies, and comparative theory to compare theoretical frameworks, theories and methodologies from postcolonial perspective. Fifthly, the special attention was paid towards interdisciplinary instruments to provide a comprehensive understanding of colonial and postcolonial experiences. This includes incorporating ideas from anthropology, sociology, political science, and cultural studies.

Sixthly, the methods of synthesis and interpretation were used to formulate the conclusions. In particular, synthesis helped to combine the findings from various sources, such as historical documents, ethnographic observations, literary texts, and quantitative data, to identify the patterns of postcolonial theories. At the same time, the method of interpretation involved critical analysis of these synthesized outcomes to understand their broader significance and connect them to existing theoretical frameworks within historical, cultural, and political contexts.

The above-mentioned research instruments contributed to evaluation of the strengths and weaknesses of the existing theories and enabled to understand how they have been applied in postcolonial studies. The findings will likely allow to explain the historical events such as colonization, or independence movements objectively and to draw the responses to the contemporary global issues caused by colonialism. Using diverse methods to conceptualize theoretical arguments and assess their implications contributed to the understanding of postcolonial conditions significantly. Further, proposed theoretical frameworks may enable the development of new contribute theories and approaches to address the gaps in the existing literature that will respond to the emerging postcolonial realities.

The theoretical review of postcolonial perspectives in studying cultural and social phenomena was conducted in five stages:

- Identification of the research aim and objectives to guide the selection of the relevant postcolonial literature;
- Literature search which required the comprehensive analysis of academic databases, journals, books, and other sources on the basis of the following keywords related to postcolonialism (colonialism, decolonization, neocolonialism, hybridity, postcolonial theory, culture, cultural hegemony);
- Data extraction from the selected literature and its analysis to draw the key themes, concepts, and theoretical frameworks related to postcolonialism;
- Synthesis and interpretation of the findings from the literature to develop an integrated overview of the existing theoretical landscape in postcolonial studies. At the same time, critical evaluation of the strengths and weaknesses of the existing theories in postcolonial studies helped to consider their implications in the academic discourse;
- Summarizing the key findings of the theoretical review and drawing the main conclusions to advance knowledge in the field.

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Results and Discussion

In postcolonial studies, several theoretical frameworks have been developed to analyze and understand the peculiarities of colonialism through cultural and social phenomenon, the dynamics of resistance, and the complexities of identity (Chiorean, 2022; Rana, 2021). The recent findings show that there are six main theories (figure 1). It is worth mentioning that these theories are not mutually exclusive and they are often used in combination to provide a comprehensive understanding of postcolonial phenomena.

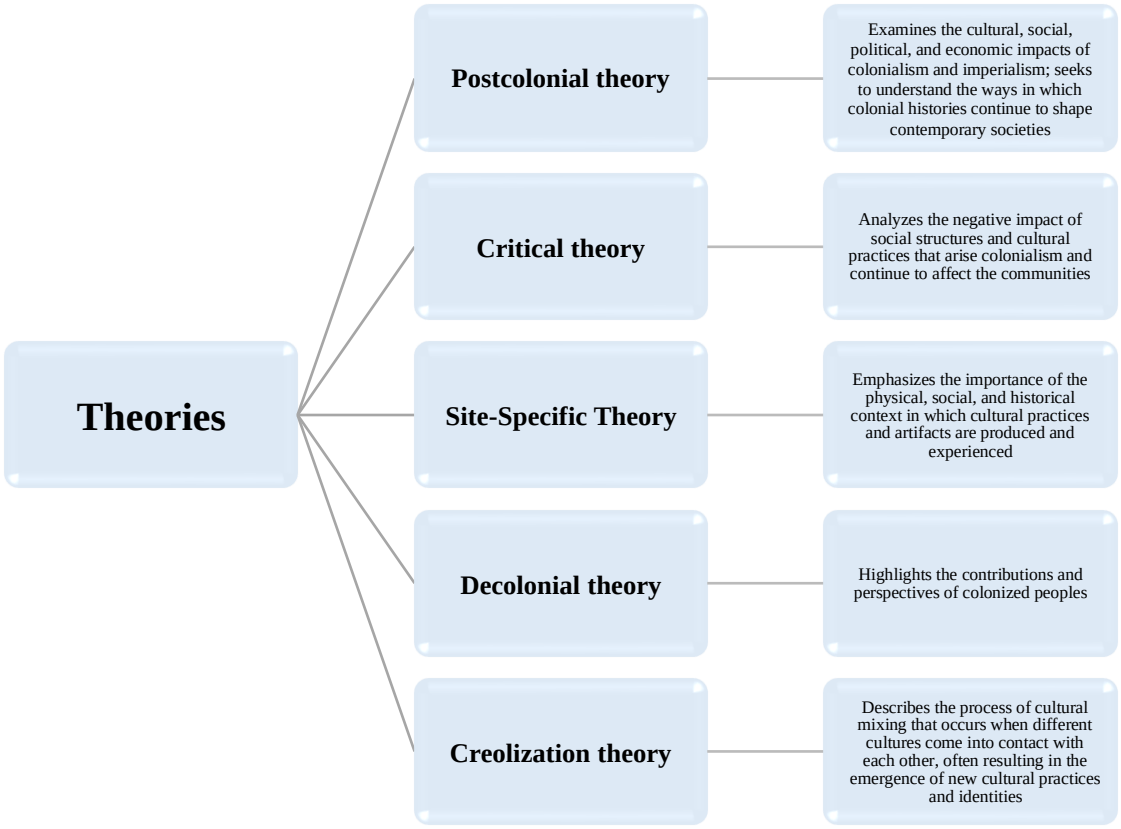


Figure 1. Interpretation of modern theories in postcolonial perspectives.
Source: authors' development.

Postcolonial theory and the problem of culture, identity, and globalization

Postcolonial theory offers a framework for analyzing the ways in which colonial histories and their impacts shape the contemporary societies, cultures, and identities (Rana, 2021). It examines the negative effects of colonialism on the cultural and social structures of formerly colonized regions (Bhandari, 2022). The findings show that postcolonial theory occupies a central place in postcolonial and colonial discourse (Parashar & Schulz, 2021; Rana, 2021). One of the central concepts in postcolonial theory is hybridity, which refers to the mixing and blending of cultures resulting from colonial encounters (Azada-Palacios, 2022). This creates hybrid identities that cannot be easily categorized into binary oppositions of colonizer and colonized. These identities incorporate elements from both indigenous and colonial influences. In this context, the theory examines the experiences of diasporic communities who maintain connections with their homelands while navigating new cultural and social environments (Sadiq & Tsourapas, 2021). It explores how migration and displacement impact identity formation and cultural expression (Consterdine, 2023).

Drawing on Antonio Gramsci's concept of hegemony, postcolonial theory investigates how colonial powers maintained control not just through physical domination but through cultural and ideological means (Salem, 2020). It examines how these hegemonic practices continue to influence contemporary cultural and social norms. Resistance movement as a component of postcolonial theory is understood as multifaceted and dynamic response to the oppression and domination experienced under colonial rule and its negative effects

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in the postcolonial era (Bhandari, 2022). This movement usually uses a wide range of strategies, from armed struggle to cultural revival, aimed at reclaiming autonomy, dignity, and identity.

The special attention is paid towards globalization as well (Das & Roy, 2022). According to postcolonial theory, globalization is understood as a continuation of colonial and imperial processes, but in a new form (Tah, 2021). It involves the expansion and intensification of economic, political, cultural, and social connections on a global scale, which often bring inequalities established during the colonial era. Consequently, globalization leads to increased migration, both voluntary and forced, as people move in search of better opportunities or escape from conflict affected areas and economic hardship (Ahmad, 2022). According to some findings, globalization facilitates the spread of Western knowledge systems, often at the expense of indigenous knowledge and epistemologies (Kusumawardani, 2021). Therefore, postcolonial theory criticizes this epistemic dominance and advocates for the recognition and integration of diverse ways of science formation.

Critical theory and postcolonialism

Critical theory is closely connected to postcolonial theory and focuses on the understanding of negative impacts of colonial histories and the resistance to these impacts (Felsch, 2023). Bhandari (2022) insists that critical theory deals with investigation of establishment and further maintenance of dominance over colonized societies. Since colonial powers often imposed their languages and suppressed indigenous languages, leading to the loss of cultural and linguistic diversity, colonial language policies is a significant area of study. In regions with multiple languages, colonial states sometimes promoted bilingualism, particularly in education, to ensure that citizens were proficient in both the official language and their mother tongue (Dascomb, 2019). Grala (2022) states that bilingual approach helped to maintain cultural and linguistic diversity.

In postcolonial studies, critical theory contributes to the analysis of the concept of stereotype that refers to generalization or assumption about a group of people based on limited, often superficial, characteristics. Stereotypes are a tool used to name colonized peoples as “other”, portraying them different to the colonizers (Marsha Divina, 2022). Such “othering” creates a dichotomy between the colonizer (seen as civilized, advanced, and superior) and the colonized (seen as primitive, backward, and inferior). According to Zafran, Afzal, Hussain, Irshad, & Arif (2021), the construction of the “other” was often based on racial or cultural hierarchies. Some recent findings show that the effect of “othering” continues to impact postcolonial societies (Raddatz, 2024).

Collective memory and trauma are important concepts of critical theory as well. Collective memory concerns the shared representations, narratives, and interpretations of the past that are developed and maintained by a group or society (Cross, 2023). At the same time, trauma refers to the psychological, social, and cultural impacts of colonial violence, oppression, and displacement that continue to affect individuals and communities in postcolonial contexts. Al-Douri & Abdul-Aziz (2023) define it as ambiguous and long-term harms. Their study (Al-Douri & Abdul-Aziz, 2023) also demonstrates that despite the multiplicity of traumatic causatives, victims have significant symptoms, and their destiny depends on their abilities to achieve closure. It was found that when examining how memories are constructed and transmitted, postcolonial scholars seek to promote healing to indigenous peoples and contribute to the creation of a more inclusive postcolonial community.

Krishnaswamy and Goldiș’s site-specific theory

Chiorean (2022) suggested site-specific theory as one of the key moments in the evolution of postcolonial studies. It emphasizes the importance of considering the “site” as more than just a physical location, but also as a complex network of social, political, and economic relations. Also, while focusing on specific sites, the theory recognizes the links between various global processes (Oostindie, 2021). These findings demonstrate the site-specific theory is usually used to explain how local experiences are influenced by broader global forces such as globalization, migration, and transnationalism.

In 2010, Revathi Krishnaswamy revealed the slow development of critical self-awareness in World Literature, where the special attention must be paid towards non-European theoretical or literary works (Chiorean, 2022). The scholar presented Tamil texts and poetics, bhakti poetry, and Dalit nation narratives to present the unique local literary phenomena. Generally, postcolonial Indian literature refer to a wide

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range of genres, styles, and themes that reflect the diverse experiences and perspectives of Indian society during and after colonization. One of the central themes is the exploration of the impact of colonialism on Indian identity, culture, and society (Mani, 2023). Authors often explain the complexities of colonial impact, including issues of identity, language, and cultural hybridity (Rajamony & Tripathy, 2021). Many literary works describe the struggles of Indian people to assert their independence and reclaim their cultural and national identity (Das & Tripathi, 2021). Also, the authors often draw on indigenous cultural traditions, folklore, and history to create narratives that challenge colonial narratives and celebrate Indian culture and heritage (Das & Tripathi, 2021; Mani, 2023).

Further, Goldiș (2021) revisited the theory and explained it through the localized approach to the literary text. In this context, Eastern European postcolonial narrative was developed that embraced certain forms of colonialism, imperialism, or domination, often at the hands of larger powers (Kołodziejczyk & Huigen, 2023). The narrative often concerns the themes of resistance, adaptation, and survival in the face of colonial or imperial oppression. They explore how local cultures and identities have been shaped by interactions with dominant states. Like other postcolonial nations, Eastern European narrative often reflects cultural hybridity, blending elements of local traditions with those of the colonizers. This hybridity can be seen in language, religion, art, and architecture. In the XX century, many Eastern European countries were part of the Soviet bloc, which has had a lasting impact on their societies. Post-Soviet literature often explores themes of transition, identity, and memory in the aftermath of Soviet domination (Ștefănescu, 2022). Since the fall of the Soviet Union, Eastern Europe has undergone significant geopolitical shifts, including EU integration and NATO membership. These changes have influenced the region's cultural and literary landscape.

Decolonial theory: origin, categories, and imperatives

Decolonial theory originated in response to the limitations of postcolonial theory, particularly its perceived Eurocentrism and its failure to fully address the ongoing effects of colonialism (Mehta & Henriksen, 2022). One of the key figures in the development of decolonial theory is Frantz Fanon, whose work, especially in "The Wretched of the Earth," emphasized the psychological and cultural effects of colonization on both the colonizer and the colonized (Sajed & Seidel, 2019). Fanon's work highlighted the need for a radical transformation of society to decolonize both the minds and the structures of colonialism (Adalet, 2021).

Another important influence on decolonial theory is the Latin American dependency model, which emerged in the 1960s and 1970s. The model was developed to explain that the underdevelopment of the Global South was not a natural state but a result of the economic and political structures imposed by colonial powers and maintained by neocolonial relationships (Valente & Grohmann, 2024). Dependency theorists argue that the international economic system is characterized by unequal exchange, where underdeveloped countries are forced to export raw materials and agricultural products at low prices and import manufactured goods at high prices (Ruvituso, 2019). Besides, the model argues that Western cultural impact has played a significant role in shaping Latin American culture, leading to a dominance of Western forms, such as language, art, literature, and media, over indigenous cultural practices (Beghin, 2022; Valente & Grohmann, 2024).

In the early 21st centuries, decolonial theory continued to evolve, drawing on a wide range of intellectual traditions, including indigenous knowledges, feminist theory, critical race theory, and poststructuralism.

Creolization theory toward composition of a new cultural and social identity

The term "creole" was originally used to describe people of mixed European and African descent in the Caribbean, but it later came to be associated with a wide range of cultural phenomena resulting from the mixing of different cultures (De la Bretèque, 2024). Creolization theory describes the process of cultural mixing and blending that occurs when different cultures come into contact and result in the emergence of new cultural forms, practices, and identities (Chiorean, 2022). One of the key figures in the development of creolization theory is the anthropologist Sidney Mintz, who explored the concept of creolization in the context of Caribbean food culture (Parvulescu & Boatcă, 2023).

Creolization theory emphasizes the dynamic and creative nature of cultural exchange, highlighting how cultural practices and identities are continually evolving through interactions between different groups. It suggests that cultures are not static or fixed but are instead flexible and adaptive. At the same time, Chiorean

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(2022) sees creolization theory as a form of resistance to cultural homogenization. The author emphasizes the importance of maintaining cultural diversity and recognizing the contributions of local cultures.

The recent findings show that presently there exist a number of examples of creolization depicting various aspects of culture, language, music, and food (Parvulescu & Boatcă, 2023). Definitely, the Creole languages continue to evolve and develop in many regions. For example, in the United States, so-called "Black English" is considered by some linguists to be a creole language since it blends the elements of African languages with English (Murdoch, 2023). Additionally, creolization can be found in music, cuisine, fashion industry. Therefore, creolization theory in postcolonial studies provides a framework for composition of a new cultural and social identity through cultural interactions. The theory challenges traditional notions of cultural authenticity but stresses upon the richness and diversity.

Comparative analysis of theories related to contemporary postcolonial studies

The theories (postcolonial theory, critical theory, site-specific theory, decolonial theory, and creolization theory) offer both strengths and weaknesses when analyzing the impacts of colonialism and the changes within the contemporary societies. On the one hand, these theories provide critical tools for understanding the complex scientific problems, such as cultural interactions, systemic inequalities, cultural hegemony that have resulted from colonial histories (Chiorean, 2022). At the same time, they demonstrate the importance of centering the voices of colonized peoples, highlighting their experiences and postcolonial perspectives. On the other hand, the theories can sometimes be criticized for their dependence on the context, misinterpretation of some concepts, or lack of specificity (Felsch, 2023).

A number of works are devoted to the methodology of postcolonial studies (Raddatz, 2024). They show that the methods are usually interdisciplinary and prefer examining the impacts of colonialism based on literary and cultural analysis (Thielsch, 2019). Postcolonial scholars often employ historical research to uncover colonial narratives (Nessel, 2021), archival research to study historical documents (Nerlekar & Orsini, 2022), and textual analysis to read literature, media, and cultural texts from a postcolonial perspective (Karmim, 2022). Ethnographic methods, interviews, and observations are used to capture the peoples' experiences. Postcolonial studies also apply comparative analysis to present the diverse responses to colonialism across different contexts (Nguyen & Chia, 2023). Table 1 present the comparative analysis of theories of postcolonial studies and methodologies applied while studying cultural and social phenomena.

Table 1.
Comparative analysis of theories of postcolonial studies and methodologies applied

Theory	Methodologies	Strengths	Weaknesses
Postcolonial theory	Literary analysis, discourse analysis, historical analysis, cultural analysis, comparative analysis, archival research, observations	Based on the interdisciplinary approach; focuses on colonized experiences; explores the formation of complex, hybrid identities; uses historical analysis and addresses contemporary issues.	Studies a wide range of issues that can lead to lack of clarity; neglect of economic factors; overemphasis of cultural aspects of colonialism; criticises eurocentrism.
Critical theory	Historical analysis, literary and cultural analysis, ethnographic research, interviews, critical pedagogy	Based on deep and critical analysis; considers a global perspective, recognizing the interconnectedness of colonial histories; addresses the complex issues of colonialism.	Reduces colonialism to fixed categories or stereotypes; provides lack of empirical evidence.
Site-specific theory	Spatial analysis, contextualization, interdisciplinary approach	Incorporates historical perspective; recognizes the complex and dynamic nature of culture; involves collaboration with local communities that leads to better comprehension of local cultural and social practices.	Depends on the context; limited engagement with theory; lack of critical perspective.
Decolonial theory	Theoretical review, historical analysis, archival research, observations, interviews	Suggests critical analysis; advocates equity; call for actions against colonization.	Raises ethical and methodological challenges, particularly on researchers' engagement with local communities;

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			may lead to confusion or misinterpretation of the outcomes.
Creolization theory	Historical analysis, linguistic analysis, comparative analysis	Emphasis on hybridity; understands contemporary process of globalization; uses interdisciplinary approach.	Lack of specificity; neglect resistance to colonialism; difficult to measure the interrelations.

Source: authors' development.

Therefore, postcolonial perspectives offer the important frameworks for understanding the enduring impacts of colonialism fostering more inclusive and equitable community model in the scientific discourse.

At the same time, the study revealed the fact that the problem of postcolonialism is not widely presented in the scientific discourse nowadays, especially more contemporary issues such as globalization (Lodigiani, 2020), digital transformation (Ponzanesi, 2020), and identity politics (Boucher, 2021) are not fully revealed in the recent works. While previously the studies were dominated by the themes of history of postcolonialism (Rana, 2021), power dynamics, cultural hegemony (Salem, 2021), and injustices (Robinson, 2022), the present-day works focus on social challenges and technological advancements, decolonization, neocolonialism, hybridity, and cultural hegemony (Odijie, 2021). Additionally, it is necessary to state that the interdisciplinary nature of current research trends often integrates postcolonial perspectives within broader frameworks, thereby diminishing its significance.

The research refers to some limitations that are significantly influenced by the lack of empirical research. It restricts the area of investigation significantly since the researchers have a limited ability to support the theoretical statements with the evidence. Definitely, postcolonial studies often rely heavily on qualitative methodologies, including historical description, literary analysis, and interpretative approaches (Rajamony & Tripathy, 2021; Rana, 2021), that help to explore the impacts of colonialism on societies. While these methods provide deep knowledge of cultural and power dynamics, they often do not offer the quantitative data that can be measured, tested, and further generalized. The current research relies on interpretative frameworks and sometimes this makes the study challenging to produce empirical evidence on the existing socio-economic and political effects of colonial legacies in different countries. In addition, the lack of empirical research within postcolonial studies in the recent scientific literature limits its integration with other fields that prioritize data-driven approaches, such as economics, sociology, and political science.

It is also important to mention that the studies on postcolonialism are significantly influenced by the presence of authors' biases shaping the interpretation and presentation of postcolonial realities (Duncan & Cumpsty, 2020; Ponzanesi, 2021). Scholars in this field often come from specific cultural, social, or political backgrounds that may consciously or unconsciously influence their perspectives. This can lead to selective emphasis on particular aspects of postcolonial experiences while neglecting others and resulting in a subjective understanding of postcolonial dynamics. This subjectivity makes it difficult to present a balanced and accurate depiction of historical and contemporary postcolonial conditions. When research is accepted as overly influenced by personal or ideological biases, it may limit its impact and contribution to the field. That is why when selecting the literature for the study, it was very necessary to assess the scientific narratives and analyse its validity and applicability to achieve a holistic understanding of a number of postcolonial issues.

The study on postcolonial perspectives in the 21st century provides the critical analysis that can be implied to improve the understanding of the existing socio-political and economic structures. The examination of inequalities and cultural dynamics through various postcolonial perspectives can help policymakers and practitioners develop more informed and effective strategies to overcome the issues facing the modern societies including racism, economic disparities, and cultural marginalization. The critical analysis offered by postcolonial studies serves as an important instrument to foster social justice and equity in different social areas, including education, governance, and international relations. The methodologies described in the article, also have significant practical implications since they enable a deeper understanding of complex issues related to postcolonialism through history, literature, sociology, and anthropology. For example, qualitative methods provide detailed investigation of the experiences of affected communities and bring more effective interventions. Furthermore, the methodologies when used in complex encourage innovative solutions to contemporary challenges of decolonization, neocolonialism, nationalistic movements, cultural hegemony, and postcolonial reconstruction of a country. Moreover, practical implications based on

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theoretical frameworks of the research problem contribute to a more profound understanding of modern issues existing within the society.

Conclusions

Colonialism was found as the maintenance of military, political, social, economic, and cultural domination over people by a foreign power. At the same time, postcolonialism is an intellectual and cultural movement that critically examines and challenges the enduring impacts of colonialism, advocating for the reclaiming and revitalization of indigenous cultures and the addressing of social inequalities created by colonial histories. The mid-XX century marked a shift in focus from colonial to postcolonial studies. Currently, postcolonial studies play a significant role in modern science since they critically examine the historical and ongoing impacts of colonialism on knowledge production and the dissemination of scientific theories.

Postcolonial studies began as a movement against imperialism by directly addressing the consequences of colonial rule and advocating for the voices and experiences of colonized people. And postcolonial perspectives uncover ethical considerations and social justice as well as postcolonial scholars emphasize the importance of conducting research that benefits marginalized communities, avoids exploitation, and respects cultural differences. Investigating postcolonialism and its impact of colonialism on societies, cultures, and identities, led us to consider the theoretical framework of postcolonial studies from diachronic and synchronic tiers. A diachronic tier involves analyzing the historical development and evolution of colonial and postcolonial conditions over time. In contrast, a synchronic tier focuses on the analysis of postcolonial conditions at a specific moment in time rather than tracing their historical development. In postcolonial studies, both diachronic and synchronic tiers are important to analyze culture and society comprehensively.

The findings show that several theoretical frameworks have been developed to analyze and understand the peculiarities of colonialism through cultural and social phenomenon, the dynamics of resistance, and the complexities of identity. The recent findings show that there are six main theories (postcolonial theory, critical theory, site-specific theory, decolonial theory, and creolization theory). They offer both strengths and weaknesses when analyzing the impacts of colonialism and the changes within the contemporary societies. The analysis of scientific literature showed that a number of works are devoted to the methodology of postcolonial studies. They show that the methods are usually interdisciplinary and prefer examining the impacts of colonialism based on literary and cultural analysis. Other methodologies include: historical research, textual analysis, ethnographic methods, interviews, and observations. Postcolonial studies also apply comparative analysis to present the diverse responses to colonialism across different contexts.

Further research should explore the profound impact of technology on postcolonial communities, focusing on both the opportunities and challenges it presents. As digital technologies increase, they offer new platforms for developing states to present their cultures and enhance social development. However, the technological advances also raise concerns about digital divides and technological dominance by former colonial powers.

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From Mary Shelley to Stephen King: the transformation of gothic fiction in English literature

Від Мері Шеллі до Стівена Кінга: трансформація готичної фантастики в англомовній літературі

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Written by:
Tetyana Chonka[1]
https://orcid.org/0000-0002-5567-813X
Oleksandr Kordonets[2]
https://orcid.org/0000-0002-4298-6096
Evelina Balla[3]
https://orcid.org/0000-0001-9460-331X
Volodymyr Banias[4]
https://orcid.org/0000-0001-6880-8805
Nataliya Banias[5]
https://orcid.org/0000-0002-6974-0790

Abstract

The article is dedicated to studying the evolution of the Gothic novel in English-language literature from the 18th century to the modern stage of development through the lens of genre transformations and stylistic modifications. The purpose of the article is to study the peculiarities of the Gothic novel genre in English-language literature through the prism of genre transformations, the dialectic of tradition and innovation. The research was conducted on the basis of the complex application of the method of analysis and synthesis, comparative-typological, biographical, historical-genetic methods and the method of generalization. By conducting a typological comparison of the early Gothic novel, represented in the works of Horace Walpole, Mary Shelley, Ann Radcliffe, and the later Gothic novels of Oscar Wilde, Bram Stoker, and Stephen

Анотація

Стаття присвячена дослідженню еволюції готичного роману в англомовній літературі від XVIII століття до сучасного етапу розвитку крізь призму жанрових трансформацій та стилістичних модифікацій. Метою статті є дослідження особливостей жанру готичного роману в англомовній літературі крізь призму жанрових трансформацій, діалектику традицій і новаторства. Дослідження проведено на основі комплексного застосування методу аналізу і синтезу, порівняльно-типологічного, біогра-фічного, історико-генетичного методів і методу узагальнення. Провівши типологічне порівняння раннього готичного роману, представленого у творчості Горація Волпола, Мері Шеллі, Енн Редкліфф, та пізнього готичного роману Оскара Уайльда, Брема Стокера та Стівена Кінга, було виявлено, що

[1] PhD, Associate Professor, Ferenc Rakoczi II Transcarpathian Hungarian College of Higher Education, Berehovo, Ukraine. WoS Researcher ID: KVB-8116-2024
[2] PhD, Associate Professor, Ferenc Rakoczi II Transcarpathian Hungarian College of Higher Education; Uzhhorod National University, Berehovo, Ukraine. WoS Researcher ID: KVB-6803-2024
[3] PhD, Associate Professor, University of Nyíregyháza, Hungary; Uzhhorod National University, Uzhhorod, Ukraine. WoS Researcher ID: KVB-6809-2024
[4] PhD, Associate Professor, Ferenc Rakoczi II Transcarpathian Hungarian College of Higher Education, Berehovo, Ukraine. WoS Researcher ID: KVB-6789-2024
[5] PhD, Associate Professor, Ferenc Rakoczi II Transcarpathian Hungarian College of Higher Education, Berehovo, Ukraine. WoS Researcher ID: KVB-7525-2024

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King, it was found that the peculiarity of mature Gothic novels compared to early ones is authorial subjectivity, vivid imagery, and picturesque quality, which eventually evolves into a fascination with supernatural phenomena and horrors. The figurative and symbolic system of the Gothic novel also evolves, as demons and the deceased are replaced by the innocent image of a child or woman, erasing the gender boundaries of the villain hero as the primary catalyst of the plot.

Keywords: genre transformation, gothic novel, modern Neo-Gothic novel, postmodern aesthetics, Romanticism.

особливістю зрілого готичного роману порівняно з раннім є авторська суб'єктивність, яскрава образність та мальовничість, яка з часом переростає у захоплення надприродними явищами та жахами. Образно-символічна система готичного роману також еволюціонує: на зміну демонам і померлим приходить невинний образ дитини чи жінки, стираються гендерні межі героя-лиходія як основного каталізатора сюжету.

Ключові слова: жанрова трансформація, готичний роман, модерний неоготичний роман, постмодерна естетика, романтизм.

Introduction

The emergence of such a novelistic modification as the Gothic novel can be regarded as a kind of literary response to the crisis of rational systems based on the principles of "pure reason," which eventually failed. This led to the decline of Enlightenment ideas, a reorientation towards national values, and a particular interest in folkloric mysticism. The Gothic novel, therefore, is genetically linked to folklore (fantastic tales, myths), medieval chivalric romance, and Christian doctrine (sacred Christian symbols).

The Longman Dictionary of Contemporary English (2022) defines the concept of "Gothic" in two contexts – as an architectural style and as a genre of literature or film: "1) the Gothic style of building was common in Western Europe between the 12th and 16th centuries and included tall pointed arches and windows and tall pillars; 2) a Gothic story, film etc is about frightening things that happen in mysterious old buildings and lonely places, in a style that was popular in the early 19th century". It is worth noting that Gothic literature is not limited to the epic, i.e., prose genres, but also spread to drama and cinema. However, the object of our study is the Gothic novel, whose evolutionary changes help to better understand the typology of the British novel as a great epic form, to explore the potential and modifications of the genre, the evolution of the main character's image, the chronotope, and the poetics of the genre.

The article aims to study the features of the Gothic novel genre in English-language literature through the lens of genre transformations and the dialectic of tradition and innovation and to trace the main trends of this epic genre.

The study of the evolution of the genre is a relevant and promising topic in modern literary studies, because such problems allow to track trends in literature, to establish the nature of the interaction of different language codes and images. Modern linguistic studies focus on the research of semiotic, linguistic-cognitive, narratological, reflective and communicative-pragmatic levels of the fiction text. The article will consider the essence of the concepts of "Gothic novel" and "Neo-Gothic novel," outline the traditions and development trends of this novel in English-language literature, study the transformation of the Gothic hero's image, its connection with the previous romantic tradition in English literature, and the genre changes in the setting, time, and space of the action. The article also visualizes a comparative-typological comparison of the Gothic and Neo-Gothic hero.

Literature Review

Literary studies still have no clear definition of the term "Gothic". On one hand, it is endowed with existential shades, while on the other, it is associated with the realm of the fantastic, mystical, and unreal. English encyclopaedias (The New Encyclopaedia Britannica, 1995; Punter & Byron, 2004) interpret Gothic as imperfect knowledge characteristic of barbarians.

Ukrainian researcher Denysiuk (2006) equates the Gothic novel with the horror novel. However, in defining this concept, he limits himself to the specificity of the setting (medieval castle, abandoned house), the typology of the Gothic hero (aristocratic criminal and young girl-heroine), and the presence of specific motifs (revenge, the mystery of the protagonist's origin, the triumph of good over evil). Most scholars consider the dominance of existential horror as a specific feature of Gothic and classify it into sentimental,

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historical, and Gothic fears (Summers, 2011). Literary critic Cavallaro (2002) created a kind of mental map of Gothic, highlighting geographical, ideological (medieval darkness - Protestantism, paganism - Christianity, feudalism - capitalism), psychological (grotesque, melancholy, subconscious, psychosis), stylistic (grotesque, absurd comedy, dreams, hyperbole), and physical connotations of Gothic. In contrast, Gamer (2004) interprets Gothic not as an epic genre but considers it an aesthetic opposite to classicism.

Ukrainian scholars have also contributed significantly to studying the English-language Gothic novel. For instance, Ukrainian researcher Nikolova (2010), studying the features of the chronotope in the Gothic prose of Charles Dickens, observed a trend of parallel development of Gothic and psychological spaces. In her opinion, "the Gothic tradition in the works of Charles Dickens serves only an auxiliary function and is not an end in itself, but its role and significance should not be underestimated." Literary critic Matviienko (2000) explored Gothic traditions in 19th-century English literature. Muntian (2014) described the tradition of Gothic prose and Gothic elements in 19th-century poetry. Her scientific conclusions boil down to the fact that Gothic attributes in 19th-century novels become merely a backdrop for more complex philosophical problems, and eventually, in the 20th century, the Gothic novel lost its dominant position altogether. Researcher Yefymenko (2004) investigated the reflections of imagery in the English-language Gothic novel. Her observation is quite pertinent: "An important aspect of Gothic poetics is its multi-level kinship with myth as a specific way of concentrating the world view, which is built according to a certain, stable model and constitutes a certain type of consciousness, a type of understanding of reality that finds expression in the characteristic way of organising the world view, in a certain ideology, imagery, and themes." Trofymenko (2023) considers Ukrainian Gothic prose in the context of European Gothic prose and concludes that there are standard genetic-typological genre features, explaining them as "a process of migration of plots, motifs, and their variants."

Indian researcher Laxmi Rawat Chauhan (2018) studied the influence of the British Gothic novel on the formation of this genre in Indian national literature. The process of inter-literary interaction was influenced by the British colonisation of India, as well as the intercultural flow of literary concepts and cultural norms. Notably, this epic genre is still prevalent in Indian literature. Scholars Mohd Adrees & A.K. Paliwal (2023) attribute the emergence of the British Gothic novel to the industrialisation of society and the way of life of the country's inhabitants, thus linking this genre to extra-literary factors. In their opinion, Gothic literature was filled with taboo themes such as madness and unnatural human power, and "Victorian" England played an essential role in the creation of Gothic literature.

As the literature review shows, the question of the evolution of the Gothic novel genre is still under-researched, which determines the relevance of our article.

Research Methods

The aim and research tasks set in the article necessitated a comprehensive combination of the following scientific methods:

- The method of analysis and the method of synthesis – when conducting a critical review of scientific literature, clarifying the essence of the concepts "Gothic novel", "Neo-Gothic novel", and "horror novel";
- The typological method, which was used to distinguish the genre of the Gothic novel among other epic genres of fiction, to describe the specific features of this type of novel;
- The comparative-typological method, which allows highlighting similar, partially similar, and specific features of the Gothic and Neo-Gothic novel, comparing the genre-stylistic features of Gothic novels in English-language literature of different periods, and forming typological features of the Gothic and Neo-Gothic hero;
- The historical-genetic method – to establish the cultural-historical preconditions for the emergence and development of the Gothic novel in English literature, the interaction of Gothic novel aesthetics with the aesthetics of Romanticism and Enlightenment ideas of that time;
- The biographical method – to study the author's worldview orientations that influenced the choice of the Gothic type of novel form;
- The method of generalisation – to form scientific-theoretical conclusions about genre modifications and the main trends in the development of the Gothic novel.

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In addition to the methods described above, the article employed a phenomenological approach to studying literary phenomena related to the ontological categories of life and death, self and other, which dominate the Gothic interpretation of the world

Results

Cultural and historical factors influence the history of the emergence of the Gothic novel in English-language literature. At the end of the 12th and beginning of the 13th centuries, due to the expansion of the British Empire, the English language, and thus English-language literature, spread throughout the world, significantly altering the tradition of the Gothic novel. The popularisation of this type of novel was also influenced by the development of cinema, particularly horror films, whose scripts were often based on Gothic novels (Bloom, 2020).

The term "Gothic novel" originally comes from Gothic architecture – the primary setting for such works. Indeed, old Gothic castles became the setting for literary action, attracting a vast number of readers, making the Gothic novel highly readable not only in contemporary England but also throughout continental Europe. Literary critics consider Walpole Horace (1986) to be the author of the first Gothic novel, specifically his work "The Castle of Otranto". Although the novel contains horror elements, it is based on a family drama. Some researchers consider this novel to be more experimental than Gothic. Its experimental nature is also indicated by the author's anonymous publication, attempting to minimise the unexpected reaction from readers. However, his mythologisation of the Crusades provided a solid foundation for the further evolution of the Gothic novel in the works of Ann Ward Radcliffe ("Italian" (1797), "The Mysteries of Udolpho" (1794)), and Lewis ("The Monk" (1796)) (Ward Radcliffe, 2008; 2009)

Lewis's novel "The Monk" (1796) was written during the peak of the Gothic novel's popularity, which contributed to its enormous success. The novel centers on the theme of the protagonist's downfall and transformation into a villain, which is one of the critical transformations of the main character. The Gothic attributes in this novel include the church setting, which is associated with the Middle Ages. As Muntian (2014) notes, "Against the background of undeniably Gothic attributes, black magic, Satanism, etc., the Gothic novel 'The Monk' raises somewhat non-Gothic issues, particularly sexual violence, incest, and the poetics of dreams." Ann Ward Radcliffe's novel "The Italian" (1797) can be seen as a response to "The Monk". A new trend emerged in her works: various mysteries receive thorough scientific explanations, meaning that the supernatural gives way to the scientifically justified. The characters in her novels no longer fear demons or ancestral curses but are much more afraid of human creations (Ward Radcliffe, 2008).

In 1818, the English writer Wollstonecraft (1996) published the novel "Frankenstein, or the Modern Prometheus". Since there are still ongoing debates around Horace Walpole's novel regarding the purity of its genre, i.e., whether to consider it a purely Gothic novel or merely an experimental novel with elements of Gothic, there have never been such discussions around Mary Shelley's novel, as by all genre criteria it belongs to the Gothic novels of the 13th century. Therefore, most literary critics begin the tradition of the English-language Gothic novel precisely with the name of Mary Shelley. The novel above of the writer reveals the peculiarities of the life path of Victor Frankenstein, a scientist-chemist who considers scientific discoveries to be the purpose of his life – he wants to create an animated essence from inanimate substance. Frankenstein, assuming the role of God, creates a living being from various parts of corpses, which eventually starts to avenge its creator. Initially, the chemist's experiment aimed to revive dead matter to conquer death. However, the animated parts of the corpses begin to live their own lives and become uncontrollable. Seeing that his creation turned out to be monstrous and terrible, the scientist renounces it and leaves the city where he lived and worked. The nameless creature, who hates people for its appearance, soon begins to pursue its creator. As we can see, the novel also contains elements of science fiction, and psychological, philosophical, and scientific-physiological issues form the thematic core of this novel. Thanks to cinema, Mary Shelley's Gothic novel began to live a life of its own, as there have been over thirty attempts to adapt the novel to the screen with different directorial interpretations. In the second half of the 20th century, the character of Frankenstein, with little connection to the original novel, transformed into a farcical figure in comics and parodies, where the mythological image was significantly distorted. Analysing the genre-stylistic features of Mary Shelley's novel, we can assert that her novel significantly transcended the bounds of Gothic, being influenced by English Romanticism and the Enlightenment novel.

The figure of Frankenstein is also immersed in Greek mythology, as evidenced by the novel's subtitle "The Modern Prometheus". The ancient titan is an ideal mythological hero who wanted to free humanity from

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suffering, taught people to cure diseases, and gave them fire, for which the gods severely punished him. Frankenstein's feat also aimed to help humanity, but his scientific achievements remain underestimated and cause harm to himself and all humanity. Thus, the writer debates the Enlightenment idea of the omnipotence and godlikeness of man, with the absolute faith of the Enlightenment thinkers in the power of universal reason. Therefore, in Mary Shelley's novel, the creature created by the scientist-chemist declares: "Remember that I am thy creature; I ought to be thy Adam; but I am rather the fallen angel, whom thou drivest from joy for no misdeed. Everywhere, I see bliss, from which I alone am irrevocably excluded. I was benevolent and good – misery made me a fiend" (Wollstonecraft, 1996).

In her novel, the writer blurs the lines between the beautiful and the ugly, as even the monstrous creation of man acquires beauty features: "A mummy again endued with animation could not be so hideous as that wretch. I had gazed on him while unfinished; he was ugly then; but when those muscles and joints were rendered capable of motion, it became something that even Dante could not have conceived" (Wollstonecraft, 1996).

We can unequivocally assert that Mary Shelley lays the foundations of the genre canon. Firstly, the writer introduces three narrators into the novel (Victor Frankenstein, Robert Walton, and Frankenstein's creation – the demon). Secondly, the author uses the plot tactic of "mirrored transformation", representing the images of two scientists – Victor Frankenstein and Robert Walton, united by the desire to penetrate the mysteries of the unknown. In this novel, through the characters above, we observe the confrontation between tradition and innovation (by tradition, we mean the aesthetics of Romanticism, embodied in the novel by the sailor Walton, who is typologically close to the romantic hero of Byron and Scott, while the innovation of the novel is represented by the typical Gothic character Frankenstein, who is interested in the determinism of life and death, the mysteries of the human body).

The story of the creator and his creation, initiated by Mary Shelley, continued in the Gothic novel by Stevenson & Spencer (1980), "Dr. Jekyll and Mr. Hyde" (1886). This is a story about an ingenious doctor who is willing to do anything for a successful experiment, even risk his own life: "I knew well that I risked death; for any drug that so potently controlled and shook the very Fortress of identity, might be the least scruple of an overdose or at least an opportunity in the moment of exhibition, utterly blot out that immaterial tabernacle which I looked to it to change" (Stevenson & Spencer, 1980). In this novel, fear transforms from primal to incomprehensible; it becomes psychological fear, which requires explanation and investigation. The characters realise that the demons are inside each of them, so there is no need to look for external threats.

At the end of the 19th century, the Gothic novel transforms into the time of action. The immersion in the past, inherent in the early Gothic novel, transforms into a scientific investigation of contemporary problems. We observe such a temporal transformation in Oscar Wilde's novel "The Picture of Dorian Gray" (1890) and Bram Stoker's novel "Dracula" (1897). Thus, scientific achievements and knowledge become the basis for explaining the extraordinary, meaning that science, not fantasy, determines events. Readers of Stoker's novel are primarily attracted by the theme of vampirism, which has a deep metaphorical and philosophical meaning. The myth of the vampire reconciles man with death. Using the biographical method, we can assert that the origins of Stoker's worldview projected in his novel "Dracula" should be sought in his childhood, filled with the fears and superstitions of the Irish Protestant middle class to which his family belonged. The main idea of this novel was the necessity to protect human progress and civilisation from the forces of evil. Thus, Stoker created his mythical image of Eastern Europe. In "The Picture of Dorian Gray, " chemistry destroys the dead body. At the same time, in "Dracula", the main characters, a doctor and a psychologist, already rely on the latest scientific achievements rather than the superstitions of ancient legends.

Simultaneously with the temporal transformation, the tonal and intonational transformation of the Gothic novel occurs. For instance, in the works of the aforementioned Oscar Wilde, Gothic acquires features of grotesque and satire. In "The Canterville Ghost" (1906), the family of an American millionaire, despite various warnings from the surroundings, buys an old British castle, where creaks and groans are heard every night. However, the ghosts only evoke laughter and sympathy from the family members, and the mother asks to oil the chains so they do not creak, thus turning everything into a comic key. This became the first step towards entering the Gothic novel into the postmodern era, where Gothic merged with grotesque, parody, fantasy, and psychology. The main thematic centres of the Gothic novel become descriptions of degradation, the destruction of the world, and the self-destruction of the personality. The Gothic novel of this period is called Neo-Gothic or New Gothic. The Neo-Gothic novel acquires such genre features as

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enclosure, the depiction of the world's cruelty, parody, the motif of pursuit and psychological interaction between the victim and the tyrant, and the motif of a deceptive sense of security leading to catastrophe. The figurative-symbolic system of the Gothic novel also undergoes evolution. The innocent image of a child replaces demons and the deceased.

The work of one of the most famous representatives of American mass culture, Stephen King, continues the tradition of the English-language Gothic novel, transforming it into Neo-Gothic. Almost every one of his novels contains elements of Gothic. However, to trace the genre's evolution, we have selected the novel " Misery " (1987), which most closely adheres to the canons of the Neo-Gothic novel. The plot revolves around the relationship between two main characters – famous writer Paul Sheldon and his mentally unstable fan Annie Wilkes. This novel combines postmodernism's mosaic nature with mass culture's syncretism. The artistic time is built on asymmetry and non-linearity, and the genre syncretism is based on including diaries and manuscripts in the text. The Gothic villain in this novel has a female face: Paul learns about Annie's crimes by reading her scrapbook "Memory Lane". The novel is interwoven with allusions to the works of both fictional and real authors, giving the text intertextuality and allusiveness typical of postmodern aesthetics. The hero, Paul Sheldon, finds a specific pattern in Annie's actions and even tries to find a rational explanation for her behaviour. Thus, King (1987) delves into psychology, including the psychology of artistic creativity. Annie's appearance in King's novel fully corresponds to the Gothic novel tradition, where the anti-hero (in our case, the anti-heroine) appears out of nowhere and bursts into the life of a creative individual, changing it forever. Her appearance is accompanied by darkness and spatial disorientation, setting the narrative's tone. As in the classic Gothic novel, Paul finds himself in a closed room, with the wind howling and snow falling outside the window, creating an effect of being cut off from the world by the rampaging elements. Annie's image also embodies the concept of postmodern sensitivity as a specific form of world perception inherent in the postmodern philosophy of a chaotic world. In the early Gothic novel, we are used to associating the image of the villain with a male character, whereas King offers us a postmodern interpretation of gender relations and transfers the image of the villain to a female character (King, 1987).

Comparing the images of the main characters in the Gothic and Neo-Gothic novels, we can summarise the concepts of the main characters, thus tracing the evolution of the main character's image in such epic forms.

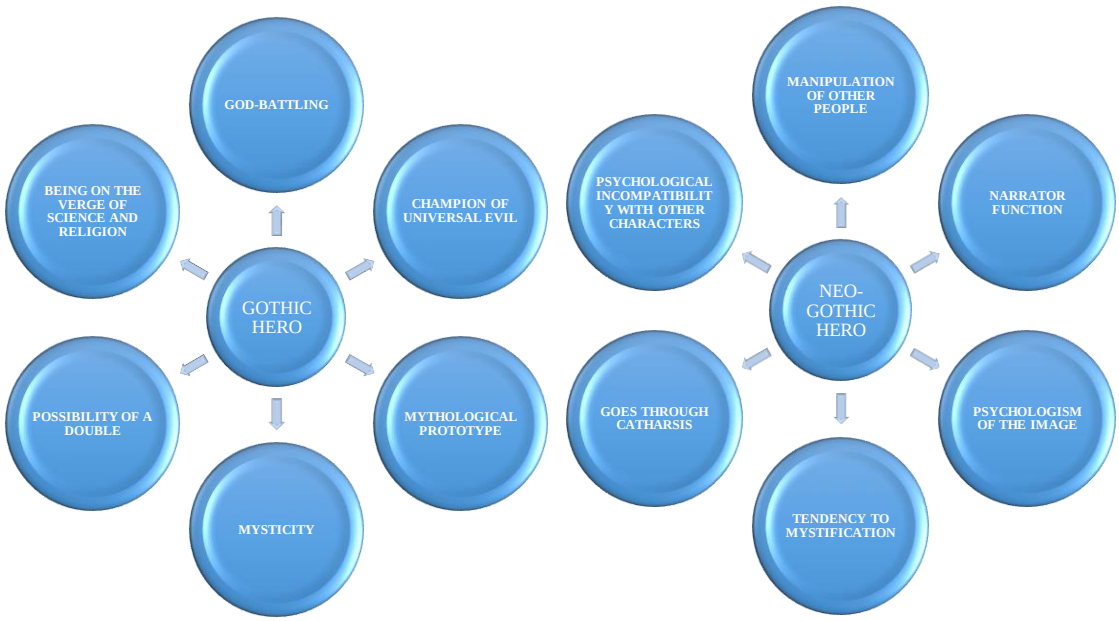


Figure 1. Comparison of Gothic and Neo-Gothic Novel Concepts of the Protagonist's Image.

In the architecture of Gothic and Neo-Gothic novels, the poetics of space and time play a decisive role. We have come to the following conclusions by comparing the chronotopes of Gothic and Neo-Gothic novels. If the Gothic novel is characterised by the topos of an enclosed space (castle, cathedral, abbey), a cursed place, and within this space, there is a clash of two opposing worlds – the real and the mystical. For the Neo-Gothic novel, this topos expands to the level of the universe. In the Gothic novel, time is mainly linear, with only occasional refractions of temporal projections.

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In contrast, in the Neo-Gothic novel, we observe the cyclicity of time projected onto the cyclicity of the plot (the search for balance between antagonistic worlds). The Gothic chronotope is mainly scenic, while in the Neo-Gothic novel, we observe three types of space: scenic, narrative, and psychological. Psychological space is the arena of passions and feelings that rage in the main character's soul. The Gothic projection of the "man–world" is reflected through the poetics of time and space, the struggle between the sacred and the mundane. The features of the transformation of the place, time, and space of action in the Gothic and Neo-Gothic novels are further presented in the form of a comparative table:

Table 1.
Typology of Chronotope in the Gothic and Neo-Gothic Novels

Gothic novel	Neo-Gothic novel
Place of action	
Topos of a confined space, a cursed place	The whole universe
Time of action	
Linear time	Cyclical time, projected on the cyclicality of the plot
Spaces of action	
Stage space	Three-dimensional space (stage, narrative and psychic)

The evolution of the Gothic novel in English-language literature can be presented through the following main stages of the development of genre and style modifications of the genre.

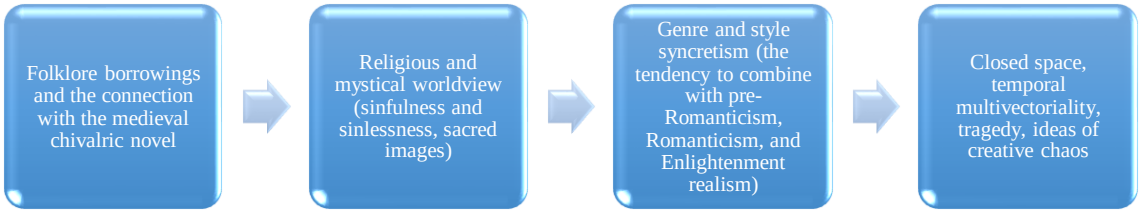


Figure 2. Evolution of the Gothic novel in English literature.

Discussion

Researcher Denysiuk (2007) uses the terms "Gothic novel", "frenetic genre", and "romantic frenzy", which, in our opinion, only develops the phenomenon of term synonymy. However, we fully agree with the researcher that "the concentration of nightmares and horrors in works of romantic frenzy is mostly not an end in itself, but a function of deepening the depicted conflict between good and evil, and the works of this modification of the Gothic novel – the novel of mysteries and horrors – acquire a shade of parable" (Denysiuk, 2007). We confirm that most Gothic novels have a parabolic structure.

We agree with researcher Prithwiraj Mukherjee (2024) that not all Stephen King's novels can be considered Neo-Gothic. Most of his horror novels contain Gothic elements, such as haunted houses, supernatural beings, and psychological terror in his stories. Most of his novels belong to the horror genre, which is a broader concept and includes Gothic literature.

Given the above, we propose to classify Neo-Gothic English-language novels into two subgroups:

1) Neoclassical novels that combine postmodern aesthetics while remaining based on classic Gothic. This group includes Joanne Harris's "Sleep, Pale Sister." (2005). Based on the main character's story, artist Henry Chester, his criminal past and criminal present intersect, featuring doppelgänger plot elements and the ghost of a girl demanding retribution, metamorphosis, and soul migration.
2) The second group of Neo-Gothic novels has two layers of artistic reality: visible and invisible.

Characteristic Gothic plot elements and a figurative-symbolic system are used in the visible layer. In the invisible layer, the ideology of postmodern aesthetics dominates, which recognises no rules or canons, does not believe in a higher intelligence, and contrasts the high purpose of humanity with its animal nature. A vivid example of the second type of Neo-Gothic novel is William Golding's "Lord of the Flies" (1954).

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This novel, of course, contains canonical elements of the genre: an enclosed space (the island where the boys find themselves), the motif of a safe place (a paradise island that turns into hell, taking three innocent souls), the image of the beast as an otherworldly force that poses the main threat, is the source of cruelty and evil, an unexpected denouement, and the transformation of "good – evil" (the source of evil and cruelty is not external but within the person, moreover, the child). This category of novels also includes Stephen King's horror and Neo-Gothic novels.

Conclusions

The feature of mature Gothic novels compared to early Gothic novels is the author's subjectivism, vivid imagery, and pictorial quality, which eventually grows into a fascination with supernatural phenomena and horrors. A common genre feature of early and late Gothic novels is the special attention to the setting, characterised by enclosed space, neglect, the intertwining of unusual space with unusual time, and ominous landscapes. This kind of setting symbolises the clash of the natural and fantastical worlds. Thus, the polarisation of the two worlds in the Gothic novel is one of the canonical features of the genre. Additionally, an essential feature of the Gothic novel is the interrupted temporal organisation. In most Gothic novels, the present intersects with the past. This past usually lives within the walls of ancient castles and abbeys and creates a tragic backdrop (stories of crimes often determine subsequent events). However, in the Neo-Gothic novel, the organisation of time and space becomes cyclical and projects onto the cyclicality of the plot.

Future research perspectives include studying the poetics of the Gothic novel genre in a typological comparison of works from the early and late periods, as well as a comparative comparison of Gothic novels in English-language literature with Gothic novels in European national literature, including the tradition of the Gothic novel in Ukrainian literature, represented by the names of Ivan Franko ("Petrii and Dovbushchuky"), Khoma Kupriienko ("The Unkind Omen"), Petro Kulish ("The Fiery Serpent"), the prose of Valeriy Shevchuk, and Halyna Pahutiak.

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Legislative support for the public policy of national memory in Ukraine

Законодавче формування політики збереження національної пам'яті в Україні

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Written by:
Svitlana Vlasenko[1]
https://orcid.org/0000-0002-1073-9680

Abstract

The implementation of legislative support for public policy on national memory in Ukraine is realised through the enactment of legislative acts, including the Constitution of Ukraine and Ukrainian laws. The country's prevailing political situation and social moods have primarily shaped it. This article aims to examine the legislative framework of Ukraine (1991-2024) that facilitates the formation and implementation of public policy on national memory within the state. The study demonstrates that active legislation has occurred over the past ten years and continues to the present day. It is established that the legislative base in the sphere of national memory comprises conceptual, organisational, and regulatory acts, which delineate the scope of their functionality. Significant achievements have been made in the legislative support of public policy on national memory in Ukraine. It is evident that the issue of adopting a special law that would define the fundamental principles of national memory policy in Ukraine, ensuring comprehensive regulation of its formation and implementation, still needs to be solved. The completeness of memory policy regulation at all levels of the administrative system is defined, and problematic issues are identified. The necessity for enhancing the legislative framework supporting public policy on national memory in Ukraine is revealed.

Keywords: public policy of national memory, public administration, institutionalisation, legal support, legal act, law, public authorities, national memory, Ukraine.

Анотація

Реалізація законодавчого забезпечення державної політики щодо національної пам'яті в Україні здійснюється шляхом прийняття законодавчих актів, у тому числі Конституції України та законів України. Політична ситуація, що склалася в країні, і суспільні настрої сформували її передусім. Мета статті – дослідити законодавчу базу України (1991-2024 рр.), яка сприяє формуванню та реалізації державної політики національної пам'яті в державі. Дослідження демонструє, що активне законодавство відбувалося протягом останніх десяти років і триває донині. Встановлено, що законодавчу базу у сфері національної пам'яті становлять концептуальні, організаційні та нормативні акти, які окреслюють сферу їх функціональності. У законодавчому забезпеченні державної політики щодо національної пам'яті в Україні досягнуто значних здобутків. Очевидно, що ще потребує вирішення питання щодо прийняття спеціального закону, який би визначав засади політики національної пам'яті в Україні, забезпечував комплексне регулювання її формування та реалізації. Визначено повноту регулювання політики пам'яті на всіх рівнях управлінської системи та виявлено проблемні питання. Виявлено необхідність удосконалення законодавчої бази підтримки державної політики щодо національної пам'яті в Україні.

Ключові слова: публічна політика національної пам'яті, державне управління, інституціоналізація, правове забезпечення, нормативно-правовий акт, право, органи державної влади, національна пам'ять, Україна.

[1] PhD in History, Doctoral Student, Department of Public Policy, Educational and Scientific Institute of Public Administration and Civil Service, Taras Shevchenko National University of Kyiv, Kyiv, Ukraine. WoS Researcher ID: JXX-0567-2024

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Introduction

Public policy on national memory in Ukraine is designed to consolidate the Ukrainian people through shaping perceptions of a shared past for the Ukrainian political nation and affirming Ukrainian civic identity. This policy aims to achieve a unified national identity by defining pivotal moments in the history of Ukrainian nation-building and state formation, restoring and preserving national memory, and researching and popularising the history, culture, and traditions of the Ukrainian people and the people residing in Ukraine.

Over the past decade, there has been a notable increase in interest among the state and the public in Ukraine's national memory policy. It, in turn, necessitates the institutionalisation of this process, as Ukrainian scholars in public administration, Soroka and Lizakovska, posit that institutionalisation enhances the effectiveness and efficiency of public administration (Soroka & Lizakovska, 2021). The pivotal role of institutionalisation in political development was also addressed in the mid-1970s by the renowned political scientist from Haifa University, Ben-Dor (1975).

The effectiveness of the national memory policy can only be achieved with the appropriate legal, institutional, organisational-functional, informational, personnel and financial support. It is indubitable that legal support constitutes an essential component of the institutionalisation of the policy of national memory. The term 'legal support' is defined as the exercise of state power through all legal means to influence social relations to order, consolidate, protect, and develop these relations, as well as influencing the behaviour and consciousness of citizens by proclaiming their rights and obligations, establishing explicit permissions and prohibitions, and affirming certain legal acts (Hizhevskyi et al., 2003). Consequently, by establishing and consolidating specific rules (norms) in legal acts, the state ensures the legal regulation of social relations and the activities of actors regarding the formation and implementation of public policy on national memory.

Problem of analyzing a legislative framework of National Memory Policy is relevant during the full-scale war between Russia and Ukraine. Enshrining in normative-legal field some principles of regulating social relations and activities of subjects regarding a formation and implementation of state policy in case of national memory makes it possible to intensify the processes of national progress.

An article begins with analytical description of current scientific sources, industry publications and the latest developments in research topic. After describing research methods, results are praesend. In results, the laws of Ukraine (1991-2024 pp.) were studied. Discussion describes the research of modern scientists, compared with the results of our research. The results of the research were summarized in conclusions and directions for development of scientific topics are outlined.

Literature Review

The issue of national memory policy in Ukraine has become increasingly significant over the last ten years, as evidenced by the growing scientific interest from scholars both within Ukraine and internationally. For instance, Austrian scholar of Ukrainian origin Zhurzhenko, who has published extensively on contentious issues of memory geopolitics, including World War II, Ukrainian-Polish relations, and others (Zhurzhenko, 2011; 2013), also studied the legislative consolidation of national memory policy in Ukraine. In particular, she concentrated on the period following the Revolution of Dignity and the onset of Russian aggression in 2014 (Zhurzhenko, 2022). In the context of studying the memory policy regarding the Ukrainian national liberation movement of the 20th century, Yurchuk (PhD in History, lecturer at Södertörn University, Stockholm, Sweden) analysed Ukrainian legislative acts regulating state policy on these issues (Yurchuk, 2014; 2017). Canadian historian Marples examined the processes of overcoming the communist past in Ukraine, analysing the decommunisation laws of 2015, which he called "Memory Laws" (Marples, 2018).

In Ukraine, there is a substantial corpus of scholarly works in various scientific disciplines that examine the processes of institutionalisation, including the legal framework supporting national memory policy. These include the works of scholars such as Hrytsenko (2017), Dodonov (2018), Matsyshyna (2018), Yablonskyi et al. (2019), Korniievskyy and Rozumnyi (2019), Cherviatsova (2020), and Rudenko (2020), Sachko (2022), Kovalska-Pavelko (2022), Ivanenko and Kryvoshein (2022), Sova and Dienizhna (2022), Andriiash, Hromadska, and Malikina (2023), and others. In particular, Hrytsenko conducted a comprehensive examination of the normative legal acts issued by the presidents of Ukraine between 1994

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and 2014. This analysis aimed to assess Ukraine's national memory policy and the role of the head of state in shaping it (Hrytsenko, 2017). In the works of Sachko, Andriiash, Hromadska, and Malikova, the subject of national memory policy is studied as a field of research in public administration and as a direction of public policy (Andriiash et al., 2023; Sachko, 2022). In the field of public administration, the policy of national memory is also the subject of research by the author of this article. In her scholarly work, the author examines the normative legal support of national memory policy in Ukraine in different periods, along specific directions or spheres, by subjects of norm creation (Vlasenko, 2023a; 2023b; 2024; Vlasenko et al., 2024). Nevertheless, a comprehensive scientific study of the legislative support for public policy on national memory in Ukraine needs to be improved. Moreover, several significant legislative instruments have recently been enacted that necessitate scientific analysis.

This study aims to investigate Ukraine's legislative framework, which ensures the formation and implementation of public policy on national memory in the state. It involves analysing the legislative acts that contain the policy's conceptual foundations and were adopted between 1991 and 2024.

Methodology

The article was written using a variety of approaches and research methods, including general scientific and specialised techniques. The primary focus of the research was on the processing of normative legal acts of Ukraine. A distinctive feature of this scientific research is its interdisciplinary nature and practical significance.

At the initial stage of preparing the article, a descriptive method was employed to avoid subjective evaluative statements. Furthermore, during the processing of legislative acts, general scientific methods of analysis, synthesis, comparison, and generalisation were employed.

Applying a systemic approach to analysing legislative acts governing public policy on national memory permitted the analysis of these acts according to their legal force, specifically the Constitution of Ukraine and Ukrainian laws. Given this article's subject, unique legal research methods were employed, namely formal-juridical and logic-juridical. Combining these methods with general scientific methods of analysis and comparison enabled the drawing of conclusions regarding the legislative provisions of national memory policy, identifying gaps in the legal field of the studied area, and determining problematic and uncovered issues by legislative acts.

To ascertain the public's perception of the necessity for the enactment of specific legislation or the consequences of its implementation, data from sociological surveys conducted in Ukraine at different times and concerning various aspects of public policy on national memory were analysed. In particular, the results of multi-year surveys conducted by the sociological group "Rating" were considered.

Forecasting and generalisation methods were employed to formulate proposals for addressing the existing needs in the national memory policy, theoretically substantiate the main research results, formulate conclusions, and identify issues requiring further study.

Results

In examining the legislative framework supporting public policy on national memory in Ukraine, it is essential to recognise the law as a normative legal act of the highest juridical force, which regulates the most important social relations within the state. The current legislative base of Ukraine, which ensures the formation and implementation of public policy on national memory, is represented by legislative acts (the Constitution of Ukraine and laws of Ukraine) containing the conceptual foundations of national memory policy. The activities of the principal actors in public policy on national memory (state authorities, local self-government bodies, civil society organisations, etc.) are regulated by specific legislation that defines their status, powers, procedures for formation, etc.

The Constitution of Ukraine (Verkhovna Rada of Ukraine, 1996) constitutes the primary legal instrument through which the conceptual foundations of the state's national memory policy are defined. In particular, Article 11 stipulates that the state is responsible for the consolidation and development of the Ukrainian nation, its historical consciousness, traditions, and culture, as well as the development of the ethnic, cultural, linguistic, and religious identity of all indigenous peoples and national minorities of Ukraine. Furthermore,

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the Constitution of Ukraine delineates the roles of the various actors in public policy, outlining their respective powers, rights, and obligations (state authorities, local self-government bodies, civil society organisations, and citizens).

In examining the legislative acts that serve as the conceptual foundations of national memory policy, we will adopt a chronological approach as our organising principle. It is of the utmost importance to direct attention to the Law of Ukraine "On the Holodomor of 1932-1933 in Ukraine" (Law of Ukraine No. 376-V, 2006).

The significance of this legislative act in terms of the institutionalisation of the policy of national memory can be explained by the fact that it first established the primary goal of national memory policy – the consolidation and development of the Ukrainian nation, its historical consciousness, and its culture. Furthermore, the law identified the actors involved in forming and implementing the policy – state authorities and local self-governance bodies according to their powers.

This legislation played a pivotal role in the recognition of the Holodomor of 1932-1933 in Ukraine as a genocide of the Ukrainian people. It defined the event as a "deliberate act of mass destruction of people." Public denial of the genocide is considered "an insult to the memory of millions of Holodomor victims" and is illegal.

It is noteworthy that the term "genocide" had previously been used in Ukrainian legal acts about the Holodomor of 1932-1933. For the first time, it was employed in a directive of the Cabinet of Ministers of Ukraine regarding the holding of the International Conference in Memory of the Victims of the Genocide of the Ukrainian People (Order No. 459-r, 2000). This conference took place on November 25 2000. Subsequently, in the resolution of the Verkhovna Rada of Ukraine "On the 70th Anniversary of the Holodomor in Ukraine" (Resolution No. 258-IV, 2002), the term "policy of genocide" was condemned for the first time and its characteristics were provided for the first time. These characteristics included the fact that the policy was carried out at the state level by leaders of the totalitarian Soviet regime against the citizens of Ukraine and that it targeted the national spirit, mentality, and genetic foundation of the Ukrainian people. Subsequently, a special session of the Verkhovna Rada of Ukraine (Resolution No. 789-IV, 2003) was held during which participants recognised the Holodomor of 1932-1933 as "an act of genocide of the Ukrainian people" and declared the need to give it an appropriate political and legal assessment at the highest state level and from all branches of power in Ukraine.

The next step in the legislative establishment of the fundamental principles of the national memory policy was adopting the so-called "decommunisation package of laws" on April 9, 2015. These four Laws of Ukraine include: "On the Legal Status and Honoring the Memory of Fighters for Ukraine's Independence in the 20th Century," "On the Perpetuation of the Victory over Nazism in World War II 1939-1945," "On Access to the Archives of Repressive Bodies of the Communist Totalitarian Regime 1917-1991," (Law of Ukraine No. 314-VIII, 2015, Law of Ukraine No. 316-VIII, 2015, Law of Ukraine No. 317-VIII, 2015) and "On the Condemnation of the Communist and National Socialist (Nazi) Totalitarian Regimes in Ukraine and Prohibition of Propaganda of Their Symbols." (Venice Commission Opinion, 2015). These legislative acts can genuinely be milestones in countering Soviet identity and nostalgic sentiments for the USSR that existed among some citizens at the time. Indeed, a nationwide survey conducted by the sociological group "Rating" (2014) showed that 33% of respondents at that time regretted the dissolution of the Soviet Union. In particular, the Law of Ukraine, "On the Legal Status and Honoring the Memory of Fighters for Ukraine's Independence in the 20th Century" (Law of Ukraine No. 314-VIII, 2015), recognised as fighters for independence those who participated in all forms of political, armed, and other collective or individual struggle in the 20th century. The law lists government bodies, organisations, structures, and formations whose participants are recognised as fighters for Ukraine's independence. It also defines the directions of state policy for the restoration, preservation, and honouring of the national memory of the fighters and the struggle they waged. Specifically, the state ensures a comprehensive history study, raises societal awareness, encourages and supports research and educational work, and facilitates memory commemoration. The law defines the public denial of the legitimacy of the struggle for independence of Ukraine in the 20th century as illegal (Kniaziev et al., 2011).

Incidentally, the issue regarding adopting such a law had been raised earlier. For instance, President Viktor Yushchenko directed the Cabinet of Ministers of Ukraine, in collaboration with the National Academy of Sciences of Ukraine, to develop a draft law about the Ukrainian liberation movement of the 1920s-1950s.

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This law was intended to define the status of the participants, provide for their social protection, and recognise the activities of organisations that fought for Ukraine's independence (Decree No. 879/2006, 2006). In 2008, a draft law, "On the Legal Status of Participants in the Fight for Ukraine's Independence of the 1920s-1990s," was developed but not adopted. Some of its provisions can be traced in the Law of Ukraine of April 9, 2015. (League 360, 2008).

The Law of Ukraine, "On Perpetuating the Victory over Nazism in World War II 1939-1945" (Law of Ukraine No. 315-VIII, 2015), ensured respectful recognition not only of the memory of the victory in World War II but also of the war's participants. For the first time at the legislative level, veterans of the war, participants of the liberation movement, and victims of Nazism were officially recognised. It established one of the fundamental principles underlying European memory policy: reconciliation and understanding. The legislation also delineated the principal methods of commemorating the triumph over Nazism, regulated matters about World War II memorials, and ensured Ukraine's fulfilment of international obligations. Among the international acts referenced in the law, the United Nations General Assembly resolution of November 22 2004, No. A/RES/59/26, which declared 8 and 9 May as days of remembrance and reconciliation, stands out. By the law, May 8 was designated as the Day of Remembrance and Reconciliation, while May 9 was established as Victory Day over Nazism in World War II (Victory Day), which is recognised as a national holiday. In 2023, amendments were made to the law (based on the Law of Ukraine of May 29 2023, No. 3107-IX), whereby May 9 was no longer associated with the war, and May 8 was established as the Day of Remembrance and Victory over Nazism in World War II 1939-1945. The enactment of this legislation played a pivotal role in challenging Soviet and contemporary Russian narratives surrounding the Second World War. It signified a rejection of the Soviet-era term "Great Patriotic War 1941-1945" and the introduction of "World War II 1939-1945" at the legislative level (Law of Ukraine No. 3107-IX, 2023).

The Law of Ukraine "On Access to Archives of Repressive Bodies of the Communist Totalitarian Regime 1917-1991" is more regulatory and organisational (Law of Ukraine No. 316-VIII, 2015). The legislation contains provisions that regulate the fundamental principles, guarantees, and methods of implementing state policy regarding access to archival information of repressive bodies. The legislation defines the term "repressive body" and enumerates the repressive organs of the communist totalitarian regime. It is beyond doubt that the enactment of this legislation constituted one of the most significant factors in the democratisation of Ukrainian society. The law reflected European practices regarding the openness of state archives in the context of memory policy to overcome the communist totalitarian past. It was by the Recommendations of the Committee of Ministers of the Council of Europe to member states on European policy regarding access to archives, as set out in No. R (2000) on July 13 2000. Despite the existence of the particular Law of Ukraine "On the National Archival Fund and Archival Institutions," which regulates the main issues of archival affairs, including relations related to the use of archival document information, the necessity of adopting the Law of Ukraine "On Access to Archives of Repressive Bodies of the Communist Totalitarian Regime 1917-1991" was substantiated (Law of Ukraine No. 316-VIII, 2015).

The fourth of the "decommunisation package" is the Law of Ukraine "On the Condemnation of the Communist and National Socialist (Nazi) Totalitarian Regimes in Ukraine and Prohibition of Propaganda of Their Symbols" (Venice Commission Opinion, 2015). The legislation identified the communist and Nazi totalitarian regimes in Ukraine as "criminal and having implemented a policy of state terror." It prohibited the propagation of these regimes and the utilisation of their symbols. The foundation of the law was a series of international legal acts that addressed the issue of overcoming the legacy of communist and Nazi totalitarian regimes in Europe. A distinctive feature of the law is not only its declarative but also its criminal component. Relevant changes and additions were made to the Criminal Code of Ukraine (Code No. 2341-III, 2001): "The manufacture, distribution, and public use of the symbols of the communist, national-socialist (Nazi) totalitarian regimes [...] are punishable by restriction of liberty for a term of up to five years or imprisonment for the same term, with or without confiscation of property" (Article 4361).

It is important to note that the Law of Ukraine, "On the Condemnation of the Communist and National Socialist (Nazi) Totalitarian Regimes in Ukraine and Prohibition of Propaganda of Their Symbols" (Venice Commission Opinion, 2015), has been the subject of a mixed evaluation among experts and academics both in Ukraine and abroad. The constitutionality of the law was also called into question. On July 16 2019, the Constitutional Court of Ukraine ruled on an appeal by 46 members of the Ukrainian parliament that the law was following the Constitution of Ukraine (Verkhovna Rada of Ukraine, 2019). The joint opinion of the Venice Commission and the OSCE Office for Democratic Institutions and Human Rights (Venice

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Commission Opinion, 2015) contained significant recommendations for improving the law, particularly concerning provisions on symbols, propaganda, denial of crimes, sanctions, etc. The opinion highlighted the right of states to enact legislation that prohibits or criminalises the use of symbols and propaganda of specific totalitarian regimes, provided that these laws comply with the requirements of the European Convention and other regional and international legal documents on human rights.

In our estimation, the impact of this legislation on the national memory policy regarding the communist totalitarian past cannot be overstated. Over two decades after the dissolution of the USSR and the restoration of Ukraine's state sovereignty, the communist totalitarian regime was legally recognised as criminal and condemned as "incompatible with fundamental human and civil rights and freedoms," and its propaganda and symbols were prohibited. Nevertheless, it is crucial to highlight that the anticipated outcomes of this legislation have yet to be fully realised. In particular, the process of decommunisation has not been executed effectively, and Ukraine has yet to eradicate communist/Soviet symbols. Doctor of Public Administration Pavlo Pokataiev identified a shortcoming of the law as the limited time allowed for discussion and renaming of settlements. Furthermore, one of the problems encountered during the implementation of its provisions was the passive attitude of the population towards the decommunisation of public spaces (Pokataiev, 2018). A survey by the sociological group "Rating" (2016) revealed that only 48% of respondents supported banning communist ideology in Ukraine, while only 35% supported the initiative to rename cities and streets.

Decommunisation represents a pivotal aspect of national memory policy. Furthermore, it encompasses the rehabilitation of citizens who were repressed by the communist totalitarian regime. These processes have been ongoing for many years and relate to policies in national memory and, more broadly, the social sphere. The legal framework for this policy is provided by the Law of Ukraine "On the Rehabilitation of Victims of Repressions of the Communist Totalitarian Regime 1917-1991" (Verkhovna Rada of Ukraine, 1991). This law's history commenced before the restoration of Ukraine's state independence. On April 17 1991, the Verkhovna Rada of the Ukrainian SSR adopted the Law "On the Rehabilitation of Victims of Political Repressions in Ukraine" (Law of Ukraine No. 962-XII, 1991). The adoption of this law demonstrated the democratisation of Ukrainian society, was of significant importance in restoring the rights of citizens who suffered from the communist regime, and simplified the rehabilitation procedure. Nevertheless, the law failed to consider the interests of specific population categories affected by repressions, including participants in the national liberation movement, citizens who were repressed but not detained, and family members of the repressed.

Since 1991, amendments and additions have been made to the law on several occasions, which have expanded the categories of citizens eligible for rehabilitation. In March 2018, the legislation underwent a significant amendment and was renamed. The 2018 edition of the law contains a comprehensive list of terms used, including the definition of "repressions of the communist totalitarian regime from 1917-1991" and "repressed person". It also lists extrajudicial and other repressive bodies. It outlines the motives for repression (class, national, political, religious, social) and forms of repression (exile, deportation, banishment, internment, deprivation of housing, forced repatriation, dekulakization).

Furthermore, the revised text significantly revised the article defining the categories of rehabilitated citizens (Article 12), added an article defining the categories of citizens affected by repression (Article 13), and significantly expanded the list of forms of repression, which includes 23 items (Article 2). A significant addition was delineating the roles and responsibilities of the National Rehabilitation Commission and regional rehabilitation commissions. These commissions can recognise individuals as rehabilitated or affected by repression (Article 7).

The amendments and additions made to the Law of Ukraine "On the Rehabilitation of Victims of Repressions of the Communist Totalitarian Regime 1917-1991" in 2018 constituted a significant reorganisation of the rehabilitation processes, defining mechanisms for the fair resolution of a range of issues related to the restoration of the rights of citizens affected by repression. For example, between 2019 and 2023, nearly 3,000 proposals from regional rehabilitation commissions were considered, with 2,370 individuals recognised as rehabilitated or affected by repression.

The full-scale war between the Russian Federation and Ukraine has prompted a re-evaluation of the policy of national memory, which has been the subject of legal regulation. The legislative acts adopted after February 24 2022, have implications extending beyond the humanitarian sphere and are of considerable

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consequence to the state's security policy. Although some of these were already under development, the full-scale aggression accelerated the legislative actions concerning their adoption.

In particular, the Verkhovna Rada of Ukraine enacted the Law of Ukraine "On the Basic Principles of State Policy in the Field of Affirming Ukrainian National and Civic Identity" (Law of Ukraine No. 2834-IX, 2022). The law defines the formation and implementation of state policy in this area as a component of ensuring Ukraine's national security. Given that historical memory is an integral part of national identity (as defined in the law as "Ukrainian national identity"), this law plays a significant role in national memory policy. Among the areas of civic-patriotic education (one of three components of state policy in the field of affirming Ukrainian national and civic identity), the organisation of a comprehensive study of the history of Ukrainian state formation, stages of the struggle for the restoration of statehood, and the dissemination of relevant information in Ukraine and internationally are defined. These directions align with the objectives of the Ukrainian Institute of National Memory (UINM), which serves as the central executive body responsible for implementing state policy in the restoration and preservation of the national memory of the Ukrainian people (Ukrainian Institute of National Memory, 2020).

Among the legal acts of Ukraine during the full-scale war, which are significant tools in the policy of national memory, is also the Law of Ukraine "On Condemnation and Prohibition of Propaganda of Russian Imperial Policy in Ukraine and Decolonization of Toponymy" (Law of Ukraine No. 3005-IX, 2023). For the first time, the law employed the term "decolonisation," although its precise definition was not provided. In contrast, the legislator introduced the concept of "Russian colonial/imperial policy," defining it as "a system of measures aimed at subjugation, exploitation, and assimilation of the Ukrainian people, carried out by administrative bodies, armed formations, political parties, non-governmental organisations, institutions, enterprises, groups, or individual citizens (subjects)" of all state entities that existed throughout Russian history (from the Muscovite Tsardom to the Russian Federation, including the Soviet Union). The legislation recognises Russian imperial policy as criminal and prohibits the dissemination of propaganda associated with this policy and its symbolism. It is important to note that the law not only delineates the procedure for removing symbols related to the Russian colonial past from public spaces but also specifies the applicable administrative levels.

The Law of Ukraine "On Condemnation and Prohibition of Propaganda of Russian Imperial Policy in Ukraine and Decolonization of Toponymy" (informally known as the "decolonisation law") represents a logical progression of the decommunisation processes that have been ongoing in the country since 2015 (Law of Ukraine No. 3005-IX, 2023). Moreover, the law reflects a strong public demand for the removal of symbols associated with both the communist totalitarian and the Russian imperial past. For example, in the initial months of the full-scale Russian-Ukrainian war, over 65% of respondents expressed support for the renaming of streets bearing Russian or Soviet names. In comparison, 71% endorsed the dismantling of monuments associated with Russia (as reported by the sociological group "Rating" (2022)). Consequently, the public initiative, which emerged in response to the invasion of the Russian Federation in Ukraine in February 2022, prompted the actions of public authorities in collaboration with civil society organisations towards the legal regulation of processes to overcome the Russian imperial colonial past.

Discussion

In analysing the legislative support for public policy on national memory in Ukraine, it is essential to consider the role of this legislation as an important tool influencing societal processes by establishing mandatory legal rules of conduct for policy actors. The existing legislative base in the field of national memory comprises several Ukrainian laws that contain conceptual foundations particularly relevant to the historical memory issues of Ukrainian post-colonial society.

The formation of the legislative base in the area of national memory occurred during the democratisation of Ukrainian society, the development of Ukraine as a legal state, and the restoration of the national identity of the Ukrainian people. These laws were enacted by a surge in public interest in specific matters about national memory. For instance, the "decommunisation laws" and the "decolonisation law" were responses by public authorities to societal demands that emerged in response to the Euromaidan and the Revolution of Dignity (November 2013 – February 2014) and the beginning of Russian aggression against Ukraine in February 2014. It culminated in the full-scale invasion by the Russian Federation into Ukraine on February 24 2022. For instance, the so-called "Leninfall" during the Revolution of Dignity prompted the adoption of

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the Law of Ukraine "On the Condemnation of Communist and National Socialist (Nazi) Totalitarian Regimes in Ukraine and Prohibition of Propaganda of Their Symbols".

As the former head of the Ukrainian Institute of National Memory, Volodymyr Viatrovych observed that the decommunisation laws "were not imposed from above but rather reflected the prevailing moods within society, providing these moods with clear and legitimate frameworks" (Viatrovych, 2023). It is beyond doubt that these laws had a profound social impact. Concurrently, they attracted considerable criticism from both Ukrainian and foreign experts. For instance, Barbara Törnquist-Plewa and Yuliia Yurchuk identified elements of Ukrainian "post-colonial hybridity" in memory policy within the decommunisation laws, noting their symbolic nature, manifested in the "rhetorical, almost poetic language" in which they were written (Törnquist-Plewa, & Yurchuk, 2019). In contrast, Tetiana Zhurzhenko, in comparing the legislation of Ukraine in the field of national memory prior to 2015 with the decommunisation laws, has described them as "much more ambitious and comprehensive" (Zhurzhenko, 2022).

In our estimation, although the decommunisation laws were imbued with specific symbolism, they played a pivotal role in the institutionalisation of the policy of national memory in Ukraine. The legislation above constituted the legal foundation for regulating memory policy about the most pressing and critical issues in Ukrainian 20th-century history. The legislation established effective mechanisms for overcoming the legacy of communist totalitarianism and constructing the national memory of the Ukrainian people's struggle for state independence. These laws became a vital instrument in countering Russian historical myths, facilitating the restoration of historical justice, and initiating processes that ensured the consolidation of Ukrainian society. Furthermore, adopting these laws demonstrated a collaborative relationship between state authorities and civil society organisations in the legislative process. For instance, this process involved the public organisation "Center for the Study of the Liberation Movement" and the coalition of leading Ukrainian experts and civil society organisations "Reanimation Package of Reforms Coalition".

Regarding the Ukrainian law "On the Holodomor of 1932-1933 in Ukraine," scholars have identified it as the inaugural significant step towards formally recognising the Holodomor as genocide (Vasylenko, 2013). Additionally, it has been posited that this legislation is a potent instrument for shaping collective national memory (Coulson, 2021). It is widely acknowledged that this law played a pivotal role in shaping public policy on national memory, particularly about the recognition of the Holodomor of 1932-1933 as genocide against the Ukrainian people. The adoption of this law was due to the political will of President Viktor Yushchenko, during whose tenure (2005–early 2010) political and legal assessments of this national tragedy were made. It resulted in the holding of the most significant number of commemorative events for the victims of the Holodomor at local, national, and international levels. Memorials and monuments were established across Ukraine and abroad. A vast amount of documentary and oral testimonies were opened and published. Significant scholarly research was conducted, and progress was made in gaining international recognition of the genocide of the Ukrainian people.

The Ukrainian Law on the Rehabilitation of Victims of Repressions of the Communist Totalitarian Regime 1917-1991 has also generated considerable debate and diverse evaluations among Ukrainian scholars and experts. Among the positive changes and additions are the expansion of the categories of the repressed, the presence of a list of forms of repression, the definition of procedures for restoring the rights of the victims, the definition of the time limits of crimes committed by the Soviet authority, the definition of critical terms. Among the shortcomings are the absence of the motives and normative acts under which the repressions were carried out, the absence of a rehabilitation procedure for former employees of punitive-repressive organs, the absence of the vital concept of "rehabilitation" (Demianchuk, 2023; Zakharov, 2018; Prots & Kopeltsiv-Levytska, 2023; Rozhkova, 2018).

The Law of Ukraine, "On the Fundamental Principles of State Policy in the Sphere of Affirming Ukrainian National and Civic Identity," received a positive evaluation among experts. In particular, Doctor of Philosophy Nataliia Kryvda (Stozhary, 2024) called it a "growth point for Ukraine," although she stated the need for its future refinement. Indeed, this law is extremely important for the consolidation of the Ukrainian nation, and its adoption during a full-scale war can be seen as a weapon against the aggressive Russian policy towards Ukraine.

Meanwhile, the legislative base's development and improvement in the national memory field in Ukraine continues. In this context, we propose for discussion an issue that, in our opinion, requires urgent resolution:

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– It is imperative that the legislative activity of public authorities be expedited in collaboration with civil society organisations to adopt a particular legislative act that would directly regulate the policy of national memory in Ukraine. This necessity has become particularly acute during the full-scale Russian-Ukrainian war, which poses a threat to the country's territorial integrity, state sovereignty, constitutional order, and national identity. In these conditions, the national memory policy is vital in ensuring the state's national security. At the beginning of 2024, the Ukrainian Institute of National Memory developed and submitted the draft Law of Ukraine for public discussion, "On the Principles of State Policy on the National Memory of the Ukrainian People" (Ukrainian Institute of National Memory, 2024). It defines the legal bases of national memory policy, its goals, main principles, tasks, policy subjects, and their powers. It is important to emphasise that this draft law incorporates two key provisions regarding national memory policy: 1) It serves to consolidate the Ukrainian people around a common past; 2) It constitutes a component of the foundations of Ukraine's national security, an essential factor in forming societal immunity against human rights violations. In light of the above, it seems appropriate to include the protection of national interests as a fundamental principle of national memory policy. This principle is the first and fundamental basis of the state's internal policy in the Law of Ukraine "On the Principles of Domestic and Foreign Policy" (Law of Ukraine No. 2411-VI, 2010). Threats to Ukraine's national security directly threaten the realisation of national interests and the preservation of national values (Law of Ukraine No. 2469-VIII, 2018). Consequently, the state's external and internal political activity is oriented towards ensuring its national interests and security. It is achieved by counteracting humanitarian aggression, strengthening the identity of the Ukrainian nation, and so forth. In this context, the policy of affirming Ukrainian national and civic identity is defined as a component of ensuring national security, and national memory is an integral characteristic of the Ukrainian nation as a distinctive community (Decree No. 392/2020, 2020).

Conclusions

Legislative support for public policy on national memory in Ukraine is provided by legislative acts (the Constitution of Ukraine and Ukrainian laws), which contain the conceptual foundations and play a vital role in forming and implementing the policy, meeting the requirements of international law. The legislative base in the field of national memory has been developed throughout the entire period of state independence and, to some extent, has reflected the country's political situation and public moods. The active phase of lawmaking has occurred over the last ten years and continues today.

The legislative framework in the field of national memory consists of:

- Legislative acts that contain the conceptual framework and play a vital role in the formation and implementation of the public policy of national memory;
- Legislative acts of an organisational and regulatory nature that ensure the activities of the main actors of the public policy of national memory.

Significant achievements in Ukraine's legislative support of public policy on national memory can now be acknowledged. A series of legislative acts containing the conceptual foundations of national memory policy have been adopted. However, the issue of adopting a special law defining the basic principles of national memory policy in Ukraine and ensuring comprehensive regulation of its formation and implementation still needs to be solved. Currently, such a bill is in the development stage.

Further scientific research will focus on studying subordinate acts operating in national memory. It will allow for assessing the completeness of memory policy regulation at all management system levels and identifying problematic issues. Additionally, the legal support of memory policy in the European Union and individually in EU member states will be examined. It will help form the theoretical basis for Ukraine's integration into the memorial space of Europe.

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Mind games' potential to increase learning: worth investigating further

Потенціал інтелектуальних ігор для покращення навчання: варто подальшого дослідження

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Written by:
Nataliia Tarasiuk[1]
https://orcid.org/0000-0003-4514-6911
Nataliia Osipchuk[2]
https://orcid.org/0000-0002-3186-6806
Ilona Prykhodko[3]
https://orcid.org/0000-0001-5106-2218
Alina Maslova[4]
https://orcid.org/0000-0002-1993-4837
Olga Goncharova[5]
https://orcid.org/0000-0002-1084-7112

Abstract

Gamification has been used to address educational challenges on a constant basis, but a gap remains in the effects of mind games on executive functions such as memorization, creativity, and cognitive flexibility. The current study outlines the influence of mind games for exploratory behavior and exploitatory behavior on memorization, creativity, and cognitive flexibility. These games were analyzed from the viewpoint of exploration-exploitation types' characteristics. For quantitative data analysis, the paired t-test was carried out to compare pre- and post-experiemntal results, whereas the independent sample t-test was used for determining which set of mind games exerted more effect. Results demonstrated the prevalence of mind games for exploratory behavior on students' memorization, creativity, and cognitive flexibility.

Анотація

Гейміфікація постійно використовується для вирішення освітніх проблем, але залишається прогалина у вивченні впливу інтелектуальних ігор на запам'ятовування, творчість та когнітивну гнучкість виконавчих функцій. У цьому дослідженні описано вплив інтелектуальних ігор на дослідницьку та експлуататорську поведінку на запам'ятовування, креативність та когнітивну гнучкість. Ці ігри були проаналізовані з точки зору характеристик типів "дослідництво-експлуатація". Для кількісного аналізу даних було проведено парний t-тест для порівняння результатів до і після експерименту, тоді як незалежний вибірковий t-тест використовувався для визначення того, який набір інтелектуальних ігор мав більший ефект.Результати продемонстрували переважання інтелектуальних ігор для

[1] Ph.D (Education), Associate Professor of the Foreign Languages Department, National university of Water and Environmental Engineering, Ukraine. WoS Researcher ID: HOH-9811-2023
[2] Ph.D (Education), Associate Professor of the Foreign Languages Department, National university of Water and Environmental Engineering, Ukraine. WoS Researcher ID: KYP-6226-2024
[3] Ph.D (Philological sciences), Associate Professor of the Department of Methodology of Teaching Germanic Languages, Bogdan Khmelnitsky Melitopol State Pedagogical University, Ukraine. WoS Researcher ID: V-7718-2017
[4] Ph.D (Education), Associate Professor of the Department of Methodology of Teaching Germanic Languages, Bogdan Khmelnitsky Melitopol State Pedagogical University, Ukraine. WoS Researcher ID: KYQ-6654-2024
[5] Ph.D (Education), Associate Professor of the Department of Methodology of Teaching Germanic Languages, Bogdan Khmelnitsky Melitopol State Pedagogical University, Ukraine. WoS Researcher ID: KYQ-6776-2024

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Keywords: exploratory behavior, exploitatory behavior, mind game, creativity, memorization, cognitive flexibility.

дослідницької поведінки на запам'ятовування, креативність та когнітивну гнучкість студентів.

Ключові слова: дослідницька поведінка, експлуататорська поведінка, інтелектуальні ігри, креативність, запам'ятовування, когнітивна гнучкість.

Introduction

In the continually expanding field of education, the development of innovative techniques to improve learning outcomes remains a vital priority. Among the different ways examined, the employment of mind games—also referred to as cognitive training games—has attracted substantial interest. These games are deliberately created to challenge and stimulate diverse cognitive functions, hence holding potential to greatly alter learning processes and outcomes. Despite their growing popularity among educators and learners, the empirical validation of their effectiveness continues to be a contested issue within the academic community.

Mind games are hypothesized to augment cognitive abilities such as memory, creativity, and cognitive flexibility, all of which are integral to effective learning. Preliminary empirical studies have reported promising results, indicating that regular engagement with these games can lead to quantifiable improvements in cognitive function and academic achievement. Reseachers addressed the issues of their effect in the domains of education of philosophy and logic, general knowledge, and skill level (Duman et al., 2023; Güneri & Korkmaz, 2023). An intriguing area in the field of mind games are comprehensive advantages for effective use of leisure time and their effects on memory and cognitive skills (Melike, 2021). However, the existing research is characterized by a heterogeneous mix of methodologies and varying degrees of methodological rigor in the multidimensional development of students, resulting in a body of evidence at different grade levels.

Furthermore, another important research issue correlated with mind games is exploratory and exploitatory behavior in learning. The significant performance implications of exploratory learning and exploitative learning have come to the fore in studies about their contingent value in active learning (Lyu et al., 2023). Despite the growth of learning literature about the exploration-exploitation spectrum, there is a research gap in the effect of some specific types of mind games with exploratory and exploitatory behavior on creativity, memorization, and cognitive flexibility. No one, to the best of our knowledge, has delineated this issue before to provide more definitive guidance regarding their application in educational contexts together with the advancement of mind games' effect on memory, creativity, and cognitive flexibility.

Given the potential of mind games to transform educational practices within the exploration-exploitation spectrum, there exists a pressing need for more sophisticated and methodologically rigorous research. This paper endeavors to reveal if playing mind games that encourage exploratory or exploitative behavior affects memory, creativity, and cognitive flexibility.

We address the following research questions:

1. Does playing mind games that encourage exploratory or exploitative behavior affects memory, creativity and cognitive flexibility?
2. Which mind games lead to larger gains in memorization, creativity and cognitive flexibility?

The rest of the paper is organized as follows: The introduction presents and discusses findings about mind games and exploratory and exploitatory behavior. The literature review highlights the influence of mind games on creativity, memory, brain plasticity, and the exploration-exploitation spectrum within them.

Methodology includes information about participants and research instruments. Results and Discussion present and discuss the outcomes of the experiment, and it is defined if mind games with exploratory or exploitatory behavior are better. Conclusion and limitations present summaries of the research paper.

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Literature review

The number of research papers sheds new light on the mind games as effective guides in the framework of education programs (Esentaş, 2021; Anunpattana et al., 2021). In a study by Turkoglu, it is determined that "game-based cognitive development programs" have a crucial impact on children (Turkoglu, 2019). With this in mind, the impact of learning activities based on mind games on creative abilities has been inverted (Mustafa, 2023). The creative problem-solving scale was administered to students in the control and experimental groups and revealed the positive effect of mind games on divergent thinking, convergent creativity, general knowledge, and skills subdimensions of creativity together with academic success. Paralellism between the results obtained compared with literature and the results of research related to creativity was determined in reviewed research papers (Vidal, 2010).

Following these results, there has been a cluster of recent studies on expanding memory through scientifically designed games (Heiman, 2014). They focus on assessment of paricipants' neuropsychological status (Hesselberth & Schuster, 2008). The research gap is revealed in the lack of evidence about the influence of brain boosters on memory as the results of memory tests.

There is an emerging paradigm of game-based learning predicated on theories of situated cognition and overall efficiency of cognitive skills (Pitic & Pitic, 2022) but there is a lack of studies about the influence of mind games on cognitive flexibility.

The reviewed research paper by Franciosi S., suggests that simulation games can induce learners to generate multiple connections between new vocabulary and episodic, emotive, motor-sensory, and linguistic memory networks (Franciosi et al., 2016) The main point is that specifically vocabulary and memory games have been investigated. Within this scope, the studies have been subject to the number of merits due to them. Research on mind-game films has tended to focus profoundly on crossmemory practices by enlarging the possible manipulations of inconsistent memory related to mind games (Hesselberth & Schuster, 2008).

We initiated research to highlight the possibility of memorization, creativity, and cognitive flexibility improvements due to mind games without exposure to vocabulary content, so-called mind games or brain boosters for exploratory and exploitatory behavior. There remains a paucity of evidence if the previously mentioned executive functions that enable individuals to plan, focus attention, remember instructions, and juggle multiple tasks successfully are changed after playing mind games.

Exploratory behavior and exploration in active learning have received scholarly attention in recent years (Han & Fan, 2021; Liquin & Gopnik, 2022; Hera et al., 2022; Kuang et al., 2023; Lyu, 2022). The most striking results of research are conditions that induce exploratory behavior tasks with complex and dynamic decision-making characteristics (Hardy et al., 2014), error-framing instructions on exploration (Hardy ety al., 2014), specific stimulus information (what), spatial location (where), contextual information (which), observational recency and time of day (when) (Johnson et al., 2012).

The combined version of exploratory-exploitative learning balance has been investigated profoundly in salesperson's self-regulated learning (Han & Fan, 2021). The exploration-exploitation spectrum is differentiated by the state of mind openness dimension. N. Herz outlines findings about openness as a dynamic state that variates from the ability to rely on existing knowledge (Herz et al., 2020) and perform the actions that you know are already awarding (exploitation) to the ability to learn something new, explore the environment, to do search, risk-taking, discovery and use flexibility (Millar et al., 2017). Exploratory behavior in learning is characterized by encoding information in a more meaningful way in the following types of exploration: guided, random, directed and enactive. (Bell & Kozlowski, 2008; Liquin & Gopnik, 2022).

Mind games for exploratory and exploitatory behavior have been analyzed from the viewpoint of exploration-exploitation types' characteristics. These games are open for access only after prior and free of charge registration.

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Table 1.
Mind games for exploratory behaviour

	Names of mind games for exploratory behaviour	Exploration types' characteristics
1.	**Task-switching** You are given questions and you have to respond them yes/no. You are shown pictures and you have to define if they match with previous ones. https://www.brainturk.com/taske?tour=1 (Multi Task Switching game (2023, July 29))	Enactive exploration No guidance Train brain's flexibility to think about multiple concepts simultaneously by adapting exploratory behavior to new task-switching circumstances the learner chooses to explore options which will be more informative
2.	**Inhibition** Hit the moles of the target color as fast as you can. Avoid the moles with dynamites and double tap those with helmets. https://www.cognifit.com/aplicaciones/html5/index/game/whack-a-mole (CogniFit. Brain Training. Whack-a-mole (2023, July 29))	Guided exploration (tutorial before the game) External direction on learning and development opportunity progress Ability to adapt behavior to new circumstances
3.	**Planning** Blocks of various shapes are arranged to create layers https://www.cognifit.com/aplicaciones/html5/index/game/blockout ((CogniFit. Brain Training. Blockout (2023, July 29))	The learner chooses to explore options which will be more informative
		Enactive exploration No guidance Inductive learning promoted in creating new different layers The learner chooses to explore more options overall

Designed as compiled by the authors

This table highlights types of mind games for exploratory behavior in correlation with guided, random, directed, and enactive exploration types' characteristics. Students mostly demonstrate enactive exploration, which includes elements of self-guided exploration and error management with no guidance. While active exploration characteristics are inherent to chosen task-switching and planning mind games and can hence be seen as fostering inductive learning, which includes inquiry and just-in-time learning, guided exploration with tutorials is appropriate to inhibition mind games. Relevant exploration types' characteristics also operate as a mediator between learners' active participation in self-regulatory tasks and their disclosure of exploratory behavior in regard to the strategic maneuvers and psychological tactics employed by participants to get high scores.

Table 2.
Mind games for exploitatory behaviour

	Names of mind games for exploitatory behaviour	Exploitation types' characteristics
1.	This addictive game challenges to think ahead and anticipate the ball's movements. The goal is to predict the path of a bouncing ball and select the correct hole where it will ultimately land. https://www.theepochtimes.com/epochfun/bounce-predicition-4077497 (The Epoch Times (2023, July 29))	Rely on existing knowledge of prediction without task-switching and inhibition
2	Place the coloured balls to match the example. https://www.mentalup.co/samples/game-v2/game18?referrer=brain-booster-games&page=Desktop&ga_dp=%2Fblog%2Fbrain-booster-games (MentalUP (2023, July 29))	Follow one example Rely on existing knowledge of prediction without task-switching and inhibition
3	Jackson drove the tractor to check on the crops. What do you predict that he does next? https://www.tinytap.com/activities/g4i4r/play/making-predictions (Making Predictions (2023, July 29))	Limited options and rely on existing knowledge

Designed as compiled by the authors

The table 2 highlights types of mind games for exploitatory behavior in correlation with such exploitation types' characteristics as limited options and relying on existing knowledge. These chosen mind games

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provide all conditions for exploitatory behavior. Their robustness is observed across predicative nature of these mind games and students' ability to make inferences based on their prior knowledge and beliefs.

Our study contributes to the literature in several ways. We leverage these mind games to investigate which group of mind games (exploratory or exploitatory behavior) effects creativity, memorization, and cognitive flexibility better. We illustrate the potential of positive effects of mind games on correlated constructs that share a common cognitive basis in high-level cognitive processes and develop a reliable and valid scale for measuring the effect of mind games on creativity, memorization, and cognitive flexibility.

To achieve this goal, specific theories have been created. We predict that mind games will be more successful in encouraging exploratory behavior for three reasons. So the first hypothesis is that the effects of mind games for exploitatory behavior on creativity, memorization and cognitive flexibility are lower than the effects of mind games for exploratory behavior.

Firstly, with the adaptive transfer performance of exploratory behavior to new task-switching situations to examine the world, articulation of the cognitive process pathways will be more effective. Second, exploratory learning in active learning approaches shapes the cognitive learning processes that support self-regulated learning and metacognitive activity. Researchers have developed a number of discrete learning interventions, including guided and enactive exploration, to align them with trainees' cognitive self-regulatory behavior (Bell & Kozlowski, 2008). Third, inquiry-based learning processes are best facilitated by exploration, which is appropriate for learning forward models in the reinforcement learning paradigm. (Kuang et al., 2023). Inquiry-based learning promotes the general effectiveness of the educational process by enhancing cognitive flexibility, creativity, and memorization.

In contrast, mind games for exploitatory behavior are limited with fewer options and adhere to proven existing skill sets that utilize known knowledge and capabilities to enhance performance.

The second hypothesis is that the effects of either mind games for exploratory behavior or mind games for exploitatory behavior on creativity, memorization and cognitive flexibility are the same.

Our current study aims to elucidate the observed performance differences in the groups of participants due to the influence of mind games for exploratory and exploitatory behavior on the mentioned correlated constructs.

Methodology

The participants of the experiment were two cohorts of 2nd year students (totaling 60) enrolled in the course "General English " at National University of Water and Environmental Engineering. The intervention with the mind games lasted two weeks.

Participants were assigned to two groups. One experimental group (30 students) was given the set of games of exploratory behavior. They played such mind games as task-switching games (Multi Task Switching Game, 2023, July 29), inhibition brain games (CogniFit. Brain Training. Whack-a-mole, 2023, July 29), and planning mind games (CogniFit. Brain Training. Blockout, 2023, July 29).

Another control group (30 students) played mind games for exploitative behavior. They played the following prediction mind games (The Epoch Times, 2023, July 29), (MentalUP, 2023, July 29), (Making Predictions, 2023, July 29).

Participants were voluntarily recruited through announcement to receive course-credit in the discipline "General English " for participation. The students were aged 19-20 years old and were asked to play mind games and pass tests during class time. They gave informed consent to take part in the study. There was a single-blind study because the study was conducted with no knowledge of the group to which they were allocated.

The independent variables of the experiment were: 1) the number of participants in the experimental training; 2) duration of the experimental training. The dependent variables were results of pre- and post-experimental tests on creativity, memorization and cognitive flexibility.

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Tests were given before and after playing mind games to gauge students' capacity for creativity, memorization, and cognitive flexibility. The test questions align with the theoretical foundations of the above-mentioned cognitive functions and effectively represent the constructs measured. The mean scores of the creative, memorization, and cognitive flexibility scores (in the context of the experimental and control groups) were calculated in total through the statistical program JASP.

The short-term visual memory test for images was used to match test questions to participants' memorizing abilities. “Testing” is also called “active recall” or “retrieval practice.” In the study about retrieval-based concept mapping by Blunt J., the method the students used to test their recall as “recalling as much of the information as they could on a free recall test” has been elaborated (Blunt & Karpicke, 2014). Such tests are supposed to be an efficient measurement of the ability to be engaged in the process of active recalling. The effectiveness of such kinds of short-term memory tests was verified by Jennifer M. Verive’s research paper (Verive & McDaniel, 1996). With this simple test, they were capable of testing their short-term memory for images. Students had to memorize as many of the 16 pictures as possible within 20 seconds and choose among 32 different pictures on the result entry page.

Creativity was checked via the creative ability test, based on Frank Williams' theory of creative thinking (Williams, 1979). This test measures creative ability by means of a self-rating questionnaire. Such kinds of tests belong to the measurement of creative thinking in the general domain. Research findings show that creativity tests can be used as an objective measure of creative abilities (Althuizen et al., 2010).

This creativity assessment was in percentage score and included a general creativity scale on the four dimensions: curiosity, complexity, imagination, and risk-taking.

As for the cognitive flexibility test, students had to read each statement and respond by selecting how much they agreed or disagreed with each of them. The results of research validate the use of cognitive flexibility tests as an impartial gauge of cognitive flexibility (Johnco et al., 2014). The statements dealt with their beliefs and feelings about their own behavior. Points were awarded for the cognitive flexibility scale feedback, which was compared to the students' average score of 55 points.

Table 3.
Tests identification

Name of the test	Test type	Average score
Short-term memory for images	Recall the object	16 pictures
Creative ability test	Answer the questions	62,1%
Cognitive flexibility test	Agree/disagree	55 points

Designed as compiled by the authors.

Learners’ results were examined at one data collection time to compare test results before and after playing mind games. In order to ensure reliability, tests were piloted and marked consistently. The horizontal nature of the experiment allowed to test the which set of mind games (exploratory or exploitatory) is more effective.

The research data were analyzed in stages. These stages are as follows:

1) The data from the pre-test and post-test were transferred to the statistics program.
2) The mean scores of the creative, memorization and cognitive flexibility scores (in the context of the experimental and control groups) were calculated in total through the statistical program JASP.
3) The obtained data were examined for normal distribution and other normality assumptions. The values vary between -1.5 and +1.5, indicating that the data set has a normal distribution and parametric tests can be used (Harlow, 2002)
4) The study used parametric tests (t-tests for related and unrelated samples) once the data as standard.
5) The research findings were presented in the context of the data obtained.

Considering the mean scores of pre-experimental and post-experimental tests, in this study we employed robust t-tests to check up if test results changed after playing mind games.

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First, a paired t-test was used to compare the results of pre-experimental test and post-experimental test data. Two hypotheses were accepted. The null hypothesis is that pre-experimental test and post-experimental test data are the same. The alternative hypothesis specifies that pre-experimental test data is less than post-experimental test data.

Table 4.
Exploratory behavior descriptives

Measure 1	Measure 2	df	p	Mean difference	SE difference	SE Cohen's d
Creativity before	Creativity after	29	< .001	−7.224	1.228	0.125
Memorization before	Memorization after	23	< .001	−1.875	0.392	0.260
Cognitive flexibility before	Cognitive flexibility after	29	0.001	-5.333	1.587	0.086

Designed as compiled by the authors

Degrees of Freedom, p-value, mean difference, standard error of the difference have been indicated within JASP analysis of research data. The analysis reveals a statistically significant difference between pre-test and post test results in creativity, memorization and cognitive flexibility tests. The result is highly significant ($p < 0.001$), and the provided standard errors indicate reasonably precise estimates of both the mean difference and the effect size. The arithmetic mean of the scores of the students in the experimental (mind games for exploratory behaviour) and control groups (mind games for exploitatory behaviour) from the pre-test before the applications were found to be quite close to each other.

Assumption Checks by test of normality (Shapiro-Wilk) demonstrate a deviation from normality and indicate that the null hypothesis (pretest and post test data are the same) can be rejected.

Table 5.
Exploitative behavior descriptives

Measure 1	Measure 2	df	p	Mean difference	SE difference	SE Cohen's d
Creativity before	Creativity after	29	0.385	−0.221	0.751	0.070
Memorization before	Memorization after	23	0.055	−0.583	0.288	0.150
Cognitive flexibility before	Cognitive flexibility after	29	0.220	−0.433	0.552	0.039

Designed as compiled by the authors

Degrees of Freedom, p-value, mean difference, standard error of the difference, standard error of Cohen's d have been indicated within JASP analysis of research data. The analysis reveals a statistically significant difference between pre-test and post test results in creativity, memorization and cognitive flexibility tests. The p value demonstrates the difference between the two measures is not statistically significant at conventional alpha levels. Assumption Checks by test of normality (Shapiro-Wilk) demonstrate a deviation from normality and indicate that null hypothesis (pretest and post test data are the same) can be rejected.

If the normality assumption is met and we have a sample ($n > 25$), then we are permitted to use such 'parametric' t-test as Independent Sample t test. This test has been designed to determine and verify if the results of tests on creativity, memorization and cognitive flexibility by students who played mind games for exploitatory behavior are worse than the ones by students who played mind games for exploratory behavior.

In general, students demonstrate the biggest improvement in cognitive flexibility tests and the smallest improvement in memorization after playing both mind games for exploratory and exploitatory behavior. Moreover, the results of the paired t-Test validate the bigger effects of mind games for exploratory behavior.

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Table 6.
Results of Independent Sample T test (memorization)

Exploratory	Exploitatory	df	p	Mean Difference	SE Difference	SE Cohen's d
1	2	58	0.046	−0.867	0.506	0.264

Descriptives

Type of mind game	N	Mean	SD	SE	Coefficient of variation
Exploratory	30	12.367	2.157	0.394	0.174
Exploitatory	30	13.233	1.736	0.317	0.131

Designed as compiled by the authors

Significant results suggest a deviation from normality. Test of Normality (Shapiro-Wilk). Exploi W=0.934, p=0.063. Explor W=0.938, p=0.082. Both test scores for the exploitative and explorative behavior mind games have p-values greater than 0.05, indicating that there is no significant deviation from normality for either dataset. This suggests that the assumption of normality is not violated for these scores. Specifically, the independent sample T test verifies that results of tests on memorization by students who played mind games for exploitatory behavior are worse than the ones by students who played mind games for exploratory behavior.

Table 7.
Results of Independent Sample T test (creativity)

Exploratory	Exploitatory	df	p	Mean Difference	SE Difference	SE Cohen's d
1	2	58	0.237	−2.203	3.055	0.259

Descriptives

Type of mind game	N	Mean	SD	SE	Coefficient of variation
Exploratory	30	33.121	10.791	1.970	0.326
Exploitatory	30	35.324	12.792	2.335	0.362

Designed as compiled by the authors

Both test scores for the exploitative and explorative behavior mind games have p-values greater than 0.05, indicating that there is no significant deviation from normality for either dataset. The Independent sample T test verifies that results of tests on creativity by students who played mind games for exploitatory behavior are worse than the ones by students who played mind games for exploratory behavior.

Table 8.
Results of Independent Sample T test (cognitive flexiblity)

Exploratory	Exploitatory	df	p	Mean Difference	SE Difference	SE Cohen's d
1	2	58	0.266	−2.467	3.918	0.259

Descriptives

Type of mind game	N	Mean	SD	SE	Coefficient of variation
Exploratory	30	49.567	13.776	2.515	0.278
Exploitatory	30	52.033	16.452	3.004	0.316

Designed as compiled by the authors

According to the test of Normality (Shapiro-Wilk). Significant results suggest a deviation from normality. Exploi W=0.732 $p < .001$ ExplorW=0.555 $p < .001$. The Independent sample T test verifies that results of tests on creativity by students who played mind games for exploitatory behavior are worse than the ones by students who played mind games for exploratory behavior.

Results and Discussion

The research found that mind games were significantly effective in memorization, creativity and cognitive flexibility. The statistical evidence points towards a minor but reliable difference between the two measures in mind games for explorative behaviour. It validates the hypothesis that the effects of mind games for exploitatory behavior are lower than the effects of mind games for exploratory behavior on creativity,

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memorization and cognitive flexibility. The arithmetic mean of the scores of the students in the experimental and control groups from the pre-experimental tests before the applications were found to be quite close to each other. When the post-test scores of the students in the experimental and control groups were compared, it was discovered that the difference between both creativity, memorization and cognitive flexibility sub-dimensions was significantly different in favor of the experimental group (exploratory behaviour). In other words, mind games lead to larger gains in memorization, creativity and cognitive flexibility. Particularly, mind games that foster exploratory behavior have a crucial impact on enhancing students' creativity, memorization and cognitive flexibility abilities.

Table 9.
Average indicators of (pre-experimental test/ post-experimental test)

	Memorization		Creativity		Flexibility	
Types of mind games	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
Mind games for exploratory behavior	11.083	12.958	28.100	35.324	46.700	52.033
Mind games for exploitatory behaviour	11.667	12.250	32.900	33.121	49.133	49.567

Designed as compiled by the authors.

The finding corroborates the outcome to the effect that two groups were almost equivalent in pre-test results but better yielded results were demonstrated after playing mind games for exploratory behavior.

Students used the tutorial as the learning intervention before the mind game on inhibition. External direction on learning and development opportunity progress enhanced the adaptability process. The tutorial serves as proof-of-concept for specifically designed instruction to optimize learners' cognitive resources. It correlates with the variation of self-direction as an inquiry-based activity in inquiry-based learning to direct learners towards an area by giving possible connections and providing evidence (Lameras et al., 2014). Unlike games with adaptive difficulties and complex test stimuli, the adaptive transfer performance was easy because, as it had been investigated by Baniqued et al., the available students' resources were sufficient, resulting in a perceived low load (Baniqued et al., 2015). Even without a tutorial in another mind game, students' executive functions boosted in comparison with baseline cognitive performance. The study by Tian Luo et al., confirms that students are in favour of inquiry-based activity to perceive the ability of their cognitive performance (Luo et al., 2022).

In contrast to a more complex cognitive task-switching game called Pen Em Ap, which had been elaborated by researchers of Illinios University, where participants of the experiment did not improve in tests of complex working memory span (Baniqued et al., 2015), the members of the current experiment yielded better results of memory tests after playing mind games than before. This is due to the relative ease of the mind game and simplicity of the memory test, which confirmed their baseline cognitive performance in memorization of objects.

The results of the current finding somehow align with the Effort Monitoring and Regulation Framework bridge-building approach (Seufert, 2020) when depending on the load demands of a task, learners can adjust their self-regulatory activities, and thus cognitive load can cause or affect self-regulation. Despite the fact that mind games were easy tasks for which learners had sufficient resources and might not activate intensive self-regulatory activities, they had to monitor their efforts and regulate the exploration of more informative options, adapt exploratory behavior to new task-switching circumstances, adjust such executive functions as cognitive flexibility and memorization to understanding and rememorating the tutorial.

The current study included a limited chosen range of mind games within the experiment. Future research can extend inquiry into other mind games that align with other executive functions. Future work can focus more on cognitive resources, as these are presumably associated with the learner's cognitive load while playing specific types of mind games. Finally, the current approach can be extended by including additional epistemic fluency specific features related to activities for students with ADHD.

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Conclusion

Our findings suggest that students' creativity, memory, and cognitive flexibility are greatly improved by mind games that encourage explorative behaviour. Therefore, the task of the lecturer in increased learning is to confront students with exploratory behavior activities, including mind games and at the same time to strengthen appropriate facilitating factors for successful study. Analyzes of epistemic fluency and learners' cognitive load may provide further insights into which exploratory activities are efficient for students and why.

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Legal mechanisms for gambling addiction protection: analysis of an emerging regulatory model in Ukraine

Правові механізми захисту від ігрової залежності: аналіз моделі регулювання, що формується в Україні

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Written by:
Zoriana Toporetska[1]
https://orcid.org/0000-0002-2441-4852
Leonid Shcherbyna[2]
https://orcid.org/0000-0002-1607-8174
Olga Denysenko[3]
https://orcid.org/0009-0006-6968-3702
Stanislav Bilan[4]
https://orcid.org/0009-0000-8424-6873
Orest Kryshtafovych[5]
https://orcid.org/0009-0007-2039-9695

Abstract

The purpose of this article is to analyze the legislation of Ukraine on the protection of gambling players from the formation of gambling addiction, to identify ways and means of protection, to evaluate their effectiveness and to formulate proposals for improving (strengthening) the protection of the rights of gambling players.
The research used general scientific and special scientific methods of scientific knowledge. In particular, the dialectical method of learning the phenomena of the surrounding reality, comparative-legal, systemic-structural, methods of logic (analysis, synthesis, induction, deduction, analogy).
Many prevention measures have already been implemented in Ukraine. In addition, the player is protected by the right to receive free psychosocial assistance in the event of problems with gambling and free medical assistance in the event of a diagnosis of gambling addiction. The state also

Анотація

Метою цієї статті є аналіз чинного законодавства України з питань захисту гравців в азартні ігри від формування ігрової залежності, виявлення способів і засобів захисту, оцінка їх ефективності та формування пропозицій щодо покращення (посилення) захисту прав гравців в азартні ігри.
У дослідженні використано загальнонаукові та спеціально наукові методи наукового пізнання. Зокрема, діалектичний метод пізнання явищ навколишньої дійсності, порівняльно-правовий, системно-структурний, методи логіки (аналіз, синтез, індукція, дедукція, аналогія).
В Україні вже запроваджено багато заходів профілактики. Крім того гравця захищено правом отримати безкоштовну психосоціальну допомогу у разі виникнення проблем з азартними іграми та безкоштовну медичну допомогу у разі діагностування ігрової

[1] Doctor of Science in Law, Associate Professor, leading researcher of scientific laboratory No. 1 of the scientific and organizational center of the National Academy of the Security Service of Ukraine, Kyiv, Ukraine. WoS Researcher ID: GHU-8757-2022
[2] Candidate of Science in Law (PhD), Senior Research Officer, Head of scientific and organizational center of the National Academy of the Security Service of Ukraine, Kyiv, Ukraine. WoS Researcher ID: GBP-6017-2022
[3] Applicant for a Ph.D. degree at The Scientific Institute of Public Law, Kyiv, Ukraine. WoS Researcher ID: KWT-8615-2024
[4] Applicant for a Ph.D. degree at The Scientific Institute of Public Law, Kyiv, Ukraine. WoS Researcher ID: KWT-8639-2024
[5] Applicant for a Ph.D. degree at The Scientific Institute of Public Law, Kyiv, Ukraine. WoS Researcher ID: KWT-8651-2024

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provides free socio-psychological rehabilitation of players during and after treatment for gaming addiction.
The disadvantage is the bringing of the player to administrative responsibility for participating in illegal gambling and the impossibility of recognizing him as a victim in criminal proceedings to compensate for the damage caused by the crime (engagement in the gambling business).

Keywords: gambling, gambling business, gambling disorder, ludomania, player protection.

залежності. Також державою забезпечується безкоштовно соціально-психологічна реабілітація гравців під час та після лікування ігрової залежності.
Недоліком є притягнення гравця до адміністративної відповідальності за участь в незаконних азартних іграх та неможливість визнання його потерпілим в кримінальному провадженні для відшкодування заподіяної злочином (зайняттям гральним бізнесом) шкоди.

Ключові слова: азартні ігри, гральний бізнес, ігрова залежність, лудоманія, захист гравця.

Introduction

A person's desire to play is related to a natural need. There are various game theories formulated in philosophy, psychology, pedagogy and other sciences. In particular, the following game theories are distinguished in psychology:

- *The biological nature of play* (Karl Groos). Based on comparisons of the characteristics of children's play activities and the instinctive activities of young animals, the German psychologist proved that play has a biological nature and is one of the ways of preparing for future serious activities, the main content of a child's life (Groos, 1896);
- *Socio-historical nature of the game* (Grenville-Stanley Hall). The development of the child's psyche is a kind of repetition of the stages of the development of humanity, regardless of the conditions of its life and upbringing. The American psychologist proved that the child's play in form and content duplicates history from the primitive communal system to modern society (Hall, 1921);
- *Psychoanalytic game theory* (Sigmund Freud). Within the framework of this theory, the use of games is considered as a means for the child to express instincts, desires, aspirations that he cannot realize directly in life (Freud, 1923).

Regarding azart (passion), there are two versions of the origin of the word " azart ". According to the first of them, the word "azart" comes from the French word "hasard", which, translated into Ukrainian, means "enthusiasm, zeal, ardor, feverishness". In addition, in French there is the adjective "hasarde", which translates as "risky", and the verb "hasarder", which translates as "to dare, to risk". According to the second version, this word comes from the Arabic name of the dice game "azar" (Pohoretskyi & Toporetska, 2014, p. 11)

Azart (passion) is an innate feature of human nature, which is a source of motivation in various life situations: both positive and negative. It is excitement that motivates a person to participate in sports competitions. But at the same time, excitement drives a person to gamble again and again. Therefore, in our opinion, psychoanalytic game theory and gambling as an innate feature of human nature provoke a person to gamble again and again and contribute to the formation of gaming addiction.

This human nature does not allow the state to completely ban the gambling business in the state, because people are still looking for an alternative to fulfill their passion and start playing illegal gambling games. Then the gambling business becomes a tool of criminal activity. Having passed the path of banning the gambling business from 2009 to 2020, Ukraine has witnessed the state's inability to combat the illegal gambling business. Therefore, in 2020, the gambling business was legalized in Ukraine. But this posed new challenges to the state regarding the development and implementation of legal measures to protect the population from the harmful effects of gambling, and players from gambling addiction.

Ludomania (gaming addiction, gambling disorder) occurs because of a player's abuse of gambling. Gambling addiction is a mental illness. According to the International Classification of Diseases (ICD) issue 10 (ICD-10), which is currently used in Ukraine, ludomania is defined as a pathological tendency to gamble (F63.0), which is classified under the category of disorders of habits and urges (ICD-10 Version:2010, 2010). In ICD-11, which is being implemented in Ukraine, WHO recognized ludomania as

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a mental disorder (6C50) that occurs because of addictive behavior, and included it in the group of mental, behavioral or nervous disorders (ICD-11 for Mortality and Morbidity Statistics, 2019).

But such a disease does not appear all at once, at first a person has certain problems with gambling, but the game does not yet affect his daily life. It takes about 12 months to form a stable gaming addiction and includes the stages of a tendency to addictive behavior (systemic gambler), addictive behavior - problem gambling (problem gambler), pathological behavior - gambling addiction (pathological gambler) (Toporetska et al., 2023, p. 21).

The task of the state is to ensure the protection of the player from this mental illness and to take measures for its prevention, regardless of the chosen model of regulation of the gaming business market (complete ban, restriction or full permission of all gambling). These measures are not limited to health care but require a comprehensive cross-sectoral approach. The more player protection tools are created and implemented by the state, the faster it will be possible to detect problematic gaming behavior and aid the player. A comprehensive approach allows not only to help individual players, but also to reduce the negative consequences of gambling for the whole society.

This study is the first comprehensive study of the mechanisms of protection of gambling players from gambling addiction in terms of their effectiveness. The authors of this study hope to start an active discussion about the need to improve legislation and strengthen the protection of gamblers against gambling addiction

The purpose of this study is to analyze the current legislation of Ukraine on the protection of gamblers from the formation of gambling addiction, to identify ways and means of protection, to evaluate their effectiveness and to formulate proposals for improving (strengthening) the protection of the rights of gamblers.

In accordance with the defined goal, the authors set the following tasks:

1. To analyze the relationship between the regulation model of gambling business and the prevalence of gambling addiction in the state using the example of Ukraine.
2. To single out the methods and means of protecting the rights of the gambler under the legislation of Ukraine.

Theoretical framework

Most scientific works in Ukraine are devoted to issues of legal regulation of the gambling business or the fight against the illegal gambling business by means of operational investigative activities or criminal proceedings.

D. O. Getmantsev in his monograph examines the general issues of legal regulation of contracts on games, concepts and types of lotteries, the main principles of regulation of the lottery market in Ukraine and foreign countries (Getmantsev, 2008, p. 40). R. O. Pinyaga devoted his candidate's thesis to the crimes related to gambling (Pinyaga, 2015, p. 21). In this work, the author emphasizes that gambling is a risky activity that is always associated with financial fraud, including in banks and money laundering from this crime. M. A. Pohoretskyi and Z. M. Toporetska consider the peculiarities of the investigation of the gambling business (Pohoretskyi & Toporetska, 2015, p. 250). In this monography the authors cite modern ways of disguising gambling business for lottery activity, as well as paying attention to the peculiarities of legalization of criminal proceeds from gambling business using the banking system. V. V. Vysotska considers the issue of criminal-legal analysis of the crime of occupation by gambling business (Vysotska, 2016, p. 172).

Later, Z. M. Toporetska prepared a thorough work on public management of the gaming business, which became the methodological basis of this article (Toporetska, 2022a).

These works are very valuable, the general theoretical positions set forth by the authors underlining the research.

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At the same time, no work in Ukraine considered the nature of games in general and gambling in particular, as well as what motivates a player to play again and again, how gambling addiction is formed, and what is the relationship between specific mechanisms of legal regulation and the development of gambling addiction.

Based on the gaming theories outlined above, we note that states choose different models of legal regulation of the gambling business market: prohibitive (complete prohibition of gambling business in the state); permissive (full permission of all gambling games); protectionist or monopolistic (the state exercises its monopoly right and restricts the gaming business market to protect society from the spread of gaming addiction). Ukraine has gone through all these forms and currently has chosen the most correct one - monopoly. However, currently there are no works in Ukraine devoted to the study of this model in relation to the existing mechanism of protecting players from gambling addiction.

However, currently there are no works in Ukraine dedicated to solving the problems of gambling player protection, including those carried out by legal organizers of gambling games based on licenses, considering a complex legal approach from the standpoint of various branches of law.

Methodology

This comparative legal study was carried out by studying primary legal materials, as well as secondary legal materials related to the studied legal issues. The theoretical and empirical basis of the research is represented by legislative acts, theoretical research.

The methodological basis of the study was made up of general scientific methods of cognition: the dialectical method of cognition of the phenomena of the surrounding reality and the comparative-legal method for comparison of the rights and opportunities of a gambler, which are defined in the norms of various branches of Ukrainian law.

The main research method was chosen as a regulatory and legal research. It is carried out by studying primary legal materials, as well as secondary legal materials related to the researched legal issues. Data were collected through document study and library research and analyzed using a qualitative approach and logic methods.

Methods of logic (analysis, synthesis, induction, deduction, analogy), absolute and comparative advantages were used to identify and generalize the problems that arise during the protection of the rights and interests of gambling players and to formulate proposals for their solution.

Several research techniques and methods were used in the study. First, with the help of a conceptual analysis, the current state of legal regulation of issues of protecting society from gambling addiction is determined. For this, several research methods and content analysis methods were used to study the legislation as the basis of the research. This made it possible to determine the normative acts regulating the gambling business and the issue of implementing mechanisms for their protection. In the future, a complex of general scientific methods, analysis and synthesis, generalization, logical-structural analysis, control was used to determine the legal status of the player.

In accordance with the system-structural approach the authors were able to investigate the issue of the state-created system of bodies, opportunities, and mechanisms that can be used by the player and other persons if they suffer due to problematic gaming behavior or gambling addiction. This made it possible to identify the main shortcomings in the legal regulation, which lead to the violation of the rights of players to be protected against the development of gaming addiction.

Results and Discussion

The influence of the gambling business regulation model in the state on the prevalence of gambling addiction

In its historical development, Ukraine has gone through all three main models of state regulation of the gambling market: the period of permissiveness (1991-2009); the period of complete prohibition of all

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gambling (2009-2020); the period of strict state regulation and market restrictions (2020 till now) (Toporetska, 2022a).

Although Ukrainians in general are not a gambling nation by nature, the model of market regulation affects the specific player who plays in them. Therefore, even if a small prevalence of gambling addiction is officially recorded in society, this does not mean that gambling does not have an impact on individual players.

So, for example, during the period of permissive gambling (1991-2009), slot machines were allowed to be placed not only in temporary buildings, but also in the premises of cafes and shops, so they were freely accessible to the public. At that time, the legislation of Ukraine did not contain any tools to protect the player from the formation of gaming addiction. Therefore, players who had gambling problems often found themselves alone with their problems. These mental problems were joined by economic ones (serious debts), which the player could not cope with on his own. That is why there were cases where code players committed suicide due to threats from "creditors".

From 2009 to 2020, there was an absolute ban on the gambling business in Ukraine, and the organization or conduct of gambling was recognized as a crime. But the state could not effectively fight against the illegal gambling business, which became widespread, especially on the Internet (Pohoretskyi & Toporetska, 2015). At the same time, the player was not recognized as a victim of this crime but was actually a criminal. At the same time, players could be held administratively liable for participating in illegal gambling under Art. 181 of the Code of Ukraine on administrative offenses. Accordingly, due to the lack of a legal gambling business in the country, the state did not recognize the fact that a person in Ukraine has such a disease as gambling addiction, so the player did not receive any protection and assistance from the state. A complete ban on the gambling business, in our opinion, is the most dangerous form of state regulation of gambling in terms of danger to society as a whole and players of such illegal gambling.

In 2020, gambling business is allowed in Ukraine by Law No. 768 (Law No 768-IX, 2020). As you know, the gambling business is a high-risk type of activity, since gambling can form a person's gambling addiction (Toporetska, 2022a, p. 227). This requires the state to take special approaches to the state regulation of this market, which would ensure the consideration and protection of the public (public) interest and public values before the interests of business protection or the interests of filling the budget (Toporetska, 2022b, p. 153).

Since 2020, a new stage of state regulation of gambling has begun in Ukraine, which for the first time provided opportunities to protect the rights of gambling players. In particular, the territorial restriction of gambling establishments has been introduced; introduced player identification to prevent free access to gambling establishments; the Unified register of players who are restricted from accessing gambling establishments and/or participating in gambling was launched; the obligation for the organizers to apply the principles of responsible gaming and others was introduced. All these measures should strengthen the protection of gamblers against gambling addiction. In addition, the adopted Law No. 768 initiated the formation of state policy on the protection of society from gambling addiction. During these four years of Law No. 768, many initiatives have been implemented, so today the player can protect himself from gambling addiction or to get help in the event of such a disease.

Ways and means of protecting the rights of a gambler under the legislation of Ukraine

But as the practice of implementing Law No. 768 showed, Ukraine did not take enough measures to protect society from gambling addiction and protect players from gambling addiction. The problem became even more acute with the beginning of full-scale military operations on the territory of Ukraine, because the stress of war provokes people to seek escape from reality into the virtual world of gambling, so the population has become even more vulnerable to the influence of gambling.

The problem was brought to the level of the National Security and Defense Council of Ukraine and the level of the President of Ukraine by Decree of the President of Ukraine No. 234/2024 from April 20, 2024, the decision of the National Security and Defense Council of Ukraine from April 20, 2024 "On countering the negative consequences of gambling on the Internet" was put into effect (Decree No. 234/2024, 2024). This decision provides for the introduction of a ban on advertising of gambling games, the obligation to set game limits for players (regarding time and costs), the obligation for the Cabinet of Ministers of Ukraine

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to implement the State Online Monitoring System, blocking of illegal internet sites of gambling organizers. Also, to prevent the spread of the disease, a national information campaign is planned regarding the dangers of gambling, threats of gambling addiction, methods of prevention and treatment of gambling addiction, contacts of institutions that aid persons with gambling addiction. Separately, it should be noted that the state recognized the inadequacy of means of protection for gamblers, therefore, by this decision, the Ministry of Health is directly obliged to adopt a protocol for the treatment of gambling addiction, and the Ministry of Social Policy - a standard for social and psychological rehabilitation of persons with gambling addiction, because this is the basis without which to overcome game addiction is impossible.

As ludomania is a mental illness, a person suffering from such an illness has the right to receive the necessary medical care. The Ministry of Health of Ukraine, published for public discussion draft of a new clinical protocol for medical care "Gaming addiction (gaming addiction)" (Ministry of Health of Ukraine, 2024). The protocol was developed with the participation of the author Z. Toporetska. This is the first medical document in Ukraine regarding the treatment of gaming addiction, which should significantly improve the diagnosis and treatment of this disease. Until now, psychiatrists were guided by foreign sources, but not every doctor speaks English or other languages, so access to such treatment protocols was quite difficult for doctors. Patients with gaming addiction can receive medical care free of charge according to the medical service packages of the National Health Service of Ukraine. However, a person must first consult a family doctor, who must issue a referral for receiving specialized medical care from a psychiatrist, since only a psychiatrist can establish a diagnosis of severe gaming addiction.

However, a family doctor can help a player who has a propensity for addictive behavior or addictive behavior but does not yet have a gambling addiction. In accordance with the order of the Ministry of Health of Ukraine dated 23.12.2023 No. 2118 "On the organization of providing psychosocial assistance to the population", family doctors are granted the right to provide psychosocial assistance to the population (Order No. 2118, 2023). The same help can be provided by psychologists of general or cluster health care institutions upon the referral of a family doctor or upon the patient's direct referral to a psychologist. A capable network of health care institutions of Ukraine has been created to ensure the availability of medical care for the population of Ukraine (Bilan, 2022, p. 159). All psychosocial care is free for the patient.

A gambler with gambling problems after treatment or during treatment has the right to receive a social service for socio-psychological rehabilitation of persons with gambling addiction. Social service includes the following set of services: counseling; psychological assistance (counseling, support, diagnosis, counseling, correction, psychotherapy, rehabilitation); assistance in obtaining free legal aid; representation of interests (Order No. 429, 2020). The service is also provided free of charge for citizens. However, the rules for its provision have not yet been determined.

The developed draft of the order of the Ministry of Social Policy of Ukraine "On approval of the State Standard of Social Services for Social and Psychological Rehabilitation of Persons with Gaming Addiction" was published for public discussion on 07/09/2024 and, we hope, the document will be adopted soon (Ministry of Social Policy of Ukraine, 2024). This document will allow doctors and social workers to cooperate more effectively and provide comprehensive assistance to persons with gaming addiction.

One of the principles of state policy in the field of gambling business is the fight against gambling addiction (ludomania). Law No. 768 provides for the responsibilities of the organizer of gambling games, which should reduce the risks of gambling addiction in players. These are: to adhere to the principles of responsible gaming, to ensure identification of players at the entrance to the gambling establishment or before starting to play on the Internet, to prevent participation in the game by persons under the age of 21 and those who are included in the Unified Register of Persons with Restricted Access to Gambling Institutions and participation in gambling, etc. Also, the organizers have a general duty to take measures to combat gambling addiction (ludomania), including placing informational materials on gambling addiction and responsible gambling on age restrictions, in places where activities are carried out in the field of organization and gambling. player, chances of winning, principles of responsible gaming, signs of pathological and problematic gambling addiction and places where you can get help in case of gambling addiction (Law No 768-IX, 2020). All these measures are measures to protect legal gamblers from gambling addiction.

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However, illegal gambling still exists in Ukraine, and it is difficult to protect players from its harmful effects. Yes, the player's administrative responsibility for participating in illegal gambling and punished some penalty. But the player can check the legality of the game by obtaining information from the relevant registers of gambling operators maintained by the Gambling and Lotteries Regulatory Commission. Therefore, the player himself is responsible for checking the legality of the activity of a certain land-based or online gambling establishment, although the player as a consumer must be protected by the state. Therefore, in our opinion, administrative responsibility for participation in illegal gambling can arise for the player only if he knows about the illegality of such gambling.

The problem of bringing the player as an offender to administrative responsibility is related to the problem of the impossibility of recognizing the player as a victim in criminal proceedings initiated based on the facts of employment in the gambling business (Article 203-2 of the Criminal Code of Ukraine) (Law No. 2341-III, 2001). So, currently illegal gamblers cannot demand compensation for the damage caused and do not receive state protection in criminal proceedings, because formally they are considered participants in the crime, and they themselves are offenders who are brought to administrative responsibility. We consider this approach to be wrong, because the state must protect citizens from criminal offenses, therefore we propose making appropriate changes to the Criminal Code of Ukraine in order to ensure the right of players to compensation for damage caused as a result of their involvement in the illegal gambling business.

Conclusions

The legislation of Ukraine provides for several mechanisms to protect the rights of gamblers against the development of gambling addiction. Such possibilities are defined by the special law No. 768 and there are many administrative and legal means, which are primarily aimed at preventing the development of gaming addiction.

In addition, in the event of gambling problems or a diagnosis of gambling addiction, the player has the right to receive free psychosocial assistance and specialized medical (psychiatric) assistance, as well as free social service for socio-psychological rehabilitation after treatment.

The disadvantage of the current legislation is that the player is subject to administrative liability for participating in illegal gambling and the burden of establishing the legality of the activity of a certain gambling establishment (land-based or online) is transferred to the player. A disadvantage of the current legislation of Ukraine is also the impossibility of recognizing a player of illegal gambling as a victim in a criminal proceeding, because this deprives him of the right to compensation for the damage caused to him because of committing a crime.

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