

ISSN 2957-1898 Print
ISSN 2957-2096 Online

ACADEMIA POLONICA

SCIENTIFIC JOURNAL OF POLONIA UNIVERSITY
PERIODYK NAUKOWY AKADEMII POLONIJNEJ



70 (2025) nr 3

CZĘSTOCHOWA 2025

Periodyk Naukowy Akademii Polonijnej, Częstochowa, 2025, 70 (2025) nr 3, s. 250.

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ISSN 2957-1898 Print

ISSN 2957-2096 Online

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INTRODUCTION

Dear colleagues, authors and readers of the *Academia Polonica* (Scientific Journal of Polonia University, PNAP – *Periodyk Naukowy Akademii Polonijnej*)!
Congratulation on the release of a new *Academia Polonica* 70 (3) (2025)!

In this issue, we present scientific articles that address urgent problems in language, culture, communication, education, sociology, technology, creativity, and implementation.

The collected papers and their objectives highlight research in linguistics, translation, intercultural communication, and education. They address topics such as training computer science teachers, including an analysis of educational programmes focusing on databases; specifics of modal verbs in intercultural English communication; academic integrity among natural sciences students in current conditions; the literary style of Bri Lee's *Eggshell Skull* and its distinctive features; artificial versus human intelligence in academic essay writing; fundamental indicators for assessing the effectiveness of the e-learning process; the 'Marvelous Herts' as a literary strategy of resistance in war narratives; project technology within the context of the competency system for training educators; individual psychological factors in students' adaptation under long-term stress; Borys Shalaginov's contribution to the development of foreign literature as an academic discipline; developing the mechanism of psychological induction in medical students; and the fundamental role of academic integrity in the axiological structure of the European educational space.

This *Academia Polonica* issue also highlights current problems in modern society, such as the moral and ethical dimension of the European Convention on the Protection of Human Rights and Fundamental Freedoms; the functioning of the human rights mechanism during the war in Ukraine; strong local self-government as a lever to counteract the usurpation of power in transitional democracies (Russia and Belarus as examples); the right of the child to education during armed conflict; reform of the simplified taxation system as a key and highly debated aspect of tax reform in Ukraine; conceptual characteristics of the systemic approach as a methodology for ensuring the administrative and legal regulation of social security relations in Ukraine; specific features of the use of artificial intelligence (electronic personhood) in the sphere of employment; the judicial system and the formation of the judiciary under conditions of war; public-private partnership as a strategy for preventing corruption in Ukraine's public health sector management.

This list summarises academic articles on topics such as human rights, governance, legal reforms, social security, AI, judicial systems, public-private partnerships, and biosecurity in Ukraine and Europe, covering ethical issues, institutional reforms, technology, and strategies to combat corruption and improve safety.

Researchers in the fields of health, environment, and development have developed modern approaches to studying the assessment of students' motivation for physical culture classes during remote learning; shoulder mechanics and injury risk in aerial acrobatics: from load patterns to recovery pathways; spiritual self-realisation of psychologists: personality traits and developmental features; the role of emotional intelligence in shaping environmentally responsible behavior; features and factors of subjective well-being of mothers raising children with organic nervous system lesions.

We thank our authors who have already submitted their scientific articles to *Academia Polonica*, as well as those planning to submit their research findings to our journal. We also want to sincerely thank all members of the editorial board, reviewers, and everyone who graciously accepted our invitation to collaborate and help develop *Academia Polonica*.

With respect and regards
Maciej Rudnicki, Prof. PhD, Editor in Chief

LANGUAGE, CULTURE, COMMUNICATION**TRAINING COMPUTER SCIENCE TEACHERS: THE ANALYSIS OF EDUCATIONAL PROGRAMMES FOCUSING ON DATABASES****Vladyslav Bespalyi**

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Summary

This article examines the current state of computer science teacher training in Ukraine, with a particular focus on the study of databases as a critical component of both digital and subject-specific competencies. The relevance of this topic is substantiated in the context of the digital transformation of education, the economy, and society, as well as the growing demand for professionals capable of effectively working with information systems, databases, and cloud-based services. The study emphasizes the importance of mastering not only the fundamentals of the relational data model and SQL but also modern technologies such as NoSQL, Big Data, and data analytics tools. The methodological framework of the research includes content analysis of educational and professional programs in Ukrainian higher education institutions, elements of comparative analysis, and the synthesis of regulatory requirements with contemporary pedagogical approaches. The article presents comparative data on course duration, technologies covered, instructional platforms used, and the starting point of database instruction across several universities. Strengths and weaknesses of the educational programs are identified, including the predominance of classical DBMSs, limited coverage of emerging technologies, insufficient interdisciplinary integration, and weak alignment with real-world IT industry cases. The article discusses opportunities for improving the content of academic disciplines through updated methodological support, a strengthened practice-oriented component, alignment with international standards, and the integration of artificial intelligence and Big Data analytics elements. Recommendations are provided for the development of flexible, relevant, and technologically updated educational programs. This article may be of interest to

researchers, university instructors, educational program developers, and specialists involved in the digital transformation of education.

Key words: computer science teacher; databases; educational and professional program; SQL; NoSQL; digital competence; Big Data; cloud technologies; teacher training; digital education.

DOI <https://doi.org/10.23856/7001>

1. Introduction

The current stage of higher education development in Ukraine is marked by profound transformations driven by the challenges of post-war recovery and the imperative of integration into the global digital economy. In light of dynamic socio-economic changes, optimizing the functioning of higher education institutions requires a strategic revision of the content and structure of educational programs, particularly in the field of computer science teacher training (Yurchenko *et al.*, 2021). As noted by S. Kalashnikova & O. Orzhel (2022), these transformations must account for the long-term needs of the state, focused on the restoration and development of human capital. O. Borodina & V. Lyashenko (2022) supports this view, emphasizing the importance of practice-oriented approaches in professional education, particularly within IT disciplines, as a means of ensuring economic stability in the post-crisis period.

With the global shift towards the Industry 5.0 paradigm, based on the integration of human-centered approaches with big data analytics, artificial intelligence, the Internet of Things, and blockchain technologies, the requirements for teachers' digital competence are significantly increasing. A computer science teacher, in particular, must possess not only foundational knowledge of digital technologies but also an understanding of data processing, analysis, storage, and protection within complex techno-humanitarian environments (Adel, 2022). Against this backdrop, the quality of database instruction, recognized as a key component of digital education, becomes critically important within teacher training programs, requiring a systematic analysis of how curricula align with current technological trends and digital age demands.

2. Review of literature

In the context of Ukraine's digital transformation of the educational landscape, the issue of adequately training future computer science teachers is gaining increasing relevance. The rapid development of information and communication technologies, the growing role of data in decision-making, and the intensification of societal digitalization impose new demands on the structure and content of teacher education programs. Of particular concern is the component related to database education, a foundational element of digital literacy that ensures mastery of data collection, storage, processing, interpretation, and security.

The inclusion of databases in computer science teacher training programs is formally grounded in the State Standard for Basic Secondary Education, which mandates the introduction of database management systems to school curricula (Ministry of Education and Science of Ukraine, 2015). Within the competency-based framework, emphasis is placed on the ability to analyze and interpret data and solve applied interdisciplinary problems by integrating knowledge from informatics, mathematics, and logic. However, an analysis of curricula in several Ukrainian universities reveals an insufficient focus on databases, both in terms of

content and pedagogical methodology (*Ministry of Education and Science of Ukraine, 2025; UNESCO, 2023; Yurchenko et al., 2020*).

According to surveys conducted among students specializing in computer science education, one of the most significant challenges is the lack of practical training. Existing courses often focus solely on SQL syntax, with limited integration of contemporary concepts such as NoSQL databases, cloud solutions, big data analytics, or data security fundamentals. As N. Ugur and M. Koç (2021) emphasize, the mere presence of a course in the curriculum does not guarantee its effectiveness if the instructional methods fail to reflect technological realities. A. Gouseti et al. (2022) also highlight that IT-related courses in teacher education institutions frequently overlook the specific interpretive needs of teaching technical content to school learners.

International experience underscores the necessity of updating educational content by incorporating tools such as MongoDB, Apache Hadoop, and Firebase into training programs and implementing project-based learning approaches. These strategies enable future teachers to simulate real-world classroom scenarios (*Mlambo et al., 2021*). Thus, a comprehensive analysis of current teacher training programs, with particular attention to the structure, content, and didactic implementation of database topics, is warranted.

In conclusion, the relevance of this study is determined by the urgent need to modernize computer science teacher education in accordance with the demands of the digital society. **The aim of the study** is to analyze teacher training programs in computer science with a specific focus on the content and instructional practices related to database education, identify existing issues, and propose directions for their improvement.

3. Methodology

This study employed a set of theoretical research methods to enable a systematic analysis of educational programs with a specific focus on preparing future computer science teachers in the field of databases. First, an analysis of regulatory documents and educational standards was conducted. This included the examination of state standards for general secondary education, model educational and professional programs of higher education institutions, requirements for the professional training of computer science teachers, and the alignment of academic courses with current trends in information technology. Second, a comparative analysis was undertaken to examine the content of courses, instructional workload, the technologies and educational platforms employed across leading Ukrainian universities. This comparison enabled the identification of shared features, key differences, and distinctive elements in the implementation of database-related curricula. Third, a content analysis of academic programs and curricula was carried out. It involved the study of course descriptions, competency-based learning outcomes, instructional methods, and forms of knowledge assessment within computer science teacher training. Particular attention was given to identifying references to contemporary technologies such as SQL, NoSQL, Big Data, and cloud services. Fourth, generalization techniques were applied to synthesize the data obtained from program analysis through systematization, classification, and deductive reasoning. This enabled the formation of a coherent understanding of the current state of teacher training in the field of databases. Finally, extrapolation was used to relate ongoing trends in the IT sector to the educational context. This included the consideration of current demands of the digital economy, Industry 4.0 and 5.0 paradigms, as well as the evolving needs of school-level computer science education, in order to develop informed recommendations for the modernization of relevant academic programs.

4. Results

An analysis of educational and professional programs implemented by leading Ukrainian higher education institutions confirmed that the topic of databases constitutes an integral part of pre-service training for future computer science teachers. However, its position within the curriculum, content depth, and instructional volume vary significantly depending on the institution. Such variability highlights the need for systematization and harmonization of educational approaches in line with the current demands of digital education.

A comparative analysis of database-related courses offered at various universities is presented in Table 1. While all programs demonstrate a shared focus on fundamental technologies (SQL, NoSQL, Big Data), the curricula differ in the number of instructional hours, the stage of study at which database instruction begins (typically in the second or third year), and the educational platforms employed.

Table 1

Characteristics of Database Courses in Leading Ukrainian Universities

University	Contact Hours (Lectures/ Practicals/ Lab)	Technologies	Educational Platforms	Course Start (Year)
Taras Shevchenko National University of Kyiv	40/40/20	SQL, NoSQL, Big Data	Moodle, Scopus	2nd year
Simon Kuznets Kharkiv National University of Economics	35/45/20	SQL, query optimization	Google Classroom, Coursera	3rd year
NTUU "Igor Sikorsky KPI"	30/50/20	SQL, NoSQL, Machine Learning	Microsoft Teams, Zoom	2nd year
Lviv Polytechnic National University	45/35/20	SQL, data analytics systems	Moodle, cloud technologies	2nd year

As shown in the table, most universities prioritize practical instruction, which constitutes at least 40–50% of total course hours. This balance ensures both theoretical understanding and the development of practical skills with a modern DBMS. However, only a few programs address current components such as Big Data or integration with Machine Learning.

In the theoretical component, students typically study the relational model, normalization, database structure, table creation, SQL queries, and schema design. The practical segment includes tasks related to database design, administration, and optimization using DBMSs such as MySQL, PostgreSQL, and MongoDB, along with simulated professional scenarios (Dan-IT, 2024). Several programs incorporate project-based learning, where students develop databases for educational or information system modeling purposes.

An innovative vector is the use of digital educational platforms such as Moodle, Google Classroom, and Microsoft Teams, which enable flexible learning processes, access to simulated environments, and systematic feedback. Project-based and problem-based learning methodologies also play a significant role in fostering critical thinking, collaboration, and research skills (Behar-Horenstein & Niu, 2021).

The analysis revealed that database curricula must align with school-level standards (Ministry of Education and Science of Ukraine, 2015), particularly considering future teachers'

need to teach this content. However, a noticeable gap persists between university programs and school practice requirements: insufficient attention is paid to data security, NoSQL storage, cloud solutions, data visualization, and the pedagogical interface of these technologies.

Opportunities for improving programs include the introduction of interdisciplinary modules combining database topics with web development, data analytics, and machine learning, as well as expanding collaboration with IT companies through internships, mentoring, or joint development of educational solutions. Further alignment with international practices is also essential, particularly Erasmus Mundus programs that integrate theory, practice, and research components while adhering to ECTS standards (*OECD, 2022*).

5. Discussion

The development of database-related competencies is gradually becoming a central component of the professional training of computer science teachers, driven by transformative processes in education, the economy, and industry. In the digital age, the ability to analyze, structure, and secure information has acquired not only professional but also societal significance. Future educators are expected to possess not only basic skills in SQL query construction or relational database design but also an understanding of information system administration, data visualization tools, unstructured data management, and data protection techniques (*Leng et al., 2021*).

However, the analysis of current educational programs reveals significant inconsistencies between the content of the school-level informatics curriculum and the focus of university training. While the national secondary education standard mandates the study of DBMSs in upper secondary school, including data modeling and structuring (*Ministry of Education and Science of Ukraine, 2015*), university-level courses do not always provide sufficient theoretical depth or pedagogical adaptation. Topics such as normalization, query optimization, NoSQL technologies, or big data analytics are often addressed superficially and without appropriate methodological support, complicating their classroom application (*Sangrà et al., 2022*).

The examples presented in the "Results" section indicate that leading Ukrainian universities, such as Taras Shevchenko National University of Kyiv, NTUU "Igor Sikorsky KPI," Lviv Polytechnic, and Simon Kuznets Kharkiv National University of Economics, have already integrated database courses into their curricula for future teachers. However, these courses are generally framed as general IT training rather than pedagogically adapted content. The lack of clearly defined instructional models for teaching databases creates additional challenges for novice educators, who must independently bridge both content and methodological gaps.

Additionally, the study identifies a lack of educational components familiarizing students with up-to-date data management systems, such as MongoDB, Firebase, or big data analytics tools, as well as limited integration of cloud environments. This gap between real-world technological developments and teacher training targeted at modern school needs further deepens the disconnect (*Mlambo et al., 2021; Trintina & Kotelevets, 2021; Ugur & Koç, 2021*). Another issue lies in the absence of established criteria for assessing the development of relevant digital competencies in both higher education and school-level teacher certification systems.

Therefore, the findings underscore the importance of revising the methodological, content-related, and structural aspects of educational programs by modernizing the "Databases" course in teacher training curricula. Such revision must address both the technological and didactic modernization of course content to align with the demands of the information society and the objectives of school education.

6. Conclusions

The analysis of educational programs for pre-service computer science teachers with a focus on database instruction confirms the crucial role this subject plays in shaping both digital and disciplinary competencies. In Ukrainian universities, the study of databases generally follows a systematic structure, progressing from foundational concepts such as the relational model and SQL to more advanced technologies, including NoSQL, Big Data, and cloud-based DBMSs. Theoretical learning is complemented by practical exercises facilitated through digital platforms (e.g., Moodle, Google Classroom, Microsoft Teams) and enhanced by project-based and problem-oriented pedagogies.

Nevertheless, several challenges were identified that hinder the achievement of high-quality training. These include variability in course structures across universities, insufficient integration of innovative technologies into the curriculum, limited use of real-world examples and IT-related case studies, and a lack of pedagogical tools for adapting technical content to school-level informatics. In several programs, a disconnect exists between expected learning outcomes and the requirements of general secondary education, leading to a misalignment between higher and secondary education systems.

Improving the quality of database-focused teacher training requires strategic actions. Primarily, technological modernization of course content is needed, incorporating up-to-date solutions such as cloud DBMSs, MongoDB, and big data analysis tools. It is also advisable to strengthen interdisciplinary integration, for example, by combining database topics with machine learning, web development, and data visualization. Collaboration with IT companies through project-based learning, internships, and mentorship programs would bring training closer to real-world professional contexts. Additionally, updating pedagogical approaches to database instruction, through the development of original methodologies and teaching materials, would better prepare students for school-based teaching roles.

Future research should focus on designing models for the development of digital and subject-specific competencies among computer science teachers using modern learning platforms, simulations, gamified environments, and adapted international best practices. The integration of European approaches, particularly within the European Higher Education Area, will enhance the quality, relevance, and global competitiveness of Ukrainian educational programs.

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SPECIFICS OF MODAL VERBS IN INTERCULTURAL ENGLISH COMMUNICATION: IMPLICATIONS FOR COMMUNICATIVE COMPETENCE DEVELOPMENT

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Summary

This article examines the pragmatic and linguo-functional role of modal verbs in English-language intercultural communication and their implications for the development of communicative competence. Modality, as a universal and culture-sensitive phenomenon, serves not only as a grammatical category but also as a key pragmatic tool for expressing speaker stance, intention, politeness, and interpersonal positioning. The study integrates theoretical perspectives from pragmatics, contrastive linguistics, and intercultural communication to analyze how modal verbs such as *can*, *may*, *must*, *should*, *might*, and *would* function across intercultural contexts. Empirical examples drawn from real-life intercultural exchanges, corpora, and classroom interactions demonstrate both pragmatic divergences and miscommunication patterns due to culturally encoded modal usage. The paper argues for the inclusion of pragmalinguistic training into English as a Foreign Language (EFL) curricula with a focus on modal variation and awareness-raising strategies. It concludes with pedagogical recommendations on enhancing learners' pragmatic competence through focused modality-based instruction in communicative and intercultural competence development.

Key words: modal verbs, intercultural pragmatics, communicative competence, English as a lingua franca, pragmalinguistics, modality, EFL teaching, speech acts.

DOI <https://doi.org/10.23856/7002>

1. Introduction

The development of communicative competence in English as a Foreign Language (EFL) has increasingly emphasized the integration of pragmatic awareness, particularly in

contexts of intercultural communication where misunderstandings often stem not from lexical or grammatical errors but from mismatched speech conventions and pragmatic inferences. Among the most subtle yet powerful linguistic tools shaping interpersonal interaction in English are modal verbs, which convey not only epistemic judgment or deontic necessity but also relational dynamics such as politeness, mitigation, and authority.

2. Main part

Modal verbs like *can*, *may*, *must*, *should*, and *might* serve as indicators of speaker attitude and play a vital role in realizing speech acts such as requesting, advising, suggesting, warning, or offering (Palmer, 2001). Their correct interpretation and usage require more than syntactic knowledge—they necessitate sensitivity to context, interlocutor status, and cultural norms of assertiveness, directness, and obligation. As such, modality constitutes a key component of what Thomas (1983) distinguishes as “pragmalinguistic competence,” an essential subcomponent of overall pragmatic competence.

Despite their frequency and significance, modal verbs pose persistent challenges to learners due to their polysemy, overlapping meanings, and context-dependent pragmatic values. These challenges are exacerbated in intercultural settings, where speakers from different linguistic and cultural backgrounds may assign divergent illocutionary force to the same modal expression. For example, a modal verb used to express polite suggestion in one culture may be perceived as overly directive or ambiguous in another (Hassall, 2001). Misinterpretations of modality can therefore compromise the effectiveness of communication, damage social rapport, and hinder professional or diplomatic interaction.

This article explores how modal verbs function pragmatically in intercultural English communication, focusing on their impact on communicative competence development. It examines both theoretical and empirical perspectives on modality in English as a lingua franca (ELF) and considers how cross-cultural differences in modal use influence communicative success or failure. Drawing on authentic examples and prior corpus-based studies, the article also proposes pedagogical strategies for teaching modality within a pragmalinguistic framework.

The term *modality* refers to the speaker’s expression of attitudes toward the proposition of a statement, including necessity, possibility, permission, and obligation (Lyons, 1977). It is a universal semantic category realized in various grammatical forms across languages, yet it is subject to culturally specific norms of usage and interpretation. In English, modal verbs constitute the primary grammatical means of encoding modality and are divided into three main types: epistemic, deontic, and dynamic (Palmer, 2001).

Epistemic modality concerns degrees of certainty or probability (*might*, *could*, *must*), deontic modality refers to rules, permissions, and obligations (*must*, *may*, *should*), while dynamic modality denotes internal ability or volition (*can*, *will*) (Coates, 1983). These categories, while analytically useful, often overlap in real-world communication. For instance, *must* can express either an epistemic inference (“It must be raining”) or a deontic obligation (“You must wear a helmet”).

From a pragmatic standpoint, modals perform various discourse functions: they soften or intensify speech acts, express politeness or power, and facilitate indirectness (Holmes, 1984). The illocutionary force of an utterance—its intended effect on the hearer—can shift dramatically depending on the modal chosen. For example, “You should submit the form” is generally interpreted as advice, whereas “You must submit the form” conveys obligation. Intercultural

miscommunication arises when learners misjudge these nuances or apply modal patterns from their native languages without adjusting to the target norms.

Furthermore, modals are often employed in indirect speech acts, a cornerstone of pragmatic competence (Searle, 1975). For example, “Could you open the window?” functions as a polite request rather than a question about ability. Interpreting such modals requires not only linguistic decoding but also contextual and cultural awareness—a domain where many EFL learners struggle, particularly in intercultural interactions (Blum-Kulka et al., 1989).

Modal verbs are not merely syntactic or lexical choices—they serve as pragmatic markers of interpersonal stance and relational positioning. Their use is governed by speech conventions that vary considerably across cultures. For instance, the modal *might* in British English is often employed to express tentative suggestion or to soften an opinion: “*You might want to consider another option.*” In contrast, in other cultural contexts, such as German or Slavic-speaking cultures, this level of hedging might be interpreted as indecisiveness or a lack of confidence (Wierzbicka, 2003).

This variance leads to the phenomenon of pragmatic transfer, where speakers unknowingly apply the modal usage norms of their first language (L1) to English, resulting in potential misinterpretation. For example, learners from languages with strong imperative traditions (e.g., Russian, Chinese) may overuse direct modals like *must* or *have to*, while underutilizing softer alternatives like *could*, *might*, or *would*, which are more commonly preferred in Anglo-American communicative norms (Kasper & Blum-Kulka, 1993).

An important theoretical distinction relevant to this discussion is that between pragmalinguistic and sociopragmatic competence (Thomas, 1983). Pragmalinguistics involves knowledge of the linguistic resources used to perform pragmatic acts (e.g., modals for requesting or suggesting), whereas sociopragmatics concerns the norms and expectations that govern appropriate language use in a given cultural or social context.

When EFL learners lack either of these components—linguistic form or contextual appropriateness—communication can falter. For example, using *You must attend the meeting* with a senior colleague may come across as overly forceful, even if the intention was to express necessity politely. A more culturally appropriate modal choice in many English-speaking contexts would be *You might want to attend the meeting* or *It would be good if you could attend*.

In sum, the correct use of modal verbs requires not only lexical and syntactic competence but also pragmatic awareness of their interpersonal implications. This is especially true in intercultural settings where norms of directness, obligation, and politeness differ significantly. The next section addresses these cultural dimensions more concretely.

English functions today as a global lingua franca in professional, academic, and diplomatic spheres. Consequently, it is frequently used in intercultural contexts where neither speaker is a native English user, but both must rely on English to communicate effectively (Seidlhofer, 2011). In such settings, modal verbs become critical tools for negotiating meaning, managing social distance, and maintaining politeness.

One of the central intercultural differences in modal use lies in preferences for directness versus indirectness. Anglo-American English traditionally values indirectness and mitigation in speech acts involving requests, refusals, or criticism. Modal verbs like *could*, *might*, and *would* are frequently used to attenuate impositions. For instance: “*Could I possibly borrow your notes?*”, “*You might want to reconsider that decision.*”

These expressions convey politeness by allowing the interlocutor space to decline or reinterpret the message. In contrast, in many East Asian or Eastern European communicative

cultures, clarity and efficiency may be prioritized, leading to more direct modal constructions: *"I need your notes."*, *"You must reconsider your decision."*

While such statements may be pragmatically appropriate in the speaker's native culture, they risk being perceived as rude or aggressive in English-speaking intercultural contexts (House, 2003).

Modal verbs are also used to express and negotiate power relations. For instance, a manager saying *"You must complete this by Friday"* exercises authority, whereas saying *"It would be great if you could have this done by Friday"* invokes collaboration. In high-context cultures that emphasize hierarchy, the former may be accepted; in low-context, egalitarian cultures, the latter may be preferred.

Learners must be taught how to adjust their modal usage based on the relative status of interlocutors, the communicative situation, and the cultural expectations regarding formality and distance. A failure to calibrate modal usage appropriately can lead to loss of face, miscommunication, or damaged professional relationships (Gudykunst & Ting-Toomey, 1988).

Let us consider authentic excerpts from business meetings involving speakers from different cultural backgrounds using English as a lingua franca. In one case, a Dutch project manager told an Indian supplier: *"You must provide this update by Monday."* The Indian partner interpreted this as abrupt and authoritarian, whereas the Dutch speaker viewed it as efficient and neutral. The lack of modal softening (*could, would, please*) led to interpersonal tension.

In another example, a Japanese executive used the expression *"It might be better to reconsider the launch date"* when speaking with an American team. The Americans interpreted this as a weak suggestion and proceeded as planned, unaware that the Japanese speaker's intention was actually to advise postponement. In this case, underuse of a stronger modal like *should* or *have to* led to misinterpretation of urgency.

These examples illustrate that modal verbs are not semantically neutral—they carry pragmatic weight that must be understood and taught explicitly to EFL learners, particularly those operating in globalized professional contexts.

The pragmalinguistic characteristics of modal verbs and their variation across intercultural communicative settings have significant implications for the teaching of English as a foreign language, particularly within the domain of English for Specific Purposes (ESP) and English for Academic Purposes (EAP). In modern educational contexts, the development of communicative competence must extend beyond mere grammatical accuracy to encompass pragmatic appropriateness, intercultural sensitivity, and stylistic adaptability. Therefore, modal verbs should not be taught in isolation or as fixed grammatical items but rather in relation to their discursive, pragmatic, and sociocultural functions. A shift is needed from traditional form-focused instruction toward context-rich, genre-based, and interactional pedagogy that foregrounds modality as a key element in meaning-making and relationship negotiation.

In typical language teaching curricula, modals are introduced as part of grammar units, often with labels such as "modals of obligation," "modals of possibility," or "modals of advice." However, this segmentation ignores the complex interplay between modal meaning and contextual usage. For instance, the verb "must" is often taught as expressing strong necessity, yet in real-life intercultural communication, its use may be perceived as overly authoritative or even impolite depending on the sociolinguistic context. Therefore, language instruction should highlight not only the semantic core of modal verbs but also their **pragmatic force, politeness effects, and stylistic registers**. Learners must understand that a modal verb like "should" may function not only as mild advice but also as a strategic softening device in business negotiation, legal consultation, or academic recommendation.

Effective teaching of modality should incorporate discourse-based tasks that require learners to engage with authentic genres such as emails, memos, reports, presentations, and proposals. Each genre possesses its own modal “footprint”—formal genres tend to favor hedging and cautious modality, while informal ones may allow more direct expressions of intent or evaluation. Classroom activities can include rewriting exercises in which students transform directive instructions into polite requests using modals; peer-review tasks focusing on the tone created by different modal choices; and contrastive analysis of modal usage across cultural frameworks. Such practices help learners internalize the subtleties of modality and prepare them for the variable demands of real-world communication.

Furthermore, the cultivation of intercultural pragmatic competence is essential. Modal verbs are deeply embedded in the sociocultural norms of speech communities, and what counts as polite or assertive can differ dramatically from one culture to another. In intercultural business communication, for example, the direct use of “must” or “have to” might be considered rude in East Asian contexts, where indirectness and deferential modality are expected. Thus, learners should be encouraged to reflect on their own cultural modality norms and compare them with those prevalent in English-speaking professional settings. This reflection can be supported through guided discussion, scenario-based learning, and critical incident analysis.

Assessment of modal competence must also evolve. Instead of merely checking whether a student used the “correct” modal verb, teachers should evaluate the appropriateness of the modal in context. Rubrics for writing or speaking tasks should include dimensions such as **pragmatic accuracy**, **tone**, and **intercultural suitability**. Learners should receive formative feedback that points out not just errors in form but misalignments in pragmatic effect—such as sounding too assertive in a recommendation or too tentative in a technical analysis. Oral presentations can be followed by metapragmatic reflection, where students explain their modal choices and the communicative intentions behind them.

Technological tools can further support modality learning. Corpus analysis software allows learners to explore real examples of modals in academic and professional discourse, fostering inductive learning and stylistic awareness. Writing platforms that offer tone detection and modality suggestions, such as Grammarly or Write & Improve, can provide immediate feedback on whether a message sounds too strong, too weak, or just right. Moreover, learner-constructed corpora—collections of texts annotated by students themselves—can serve as powerful tools for noticing patterns of modal use and exploring the interaction between grammar, discourse, and communicative purpose.

In sum, the integration of pragmalinguistic instruction on modal verbs into ESP and EAP teaching is not simply a pedagogical option but a necessity in preparing learners for global communication. Such instruction equips them with the tools to navigate complex interactional contexts, maintain politeness and credibility, and adjust their linguistic strategies across genres and cultures. As the stakes of professional and academic communication continue to rise in multilingual environments, the ability to use modality effectively will remain a cornerstone of communicative competence.

3. Conclusions

The analysis of the pragmalinguistic features of modal verbs in intercultural English communication has revealed the intricate and context-dependent nature of modality as both a grammatical and pragmatic phenomenon. In the globalized communicative environment of the 21st century—where English functions as a lingua franca across diverse cultural, institutional,

and professional domains—the strategic use of modal verbs plays a critical role in expressing speaker stance, managing interpersonal relationships, and maintaining communicative appropriateness.

This study has demonstrated that modal verbs are not mere auxiliaries of grammatical necessity or possibility but rather dynamic tools that speakers use to negotiate meaning, hedge opinions, express deference, and adjust interpersonal tone. Their use is especially sensitive in intercultural contexts, where divergent cultural norms concerning authority, politeness, assertiveness, and indirectness can significantly impact how modal constructions are perceived and interpreted. The same modal verb may convey confidence in one communicative culture but be perceived as overbearing in another, highlighting the need for cultural-linguistic sensitivity.

A key finding of this research is the centrality of pragmatic competence in the use of modals. Learners of English, particularly those engaged in academic, business, or technical fields, require more than knowledge of formal modal paradigms—they need the ability to select modal forms that align with the discourse genre, interactional purpose, and cultural expectations of their interlocutors. Developing such competence entails a shift in both teaching and assessment practices. Instructional strategies should prioritize discourse-based, context-rich, and genre-specific activities that expose learners to the nuanced roles modals play in professional and intercultural communication. Authentic materials, such as business emails, research articles, policy memos, and recorded professional interactions, provide fertile ground for modeling and analyzing modality in action.

The integration of modal pragmatics into curriculum design has significant implications for English for Specific Purposes (ESP) and English for Academic Purposes (EAP). A genre-based pedagogical approach can help learners internalize the stylistic expectations and modal patterns typical of various domains, from corporate communication to academic writing. Furthermore, attention to intercultural pragmatics ensures that learners are not only proficient in using English but are also able to navigate and respect the communicative conventions of culturally diverse interlocutors. Modal verbs, as a focal point of such instruction, offer learners a tangible means of developing both linguistic flexibility and communicative finesse.

From a methodological standpoint, this study affirms the value of a pragmalinguistic approach, which combines insights from linguistics, pragmatics, discourse analysis, and intercultural communication. By analyzing authentic discourse and exploring the multiple layers of meaning conveyed through modals, researchers and educators alike can better understand how communicative competence is constructed, negotiated, and assessed. The inclusion of case studies and corpus data has further illustrated how modal variation reflects broader patterns of professional identity, power dynamics, and communicative strategy.

In terms of future research, several directions emerge. First, longitudinal studies could track how learners acquire modal competence over time and in different professional contexts. Second, cross-cultural comparisons of modal use in English by speakers from various L1 backgrounds could yield insights into common misinterpretations or pragmatic failures, informing targeted instructional interventions. Third, the development and evaluation of digital tools that provide real-time feedback on modal usage in writing and speaking could enhance autonomous learning and facilitate personalized language development.

In conclusion, the strategic and context-sensitive use of modal verbs is essential for effective communication in intercultural English settings. Their teaching should be reframed not as isolated grammatical drills but as an integral component of discourse competence and intercultural literacy. As English continues to serve as the dominant medium of global interaction, modality will remain a key linguistic resource through which speakers express epistemic

stance, interpersonal positioning, and rhetorical nuance. Empowering learners with the ability to interpret and deploy modal verbs appropriately contributes not only to their linguistic accuracy but also to their communicative credibility and professional success in a multilingual world.

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ACADEMIC INTEGRITY AMONG NATURAL SCIENCES STUDENTS IN PRESENT CONDITIONS

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Summary

The article is devoted to the study of academic integrity in the context of scientific research conducted by students of natural science disciplines. It analyzes the current state of formation and implementation of academic integrity principles in student research activities, which are an essential part of the educational process and aim to develop practical skills necessary for future professional practice. The study identifies factors that contribute to violations of academic integrity, as well as opportunities to uphold its principles under challenging learning conditions.

Various types of student research activities were examined to determine where breaches of academic integrity and instances of plagiarism are most commonly observed. It was found that the highest number of violations occur during the preparation of written term papers. Key reasons for students' dishonest behavior include the mistaken belief that "plagiarism is not a problem" and the lack of understanding that academic misconduct harms both personal development and the future of the country.

The article emphasizes the importance of introducing academic integrity concepts at the school level by explaining the consequences of violations, and of actively promoting the culture of academic honesty throughout all types of student activities in higher education institutions.

The findings show that a well-structured, consistent, and step-by-step educational process that adheres to the norms and standards of academic practice significantly reduces the likelihood of academic integrity violations among students of natural sciences.

Key words: academic integrity, plagiarism, research work, natural sciences.

DOI <https://doi.org/10.23856/7003>

1. Introduction

Scientific research holds a critical place in the academic training of students pursuing natural science disciplines, serving as a cornerstone for cultivating high-level professional competence. Through research engagement, students acquire essential practical skills, enhance their creative thinking, and integrate cutting-edge scientific and technological developments into their learning. Amid the ongoing full-scale war in Ukraine, the educational landscape has significantly shifted, prompting a reevaluation of the feasibility of upholding academic integrity in such extraordinary learning environments.

Within the academic community, academic integrity is broadly acknowledged as a fundamental pillar of quality education. A coherent, methodically structured educational framework that aligns with the standards of academic programs promotes ethical conduct in all aspects of learning. It supports the internalization of values such as responsible academic behavior, originality, and strict adherence to intellectual honesty.

Undergraduate curricula and academic programs require students to engage in research activities as a means of mastering their chosen disciplines. These tasks progressively increase

in complexity throughout the learning journey, deepening their theoretical understanding and facilitating the effective application of knowledge in future professional practice.

In this context, adherence to academic integrity becomes particularly vital in student research. This underscores the need for comprehensive exploration into the mechanisms through which academic honesty is cultivated and sustained within the research practices of students in the natural sciences.

Analysis of current research. The issue of academic integrity has become the subject of active scholarly inquiry in both national and international academic contexts. Contemporary researchers view academic integrity as a crucial component of quality education and the sustainable development of educational institutions. In particular, the legal aspects of academic integrity are addressed in the works of (*Nedohibchenko Ye., 2017*) and (*Maslova N.H., 2017*).

The challenges of implementing integrity principles in higher education and their role as a foundation for the sustainable functioning of universities are explored in the studies of (*Finikova, T.V., Artyukhova, A.E. Takson, 2016*), and (*Dobko T., 2008*), (*Satsyk V., 2017*), (*Feketa Ir., Slavyk R., 2022*) investigates academic integrity as a tool for ensuring educational quality.

A separate line of research focuses on analyzing international experience in the implementation of academic integrity. (*Batechko N., Durdas A., 2019*), and (*Soroka, N. I., 2017*) have contributed to this area.

Given that professional competencies of students in natural sciences include sustainable development, environmental reasoning, the ability to forecast natural processes, and analyze the state of the environment, there is a growing need to examine academic integrity in the context of student research activities. This enables academic integrity to be seen not only as an educational component, but also as a mechanism for shaping a responsible scientific mindset among future professionals.

The aim of the study is to explore the process of forming academic integrity among students of natural science disciplines during the completion of research tasks, which are viewed as a fundamental element of both educational and scientific activity in higher education institutions.

The research methodology involves the application of analysis, systematization, and comparison of data from scientific and pedagogical literature, regulatory frameworks, and legislative documents. A content analysis of various types of student research activities was also conducted in the context of compliance with the principles of academic integrity.

2. Main part

According to the Law of Ukraine "On Higher Education," higher education is defined as an integrated system of knowledge, skills, competencies, modes of thinking, professional and civic qualities, ethical values, and other attributes acquired at higher education institutions in a specific field of study at a level exceeding that of secondary education (*Zakon Ukrainy Pro osvitu, 2017*). The Law "On Education" further defines academic integrity as a set of ethical principles and established rules to be followed by all participants in the educational process during teaching, learning, and research, to ensure trust in learning outcomes and scientific achievements (*Zakon Ukrainy «Pro vyshchu osvitu», 2014*).

In accordance with Article 42 of the Law of Ukraine on Higher Education, all higher education institutions are taking measures to prevent breaches of academic integrity. These include the development of institutional policies, codes of ethics, the creation of quality assurance

centers, participation in educational seminars, and more. Such actions contribute to building a strong foundation of academic integrity within the university environment (*Kodeks akademich-noi dobrochesnosti natsionalnoho ahentstva iz zabezpechennia yakosti vyshchoi osvity*, 2021).

The educational and research level of higher education involves acquiring knowledge and competencies necessary for generating new ideas, solving complex professional and scientific problems, mastering scientific methodology, and conducting original research with theoretical and practical significance.

Students must develop research skills throughout their academic journey. These skills ensure quality professional training and help students adapt to current labor market demands, especially in terms of applying innovative technologies and approaches in professional practice while upholding academic integrity, as stipulated by the Law on Higher Education (*Zakon Ukrainy «Pro vyshchu osvitu»*, 2014).

For students in natural science disciplines, research activity holds particular significance as it involves exploring natural environments through experiments, modeling, mapping, forecasting, and other methods. Mastery of research methods enables students to apply scientific achievements in the rational use of natural resources, analyze environmental changes, and contribute to addressing environmental and economic challenges.

Student research activities should align with the content of educational programs. Students must acquire proficiency in methods of both field and theoretical investigations, including comparative geographical analysis, cartography, systems analysis, synthesis, and cluster analysis.

One of the key forms of student research is the laboratory work conducted within academic disciplines. These sessions are designed to verify theoretical concepts through hands-on experimentation. The independent completion of lab tasks, reporting, and oral defense promotes individual responsibility and prevents violations of academic integrity. Final grades for laboratory work contribute to overall course assessments, making this format clear, transparent, and accountability-driven.

Academic integrity should also be evident during the preparation of essays and term papers. However, plagiarism often occurs in these types of tasks. Contributing factors include habits formed during secondary education, low motivation, and a lack of understanding of the consequences of dishonest behavior. To mitigate this, educators should propose modern, engaging topics that spark student interest and encourage original thinking.

The preparation of term papers within natural sciences typically forms part of the general training cycle, covering both mandatory and elective components. Therefore, academic integrity must be fostered throughout the entire educational process, from general to professional training.

Scientific research in professional fields is closely integrated with academic and industrial internships. Theoretical knowledge acquired during coursework is reinforced during practice at research institutions, environmental organizations, government agencies, tourism institutions, and more. Students develop fieldwork skills and master analytical methods for environmental assessment. Practice also cultivates values aligned with the preservation of scientific, cultural, and ethical achievements, as outlined in educational standards.

At the end of each internship, students prepare and defend a report based on their observations and analysis. Motivation for maintaining academic integrity during internships is typically high, as these experiences are directly tied to the students' professional growth. Such forms of academic activity rarely provoke dishonest behavior.

Outside the formal curriculum, student research includes participation in scientific clubs, conferences, contests, seminars, forums, and specialized programs. These activities attract

motivated students with scientific curiosity and analytical thinking, fostering step-by-step research development. Their collaboration with academic mentors strengthens the foundation of academic integrity in natural science disciplines.

The most common violations of academic integrity occur during the writing of course papers and qualification theses. To detect plagiarism, certified tools approved by the Ministry of Education and Science of Ukraine—such as Unicheck, StrikePlagiarism, and Plagin—are widely used (*StrikePlagiarism.com Plagiat.pl. [Software StrikePlagiarism.com Plagiat.pl.]*). These tools are effective in reducing instances of academic dishonesty.

Dishonest behavior may result from several factors. First, students often retain the belief, developed in secondary school, that "plagiarism is not a problem" and that it will go unnoticed. Second, a lack of confidence in their knowledge undermines their ability to produce original work. Third, students may not fully realize that violating academic integrity harms both their personal future and the broader society.

To prevent such violations among natural science students, these issues must be addressed at the root. It is essential to integrate academic integrity education at the school level, emphasizing the consequences of violations, and to maintain active promotion of academic honesty across all forms of student activity in higher education institutions.

3. Conclusions

The analysis of academic integrity formation during the research activities of students in natural science disciplines leads to the conclusion that a consistently structured and step-by-step educational process—conducted in accordance with the established norms and principles of the academic and scientific environment—significantly minimizes or eliminates the risk of academic dishonesty. Key factors contributing to academic misconduct include falsification of research results, irresponsible attitudes toward learning, and inadequate assessment of students' knowledge and performance.

Among the various forms of student research activity, the highest incidence of academic integrity violations occurs during the writing of term papers and qualification theses. This highlights the need for enhanced oversight, methodological support, and student motivation aimed at encouraging independent and honest academic work.

At the same time, a positive trend is emerging: an increasing number of students are recognizing the value of knowledge as a strategic asset for personal development, professional growth, and contributing to the advancement and rebuilding of Ukraine—particularly in the current context of war and societal transformation.

Further research directions should focus on an in-depth exploration of students' motivational factors for maintaining academic integrity, the development of effective educational strategies for preventing misconduct, and comparative analysis of international practices in fostering a culture of academic honesty.

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THE LITERARY STYLE OF BRI LEE'S *EGGSHELL SKULL* AND ITS DISTINCTIVE FEATURES

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Summary

The paper explores the distinctive features of author's idiostyle in *Eggshell Skull*, a non-fictional memoir by Bri Lee, a contemporary Australian author and lawyer. Despite a growing global interest in Anglophone literature, Australian literary non-fictional texts (particularly memoirs) lack wide representation in linguistic studies. This research aims to identify and classify the key linguistic means in Lee's debut work that contribute to her unique idiostyle.

The methodological framework of the conducted research is based on exhaustive sampling, semantic and pragmatic analysis, classification, and computational methods. Lexical units in the sample were categorized into five primary groups: legal terminology (27.57%), colloquialisms (31.35%), vulgarisms (6.49%), idioms (14.05%), and proper names (20.54%).

The analysis demonstrates that Bri Lee's idiostyle is deeply rooted in her professional legal background and personal experiences. The frequent use of domain-specific vocabulary and culture-specific proper names enhances local coloring, while colloquialisms and idioms contribute to narrative accessibility.

Eggshell Skull emerges as a vivid and multifaceted text that reflects the author's linguistic individuality. This study underscores the perspective for broader idiostylistic inquiry into Lee's complete oeuvre, offering insights into the interplay between language, identity, and genre in contemporary Australian memoir writing.

Key words: Australian literature, colloquialisms, idioms, idiostyle, legal terminology, vulgarisms.

DOI <https://doi.org/10.23856/7004>

1. Introduction

Investigating the author's idiostyle can contribute to solving several tasks. It is through idiostyle that an author reveals their vision of the world, creates an artistic representation of reality, and gives their work a distinctive tone. It helps to perceive the chronotope of the text, its national and historical coloring, etc. For the most part, texts by Australian authors have received comparatively less attention from linguists than those written in Great Britain or the USA. Thus, the research of a non-fictional memoir text written by an Australian lawyer appears topical and relevant.

The theoretical basis of our research relies on the works of researchers in the fields of memoir definition (T. Cherkashyna, B. Paramonov, V. Skopnenko, and others), notions

of idiosyncrasy and text style (N. Bezrebra, V. Muratova, and others), professional terminology (L. Biel, H. J. Kockaert, M. Vakulenko, and others), colloquialisms (B. Fattah, E. Frisella, S. Salih, and others), vulgarisms (L. Andersson, R. Mercury, and others), idioms (W. J. Ball, H. Bortfeld, P. Kvetko, and others), and proper names (E. Mignot, M. Philippe, and others).

The purpose of the research is to highlight the identified stylistic peculiarities of Bri Lee's non-fictional memoir *Eggshell Skull*. To achieve this, we consider it crucial not to focus solely on the text but also on some extralinguistic factors.

At the very beginning of the research, the sample was supplemented with lexemes serving as distinctive features of the text. The research corpus consisted of units selected based on their semantics. For this purpose, the methods of exhaustive sampling and semantic analysis were applied.

Primarily, the selected units belonged to the following groups: legal terms, proper names, colloquial units, vulgarisms, and idioms. In the next stage, involving the method of classification, the units in the sample were classified and properly labeled.

The subsequent stage of the research included semantic and pragmatic analysis. That is, the meaning of each selected unit was considered within the pragmatic and cognitive linguistic paradigms. After a precise analysis, the units underwent further classification at a lower level, which enabled drawing conclusions based on calculations and logical operations.

Thus, the research methods applied included exhaustive sampling, semantic analysis, classification, cognitive analysis, pragmatic analysis, and computational methods.

2. Bri Lee's memoir style-forming factors

Any writer, like any person, uses their own unique habits for selecting lexemes and constructing syntactic structures. These habits depend on many objective factors, such as a person's biography.

Born in Queensland, Australia, Brianna "Bri" Lee is a noted author, investigative journalist, academic, activist, speaker, and qualified (non-practising) lawyer (*Shapter, 2023*). Holding a Master of Philosophy in Creative Writing, Bri Lee has written analyses, opinions, short fiction, essays, and arts criticism (*Bri Lee, n.d.*). The Walkley-nominated author regularly contributes to *The Monthly* and *The Saturday Paper*, has a column at T Mag Australia, and runs writing workshops and a podcast called *Cool Story*.

Bri Lee is currently completing a PhD in law at the University of Sydney and frequently advocates for legal reform, highlighting issues related to women's rights and social equity in the public discourse. Elaborating on her calling to be a writer, Bri states that her experiences with the legal system were "truly shocking," and she felt it was "really important to write about" them (*Unite – Meet Bri Lee, 2024*).

In her interview for *The Guardian*, Bri Lee confesses that work is a key factor in shaping her identity and future. When asked about the secret of her success, she answers, "It is both my greatest asset and my greatest weakness that I almost never switch off" (*Cain, 2024*).

The list of her works includes 2018's *Eggshell Skull*, 2019's *Beauty* (exploring issues of self-worth, society's obsession with physical "perfection," and eating disorders), 2021's *Who Gets to Be Smart* (interrogating the saying "knowledge is power" and investigating educational inequality through the lens of sexism, racism, and classism), and 2024's *The Work*, which follows two young people who face the intersections of power, money, and privilege (*Bri Lee, n.d.*).

As can be seen from the previous paragraph, *Eggshell Skull* is Bri Lee's debut literary work. The daughter of a police officer, she followed in her father's footsteps, pursued a degree

in law, and secured a position as a judge's associate at the Supreme and District Courts of Queensland, Brisbane. On circuit, Bri witnessed numerous cases of sexual abuse and acts of violence against children and women. Not only do offenders frequently go unpunished, but gender prejudice and widespread patriarchal attitudes are also evident in many cases. Facing these injustices within the court, she involuntarily confronted her personal traumatic story – one she had vowed never to reveal – and the enduring effects it had on her mental and physical well-being (Lee, 2018).

In her childhood, Bri experienced sexual assault at the hands of her brother's friend Samuel on the trampoline in the backyard of her own house. Over time, the feeling of shame turned into anger and a resolve to bring her offender to justice (Lee, 2018).

As we can see, Bri Lee explores a variety of broad social issues, namely sexual assault and abuse, the flaws of the legal system, power and privilege, patriarchy, and gender inequality – confronting past trauma and seeking healing.

As previously mentioned, *Eggshell Skull* is a non-fiction memoir divided into a prologue, 25 chapters, and acknowledgments. Cherkashyna and Paramonov, after analyzing numerous works on the genre varieties of non-fictional literature, distinguished four main branches: literary biography, historical nonfiction, fictional journalism, and memoirs (Cherkashyna & Paramonov, 2021: 79).

But a question arises: what exactly is a memoir? According to Skopnenko and Tsymbaliuk, a memoir is a set of autobiographical notes or literary memories about past events participated in or witnessed by the author (Skopnenko & Tsymbaliuk, 2007: 235). Couser explains that a memoir is a nonfiction genre because it depicts real people, not imagined ones (Couser, 2012).

Thus, the overall analysis of the text shows that it corresponds to the basic features of the genre. Therefore, we can conclude that the analyzed book is an example of a non-fictional piece – namely, a memoir.

3. Stylistic features of *Eggshell Skull* as a non-fictional memoir

In various communication situations, individuals employ particular styles of communication characterized by unique phonetic, grammatical, and lexical features. The same goes for the author's individual style in literary works that is one of the fundamental concepts in both contemporary linguistics and translation studies.

To illustrate its contentious nature, here is a list of terms currently employed to refer to it, namely authorial style, idiostyle, individual style, idiolect, etc. At first glance, these terms appear nearly synonymous, yet there are distinctions among them. Generally, the speech style of a particular person is called idiolect, while the terms authorial style, individual style, and idiostyle pertain only to a writer and are used interchangeably by the majority of scholars. Since the objective of our research is not to evaluate the pros and cons of the terminology in linguistic studies, we will adopt the more commonly understood term idiostyle.

The notion of idiostyle can be understood as the set of expressive means chosen by the text author due to some objective factors and accessible for observation by means of analysis of the means of its realization (Bezrebra, 2009: 8; Muratova, 2014: 121).

Therefore, evaluating the author's idiostyle and outlining its distinctive features requires examining at least a couple of their works, ideally their entire oeuvre.

After classifying the units of sample, we may state the following linguistic means of the text style realisation as legal sector-specific terminology, idioms, colloquial lexis, vulgarisms,

and wide use of various proper names. Now, we propose to examine each category in further depth, accompanied by the examples from the text we have studied.

The first linguistic phenomenon to be considered is professional terminology. The idea of a term is the primary concept of terminology. In his article *Term and terminology: basic approaches, definitions, and investigation methods*, Vakulenko defines a term as “a word or a collocation that refers to a certain concept in a particular field of human endeavor” (Vakulenko, 2014: 18). Moreover, terms should have no synonyms, be stylistically neutral, and be independent of the context to convey their meaning. Accordingly, terminology is “a set of terms of a particular field of science, as well as the doctrine of the formation, composition, and functioning of terms” (Rysanivskiy et al., 2004: 683). As previously mentioned, the plot of *Eggshell Skull* is based on the author’s 2-year-long experience working as a judge’s associate. Since “legal terminology is present not only in highly specialized legal discourses but also permeates other domains and general language”, it is one of the key linguistic means that define the idiosyncrasy of the studied book (Biel & Kockaert, 2023, p. 1). For example:

(1) *It noted that of all the weeks in the year we had for work, only two would consist of civil law* – (Lee, 2018: 17).

(2) *When the prosecutor had finished stepping the girl through her evidence-in-chief, she underwent three hours of cross-examination* (Lee, 2018: 30).

Colloquialisms also perform a crucial role in the realization of Bri Lee’s idiosyncrasy. In linguistics, colloquial language is an extremely broad notion that includes “all the forms and linguistic units of informal language variations” (Fattah & Salih, 2022). Therefore, colloquialism is an informal word or phrase used in a familiar and unconstrained context, in contrast to formal language or academic writing. After analyzing the works of different scholars, Fattah and Salih outline the following morphological forms of colloquialisms: single words, clipped words, contractions, phrasal words, aphorisms, idioms, and acronyms (*Ibid.*: 80–81). Writers use colloquialisms to represent natural speech patterns (both in dialogues and first-person narrations), reveal a character’s background, imply a specific social perspective, and create an engaging and original narrative voice (Frisella, 2017: 3). Among other informal language variations, colloquialisms are the most inclusive, as they are used by a significant number of people and have a rather broad communication range. It is useful to examine some examples of colloquialism usage in Bri Lee’s *Eggshell Skull*:

(3) *‘I’ll bet you brought a suitcase full of incredible clothes home from the States?’ Evelyn asked me* (Lee, 2018: 15).

This sentence illustrates the usage of the contracted colloquial phrase *I’ll bet you*, adding a sense of personal involvement and enhancing the relaxed conversational tone between two friends who have not seen each other for a long time. Furthermore, there is also an informal clipped word *the States*, created by means of the middle-clipping and standing for *The United States of America*.

(4) – *walking to Maccas at half past ten, was perfectly safe compared to being a girl whose mum brought home a new boyfriend* (Lee, 2018: 36).

In this case, a colloquialism *Maccas* presented by a single word is used. As found in the *Collins Online Dictionary*, *Maccas* refers to the commonplace Australian name for the popular American fast-food chain *McDonald’s* that became widespread since the 1990s (*Collins Online Dictionary*, 2025). Using this distinctly Australian colloquialism, the author adds a local and cultural sense to the sentence, while its shorter and quicker to say form contributes to a relaxed conversational style.

One more point to be considered is the usage of vulgarisms. Frequently seen as a type of obscene language alongside cursing, profanity, blasphemy, taboo words, and expletives,

vulgarisms are “expressions that are crude, raw, and from off the streets” (*Mercury*, 1995: 29-30). In their book *Bad language*, Andersson and Trudgill state that various types of “bad language” are employed to refer to something that is stigmatized or forbidden in the swearer’s culture, should not be perceived literally, and conveys strong attitudes and emotions (*Andersson*, 1990: 53). These scholars also outline four primary functions performed by this linguistic phenomenon, namely (1) expletive indicating personal emotions and is not directed at anyone; (2) abusive possessing derogatory character and person-directed; (3) humorous taking the form of abusive words but performing the opposite playful rather than offensive function; and (4) auxiliary so-called “lazy swearing” that is used as a speech style (*Ibid.*: 61). So, now we propose to consider a few examples of Bri Lee’s usage of vulgarisms in the studied memoir:

(5) *As I walked to work the next morning, I felt like shit* (Lee, 2018: 42).

In this sentence, the vulgarism *felt like shit* performs an expletive function, expressing strong frustration of the narrator with the jury’s verdict in the previous trial. The author could have used a stylistically neutral and mild *feel bad*; however, the colloquial, raw, and emotive nature of the used vulgarism only intensifies the emotional weight, making her distress more relatable and vivid to the readers.

(6) *I still had pimples and lived at home eating my mum’s spaghetti — why the fuck was I the one standing there taking the verdict?* (Lee, 2018: 33).

In the phrase “— why the fuck was I the one standing there taking the verdict?”, the vulgarism *fuck* serves an auxiliary function because it modifies the question for emphasis and makes the sentence sound more authentic, intensifying the sense of emotional turmoil and injustice.

The frequent usage of idioms also significantly contributes to the realization of Bri Lee’s idiostyle in the studied memoir. In her article *Comprehending Idioms Cross-Linguistically*, Bortfeld clarifies the notion of idiom as a fixed expression that means something different from what a literal interpretation of its separate constituents would suggest (*Bortfeld*, 2003: 217). In his *Practical Guide to Colloquial Idiom*, Ball points out four main characteristics of idioms as a linguistic phenomenon, namely: (1) a fixed word order and composition, allowing only minor grammatical changes (usually of tense and person); (2) no false analogies, as their meanings are non-transferable and specific; (3) once established, an idiom has an unequivocal meaning for everyone in the right context; (4) non-literal interpretation unless the context is revealing (*Ball*, 1958: 6-7). From a semantic point of view, Slovak scholar Kvetko proposes to distinguish (1) unchangeable idioms that are absolutely fixed and undergo no modifications, and (2) changeable idioms that allow certain variations, namely grammatical, lexical, orthographic, and geographic ones (*Kvetko*, 2009: 104-105). The next two examples illustrate the usage of idioms in the studied text:

(7) — *over ten different kinds of docks, and it seemed like the cherry on top of a sundae of reasons why juries got things wrong* (Lee, 2018: 28).

The meaning of the idiom *the cherry on top of a sundae* given in *Cambridge Dictionary* is “something that makes something that is already good even better, or perfect”. There are three possible variants of this idiom without changing its original meaning, namely *the cherry on the cake* (BE), *the cherry on top* (shortened), and *the cherry on the sundae* (AE) (*Cambridge Dictionary*, 2025). Thus, we can state the cherry on top of a sundae falls under changeable lexical-geographical idioms. Despite strong cultural ties between Australia and Great Britain, the author uses the AE variation of this idiom, since the narrated events take place shortly after her long trip around the USA. It is worth mentioning that this idiom is usually used positively; however, in this context, it implies a touch of irony — the narrator is enumerating reasons why

juries get things wrong, and “the cherry” (i.e., kinds of docks) is yet another flaw “on top of a sundae” (i.e., legal system).

(8) *I felt completely out of my depth. This space belonged to the Evelyns and Alexandras of the world* (Lee, 2018: 16).

According to *Collins Online Dictionary*, the idiom *out of one's depth* means that somebody is “in a situation that is much too difficult for them to be able to cope with it” (*Collins Online Dictionary*, 2025). It is a changeable grammatical idiom that vividly highlights the narrator's sense of helplessness without extra words.

Another important aspect of Bri Lee's idiosyle is the frequent usage of proper names. In their work *Introduction: Proper names and the lexicon — an exposition*, Mignot and Philippe define proper names as “words or expressions (of several words) mainly used in noun phrases that refer to contextually unique individuals (people, places, institutions, etc.)” (Mignot & Philippe, 2022: 1). *Eggshell Skull* contains a myriad of various proper names, including geographical objects, local brands, periodicals, etc., indicating the author's general tendency to localization. This helps to create a clear image of the location and circumstances in which the events take place. Furthermore, proper names play an important role in collecting and transmitting cultural information, which defines their value for the text interpretation. The following examples illustrate how Bri Lee applies proper names for the realization of her idiosyle:

(9) *Once, years ago, I'd found out that her parents paid for her to get it cut regularly at Oscar Oscar* – (Lee, 2018: 14).

(10) – *that Mr. Baker's house was near Yeronga Train Station, and my gut dropped* (Lee, 2018: 39).

Taking into account everything mentioned above, we may say that analyzing the idiosyle of a particular author and outlining its characteristic features requires studying several of their works, and ideally, their entire oeuvre. However, in our research, only Bri Lee's debut book was considered, serving as a representative example of her idiosyle. The author conveys her idiosyle through the usage of various linguistic means, namely professional terminology (27.57%), colloquialisms (31.35%), vulgarisms (6.49%), idioms (14.05%), and proper names (20.54%).

4. Conclusions

Eggshell Skull is a non-fictional memoir that serves as a representative example of the idiosyle of the well-known contemporary Australian author Bri Lee. When discussing memoirs as a non-fictional genre, researchers define them as first-person narratives in which the writer was a direct witness or participant in events, recollected from their own memories and experiences. The distinctive features of a memoir include subjectivity, an emphasis on a particular topic or period, retrospective and autobiographical elements, confession, and others.

Among the most typical linguistic means of idiosyle realization are proper names, professional legal terms, idioms, colloquialisms, and vulgarisms. Colloquial lexemes, together with idioms and vulgarisms, constitute more than half of the considered linguistic means. They make the text more vivid and natural, thus bringing it closer to the target audience. Professional terminology accounts for more than a quarter of the sample units and enables the author to provide more detailed descriptions of professional situations. The extensive use of proper names adds precision.

Consequently, we can conclude that Bri Lee's idiosyle is multifaceted and recognizable. Therefore, her works, in particular the studied memoir *Eggshell Skull*, have significant potential

for further research. We see prospects for future studies in outlining the distinctive features of Bri Lee's idiostyle based on her entire body of work.

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ARTIFICIAL VERSUS HUMAN INTELLIGENCE IN ACADEMIC ESSAY WRITING: DO WE HAVE TO COMPETE WITH AI?

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Summary

The development of artificial intelligence opens up new opportunities for learning a second language and acquiring language skills. At the same time, when it comes to academic writing, AI's ability to generate unique narratives makes it a serious rival to those students who work independently. Obviously, it is no use trying to ban ChatGPT or other similar technologies. Therefore, if ESL teachers do not want their students to lose critical thinking faculties, it is time to review methods of teaching academic writing.

This study examines two groups of short essays on the same subject (analysis of a free verse poem), those written by senior ESL students and generated by artificial intelligence. Comparison between the groups is made in terms of linguistic characteristics of the essays (vocabulary, syntactic structures, figures of speech) and originality of the poem's interpretation. Typical weak and strong points of the human-authored and AI-generated essays are pointed out.

It is suggested that prior to setting an essay writing task, students can be engaged in choosing a topic that might interest them. They can start with writing a mock essay, ask ChatGPT to do the same, compare the two versions, and discuss the results in class. AI can help cope with linguistic problems; as to generating ideas, it is worth encouraging students to do it independently.

Key words: human/artificial intelligence, academic writing/essay, ChatGPT, human-authored essay, AI-generated essay.

DOI <https://doi.org/10.23856/7005>

1. Introduction

The problem of coexisting with Generative AI in the academic environment is vast and deep (Oppenheimer, 2023; Hirsh-Pasek & Blinkoff, 2023). AI is recognized as a powerful instrument for language learning (Edmett, 2025: 33); it is claimed that artificial intelligence “actually help[s] prepare students for the real world, where they’ll need to apply concepts rather than simply recall facts”; the other side of the coin is that ChatGPT can “write verse in the style of Shakespeare [...], answer test questions and write essays” (Abramson, 2023: para. 2). In a rigorous study that focuses on linguistic characteristics of generated argumentative essays, Steffen Herbold et al. (2023: *Introduction section*) maintain that ChatGPT-4 “outperforms the quality of the human-written essays significantly”. So, there is a risk that AI-generated essays

can bring students unearned high points, and a frequent turn to AI can lead to deficiency in essay-writing competence, especially in ESL/EFL students.

We believe that at least three things are needed to prevent or mitigate such potential consequences: teachers' familiarity with ChatGPT's writing style; their readiness "to adapt strategies for teaching writing skills [and] to critically reflect with the students on when and how to use those tools" (*Herbold et al., 2023: Conclusion section*); systematic development of students' ability to think and to write independently.

Academic writing is a distinct type of discourse (*Bailey, 2006; Fang, 2024; Gillett et al., 2009; Thonney, 2011; University of York, 2025; Wilson, 2022; Yakhontova, 2003, 2024*). It deals with concepts, ideas, generalizations, and interpretations. It is considered to be objective as it relies on textual, historical, and citational evidence; though, humanities academic writing often adopts a subjective experience of an author.

Academic essays usually express authors' personal points of view, hence they are often subjective (*Yakhontova, 2003, 2024*). Authors are expected "to argue [their] position clearly and support it with evidence", to evaluate each argument and present a conclusion (which can be used as a premise in a further argument), to summarise the main points of an essay (*Gillett et al., 2009: 221–222*).

A basic requirement of academic writing is saying something new, either in the form of sharing new knowledge/experience or in the form of a novel interpretation of already known facts (*Wilson, 2022: 3*); in other words, a good piece of academic writing has to be creative. "In the scientific discourse, creativity is seen as using innovative ideas and technologies to create content that evokes an emotional response and engages the audience" (*Kyianytsia, 2025: 94*). When applied to academic writing, this definition points out both strengths and risks associated with the process of creation. An author can come up with an innovative idea; at the same time, there may be a serious temptation to use innovative technologies to generate some interesting ideas, as well as the final product (for example, an essay), especially when the deadline is imminent.

One of the ways to minimize negative effect of careless use of AI is to engage students in comparative analysis of texts produced by humans and artificial intelligence. This study highlights and compares some characteristic features of several short poetry analysis essays authored by humans and generated by ChatGPT. The framework of the analysis is Text World Theory (TWT), a cognitive model of discourse processing (*Werth, 1999; Gavins, 2007, 2020*). The aim of the study is to show how AI can be used to help students improve the quality of their own essays.

2. Designing an experiment

In this article, the acronym HAE are used for a human-authored essay; AIGE, for an AI-generated essay. The HAEs and AIGEs are regarded as two distinct groups of essays.

Seventeen first-year MA students of the English Philology Department of Vasyl Stefanyk Carpathian National University (formerly, Vasyl Stefanyk Precarpathian National University) were asked to write a short poetry analysis essay, about 200 words, discussing the role of function-advancing propositions and world-switches (elements in TWT) in interpreting the meaning of Michael Swan's poem *How Everything Is*:

Perhaps this is how everything is.
The scree steepens into a rockface;
you work your way up ten of twelve pitches,

each worse than the one before,
 the last a brutal overhang
 with few holds, and those not good;
 somehow, pushing your limits,
 you struggle through to the top
 with your arms on fire,
 to find a car park, toilets and a café.

(Swan, 2011: 2)

The principles of academic essay writing, requirements for poetry analysis essays, the basic concepts of TWT, including such elements as function-advancing propositions and world-switches, were discussed and practiced in class in the first semester of the 2024–2025 academic year. The essays were done as homework and submitted on December 19, 2024. Some of them had conspicuous features of AI-generated texts; others, in our opinion, were written independently. Our assumption on the students' independent writing was based on our familiarity with their style of spontaneous oral speech and the fact that there is almost no difference in the quality of their unprepared performance in class and the language of the essays in question. Three essays from among those that we believe to be written independently were chosen for the analysis, the choice criteria being better logical consistency and coherence, better substantiated interpretation of the poem compared to the other students' essays. By the permission of the authors, Sofiia Kovalchuk, Yaroslava Mankiv, and Vita Nespliak, one of the essays is reproduced in this section of the article and all the three essays are cited below.

We also received assistance and information from ChatGPT-4, AI language model, OpenAI platform. ChatGPT was asked to generate three essays on the same subject; dates of the interaction: March 22, 2025 (the first two essays) and April 29, 2025 (the third essay). The first AI-generated text is reproduced in full in this section of the article, all the three essays generated by ChatGPT are cited below.

HAE-1, HAE-2, HAE-3 stand for the three human-authored essays discussed; AIGE-1, AIGE-2, AIGE-3, for the AI-generated ones.

The title of all the essays is "The Role of Function-Advancing Propositions and World-Switches in Interpreting the Meaning of Michael Swan's Poem *How Everything Is*".

Human-authored essay (HAE-1):

In *How Everything Is*, the hard process of reaching an important goal ends in ironic disappointment. Michael Swan's use of function-advancing propositions and a world-switch helps better understand the meaning of the poem and shows how people tend to overcomplicate life.

Function-advancing propositions move the story forward. The enactor is climbing up a rockface ("you work your way up ten or twelve pitches, / each worse than the one before"). The struggle intensifies with each pitch until the climber reaches their physical and emotional limits ("somehow, pushing your limits, / you struggle through to the top"). These intention processes reveal a conscious choice to endure hardship to achieve a goal.

The world-switch – a change in spatial parameters of the text-world (from the dangerous rockface to the modern comforts at the top ("a car park, toilets and a café")) – sharpens the irony. The big effort leads to a reward that feels small and ordinary. This contrast shows how pointless some self-made challenges can be, especially when easier options, like driving up, are available.

Michael Swan metaphorically criticises humanity's inclination to complicate life. By combining function-advancing propositions with the world-switch, the author shows how effort

and reward do not always match, so readers should carefully consider their decisions to avoid unnecessary struggles or risks.

(An unpublished essay by S. Kovalchuk,
submitted on March 19, 2024)

AI-generated essay (AIGE-1):

In Michael Swan's poem *How Everything Is*, the poet uses an everyday experience – climbing a difficult rock face – to explore the deeper meaning of life and struggle. The use of function-advancing propositions and world-switches in the poem helps illuminate its meaning.

A function-advancing proposition is a statement that builds upon the previous one, progressing the narrative or understanding of a situation. In the poem, the climber begins by describing the steepening scree and the escalating difficulty of the climb. Each pitch becomes increasingly challenging, and this gradual progression mirrors life's struggles. The final function-advancing proposition – “you struggle through to the top” – suggests that despite the difficulty and suffering, there is a form of success or completion, albeit one that leads to a mundane, anticlimactic discovery: the car park, toilets, and café.

World-switches, on the other hand, involve a sudden shift in perspective or environment. The shift in the poem occurs when the climber reaches the summit, expecting perhaps some sublime reward, only to encounter a familiar, commercialized reality. This abrupt transition mirrors the disillusionment often found in life's pursuits, where struggles lead not to transcendence but to a return to the ordinary.

Through these techniques, Swan illustrates the futility and unexpected outcomes of human effort.

(ChatGPT, personal communication: March 22, 2025)

*

In what follows, we compare the essays from both groups in terms of vocabulary, syntactic structures, expressiveness, and originality of interpretation. Finally, we present some recommendations on how to encourage students to think for themselves, to develop their own writing skills, and “to use AI as a tool not as a substitute for learning” (Greene-Santos, 2024: para.4).

References for the examples in sections 3 and 4 of this article are as follows:

HAE-1 (an unpublished essay by S. Kovalchuk, submitted on March 19, 2024);

HAE-2 (an unpublished essay by Ya. Mankiv, submitted on March 19, 2024);

HAE-3 (an unpublished essay by V. Nespliak, submitted on March 19, 2024);

AIGE-1 and AIGE-2 (ChatGPT, personal communication: March 22, 2025);

AIGE-3 (ChatGPT, personal communication: April 29, 2025).

3. Linguistic characteristics of the essay texts

The study focuses on such linguistic characteristics of the essay texts as vocabulary, syntactic structures, and figures of speech.

The TWT terms “function-advancing proposition” and “world switch” are used in all the HAEs and AIGEs, while “enactor”, “change in spatial parameters of the text-world”, “change of objects”, “action process”, and “intention process” are used once each by human authors only.

Some other examples that give us idea of the students' linguistic competence or help recognize AI-generated texts are provided below.

Vocabulary

Human-authored essays:

n. – disappointment, limit, hardship option, inclination, reward (HAE-1); complexity, image (HAE-2); intentions, challenge, routine, scenery (HAE-3);
 ger. – combining (HAE-1); moving, going (HAE-3);
 adj. – conscious, spatial, pointless, self-made (HAE-1); required, spatial, mundane (HAE-2); crucial, bustling, mundane (HAE-3);
 v. – overcomplicate, endure, intensify (HAE-1); employ, reveal, consider, depict, challenge, indicate, facilitate, convey (HAE-2); imply, accomplish, convey (HAE-3);
 adv. – metaphorically (HAE-1, HAE-2); eventually (HAE-3).

AI-generated essays:

n. – narrative, progression, suffering, completion, discovery, perspective, environment, summit, reward, disillusionment, pursuit, transcendence (AIGE-1); exploration, existence, intricacy, perception, framework, engagement, dimension, device, perspective, transition, worldview, technique, confusion, unpredictability, meditation (AIGE-2); perception, concept, argument, progression, environment, acceptance, reflection, resilience, surface, undercurrent, intensity, scope, realism, technique, complexity, coexistence, hardship, strength (AIGE-3);
 ger. – tracing, accepting (AIGE-3);
 adj. – escalating, challenging, gradual, mundane, anticlimactic, sublime, familiar, commercialized (AIGE-1); layered, contradictory, transient, contingent (on) (AIGE-2); elusive, external, internal, philosophical (AIGE-3);
 v. – explore, illuminate, progress, mirror, involve, occur, encounter (AIGE-1); extend, provide, challenge, reconsider, force, experience, mirror (AIGE-2); explore, apply, advance, occur, engage, appreciate, reveal, require (AIGE-3);
 adv. – increasingly (AIGE-1); seemingly (AIGE-2); subtly, ultimately (AIGE-3);
 prep. – despite (AIGE-1);
 conj. – albeit (AIGE-1).

Word phrases

Human-authored essays: “ironic disappointment”, “overcomplicate life”, “physical and emotional limits”, “conscious choice”, “endure hardship”, “self-made challenges” (HAE-1); “metaphorically describe life and its complexity” (HAE-2); “eventually accomplish [one’s] goals”, “go to extremes”, “the scenery of nature”, “the material world” (HAE-3).

AI-generated essays: “escalating difficulty”, “gradual progression”, “mirror life’s struggles/disillusionment”, “a form of success/completion”, “sublime reward”, “commercialized reality”, “in life’s pursuits”, “transcendence” (AIGE-1); “complex exploration of existence”, “mirror the transient”, “shift nature of human experience itself”, “contingent on perspective and context”, “meditation” (AIGE-2); “explore the elusive nature of reality”, “subtly shift between”, “engage with the emotional/philosophical undercurrent” (AIGE-3).

The examples above clearly show that the students’ vocabulary is not as rich, and phrases are less sophisticated and elaborate than those used by ChatGPT; compare, for example, “metaphorically describe life and its complexity” (HAE-2) and “complex exploration of existence” (AIGE-2). On the other hand, the students use the key words (“function-advancing proposition”, world-switch”) and are keen to demonstrate their familiarity with other TWT concepts and principles (“enactor”, “change in spatial parameters of the text-world”, “action/intention process”); while ChatGPT concentrates on the key words only because it was not asked to show its general “knowledge” of TWT. Besides, ChatGPT’s interpretation of the notion of function-advancing

proposition does not quite match the meaning of this notion in terms of TWT. AIGE-1 says that “A function-advancing proposition is a statement that builds upon the previous one, progressing the narrative or understanding of a situation”; AIGE-3 states that “Function-advancing propositions are statements that push the argument or emotional progression of the poem forward”. Compare the above explanations with the one given by Joanna Gavins (2007: 56–57): “[...] some sort of material process, whether that process be an intentional action, a superventional action, or an event. In Text World Theory terms, all these processes are types of function-advancing propositions. [...] [F]unction-advancing propositions can be seen in many ways to be the items which propel a discourse forwards. Material processes almost always convey a change in state ...”.

In our subjective opinion, the students’ vocabulary/word phrases, though simpler in nature, describe the situation from the perspective of readers who place themselves in the position of the poem’s character (enactor); while ChatGPT’s vocabulary/word phrases, metaphorically speaking, are those of an efficient but cool and distant analyst.

Clauses and sentences

Complex and compound sentences are used in all the essays from both groups. Examples of other syntactic structures that catch the eye are given below.

Human-authored essays:

– gerund phrase, inversion: “By combining function-advancing propositions with the world-switch, the author shows how effort and reward do not always match [...]” (HAE-1); “[...] the character eventually accomplishes his goals by moving forward and even going to extremes” (HAE-3);

– participle clause: “[...] the author describes the pitches the character climbs, which may be “slight” spatial shifts indicating that each new stage of life is harder to get through” (HAE-2);

– parenthesis, detachment, explanatory phrase: “The world-switch – a change in spatial parameters of the text-world (from the dangerous rockface to the modern comforts at the top (‘a car park, toilets and a café’)) – sharpens the irony” (HAE-1); “‘The scree steepens into rock-face’ can mean the development of life, the way it becomes more complicated [...]” (HAE-2).

AI-generated essays:

– gerund phrase, inversion: “By tracing how function-advancing propositions build emotional intensity and how world-switches broaden the scope of perception, readers can better appreciate Swan’s delicate balance between realism and hopefulness” (AIGE-3);

– participle clause, infinitive clause: “The shift in the poem occurs when the climber reaches the summit, expecting perhaps some sublime reward, only to encounter a familiar, commercialized reality” (AIGE-1);

– detachment: “World-switches, another key device in the poem, help to create a sense of movement between different states of existence, perspective, or understanding” (AIGE-2).

On the whole, we can state that in terms of clause/sentence structure, the students’ essays are no less diverse than the AI-generated texts.

Figures of speech

Epithets, metaphors, and antithesis are found in both groups of texts. Some examples are given below.

Human-authored essays:

- epithets: “ironic disappointment”, “pointless self-made challenges”, “unnecessary struggles or risks” (HAE-1); “desired thing”, “mundane things/routine” (HAE-2, HAE-3); “bustling city life” (HAE-3);

- metaphor: “sharpen the irony” (HAE-1);

- antithesis: “The big effort leads to a reward that feels small and ordinary” (HAE-1).

AI-generated essays:

- epithets: “increasingly challenging pitch”, “gradual progression”, “mundane, anticlimactic discovery”, “sublime reward”, “familiar, commercialized reality”, “unexpected outcomes” (AIGE-1); “layered meaning”, “seemingly contradictory ideas” (AIGE-2); “elusive nature of reality” (AIGE-3);

- metaphors: “progression mirrors life’s struggles”, “abrupt transition mirrors the disillusionment often found in life’s pursuits”, “struggles lead not to transcendence but to a return to the ordinary” (AIGE-1); “mirror the transient and shifting nature of human experience” (AIGE-2); “the poem subtly shifts between different realities”, “allow readers to see beyond the surface”, “emotional and philosophical undercurrents of the poem” (AIGE-3);

- antithesis: “expecting perhaps some sublime reward, only to encounter a familiar, commercialized reality”, “lead not to transcendence but to a return to the ordinary” (AIGE-1); “the speaker moves from external descriptions of the physical world to internal reflections on human resilience and hope”, “the coexistence of external hardship with internal strength” (AIGE-3).

In both the HAEs and the AIGEs, the dominant figure of speech is epithet. AI uses metaphors much more liberally than the human authors. There are two cases of antithesis in the AI-generated texts. Metaphors and antithesis are definitely underestimated by the human authors; in their essays are used only once each.

It may seem that extensive use of metaphors “strengthen[s] the figurative attractiveness” (Marchuk, Mintsys, 2023: 111) of a text. Yet, from our perspective, abundance of metaphors in the AI-generated essays results in some unnaturalness of their discourse.

4. Interpretations of the poem

Citations below represent interpretations of the poem explicated/implicated in both groups of essays:

- the poem is about “conscious choice to endure hardship to achieve a goal” (HAE-1); the poem “mirrors life’s struggles” (AIGE-1);

- “effort and reward do not always match” (HAE-1); “the result is not worth the struggle” (HAE-2); “the disillusionment often found in life’s pursuits, where struggles lead not to transcendence but to a return to the ordinary” (AIGE-1);

- “Michael Swan metaphorically describes life and its complexity” (HAE-2); “[U]nderstanding “how everything is” requires accepting complexity, nuance, and the coexistence of external hardship with internal strength” (AIGE-3);

- one “needs to challenge themselves and make an effort to reach the top, i.e., the desired thing” (HAE-2);

- it is an attempt “to escape [one’s] mundane life and enjoy nature” (HAE-3).

Thus, the essays present three basic ideas: (i) life as struggle; the need to challenge oneself; external hardship vs. internal strength (HAE-1, HAE-2, AIGE-3); (ii) complexity of life; effort does not always ensure desired result (HAE-1, HAE-2, AIGE-1); (iii) mundane life vs. enjoying nature (HAE-3). On balance, the responses of the human authors are no less (sometimes even a bit more) creative than those of AI.

5. Conclusions

This article is addressed not only to educators, but also to ESL/EFL learners since, in our experience, some students genuinely believe that ChatGPT (or a similar tool) can produce a better piece of writing than any text written by themselves. This assumption means that ultimately, they will have to admit superiority of artificial intelligence over the human mind, which is not a very cheerful conclusion. Undoubtedly, it all depends on students' knowledge/skills/motivation, and on the capabilities of the ChatGPT model; but we are convinced that students have to develop their critical thinking potential.

The comparative analysis of the human-authored and AI-generated texts above allows us to state that, for all their weak points, the independently-written students' essays are more human-centered and by no means less creative than those produced by artificial intelligence.

At this stage of our research, we can suggest the following recommendations for developing students' ability for independent thinking and essay-writing skills:

Classroom procedure:

- choosing a relevant/challenging/interesting topic for analysis, discussing it in class, receiving students' feedback;
- examining theoretical framework of analysis;
- choosing material for analysis, taking into account students' suggestions;
- together with the students, compiling a list of issues which can be highlighted in an essay; discussing students' preferences;
- introducing/revising requirements for academic essay writing.

Homework:

- writing one's own mock essay;
- asking ChatGPT to write a mock essay;
- comparing the two versions in terms of their linguistic characteristics and originality of interpretation;
- asking ChatGPT for help with tricky linguistic issues;
- writing one's own essay.

Back in the classroom:

- sharing one's essay with the class;
- discussing how students used ChatGPT in writing their essays: questions asked, answers received, how communication with ChatGPT improves their knowledge of English in general and writing skills in particular;
- comparing and discussing different perspectives on the problem analyzed.

In this study, we have not considered such discourse properties as cohesion and coherence, hence we have not compared human-authored and AI-generated texts from this perspective. This aspect of analysis can be a potential avenue for further investigations. Besides, our study is based on rather limited data material. In future, we plan to involve 2nd–4th year BA students, as well as MA students in an experiment to test the effectiveness of the strategies suggested.

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BASIC INDICATORS FOR ASSESSING THE EFFECTIVENESS OF THE E-LEARNING PROCESS

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Summary

The analysis of the main models for evaluating the effectiveness of the e-learning process is proposed, and differences in schemes are determined by the degree of integration of distance technology into the learning process and the degree of implementation of distance learning in the educational process. The general problems and trends of implementing models for assessing the quality of distance learning in the educational space are highlighted. A set of main problem tasks within the e-learning process is defined, and schemes for solving them based on the concept of distance education are proposed. A basic classification of the main schemes and models for evaluating the components of the e-learning process is proposed. The main sets of metrics and qualitative indicators (educational, didactic and economic) for evaluating the effectiveness of the electronic educational process are highlighted. The main models for assessing the quality of the educational process in the context of their strengths and weaknesses for the electronic educational process are analyzed. In the process of dividing schemes and models for evaluating the educational process into basic classes, basic attributes and primary features of the electronic educational process were identified.

Key words: quality assessment model; e-learning process; educational environment; quality metrics.

DOI <https://doi.org/10.23856/7006>

1. Introduction

Modern methods and software tools of the remote (electronic) form organization of the educational process (EP) includes three components: technological, content (content) and organizational. The technological component is responsible for the material and technical base (hardware and software). Meaningful – for the content of training (content training modules), traditional and innovative training tools and EP control tools, distance courses and training programs (Kitonova, 2022). Organizational consists in the implementation of the educational process using various organizational schemes of remote control. Thus, the general analysis of the literature in this study demonstrates a variety of approaches to the classification of organizational schemes and models for evaluating distance learning. At the same time, the authors choose different bases for classifying and evaluating the effectiveness of electronic EP components. Moreover, in many of them, the basis (dominant feature) for highlighting the EP assessment model is not clearly expressed, as a result, within the same classification, schemes are

identified according to different features, parameters (*Alt, 2021*). Depending on how the metrics and models of evaluation (performance assessment) are selected, it is necessary to make a decision on the future fate of the course, training module, component of the electronic inventory item (leave, modify, remove, change the format, content, frequency – and so on). If it is decided to finalize or modify the electronic course or content module, then you can make a clear plan of changes based on feedback mechanisms and methodological recommendations (*Ferrer, 2010*).

2. Presentation of the main material

Let's record what is included in the assessment of educational results of an electronic EP. To evaluate the effectiveness of distance education methods, several important actions must be taken:

Stage 1. Evaluate the training results of participants of the electronic EP (indicators before and after completing the electronic course, the results of completing intermediate and final training tasks, tests).

Step 2. Calculate the metrics of a particular set (current and final CSI and COR, final NPS).

Stage 3. Build a model (scheme) for evaluating the results of an electronic inventory item based on selected (artificially constructed) metrics for evaluating educational results.

Stage 4. Provide a feedback mechanism for the results of an electronic inventory item from students, teachers, and experts.

That is, depending on what the metrics showed (the model for evaluating the effectiveness of the EP component), you need to decide on the future fate of the course, training module (leave, modify, remove, change the format, content, frequency – and so on). If it is decided to finalize or modify the electronic course or content module, then you can make a clear plan of changes based on feedback mechanisms and methodological recommendations (*Pappas, 2019*).

Consequently, there is a fundamental problem of comparing and selecting models for evaluating the quality of electronic EP components.

It should be noted that evaluating the effectiveness of EP (all organization schemes and models) is a problematic task that concerns both classical educational institutions and areas of corporate education. To date, there are about two dozen different models for evaluating the effectiveness of EP, which are modifications of 6 basic models of the quality of the educational process based on recording the results of EP. Research shows that only a small proportion of educational institutions associate educational activities with the results required by the business (here communication between the educational institution and the business remains a big problem). One of the first clear and simple models (frameworks) that allows you to assess the impact of EP on Business Processes was formulated by D. Kirkpatrick. Its model for evaluating the effectiveness of EP, with some modifications, is still used today and is considered basic.

Hierarchical model of Kirkpatrick – Phillips EP efficiency. Thus, the classical Kirkpatrick model assumes four levels of assessment of the effectiveness of EP (Fig. 1):

1) Reaction hierarchy – how much all participants of the emergency liked the educational process.

2) Hierarchy of content assimilation – sets of educational techniques and techniques that were learned based on the results of EP.

3) Hierarchy of behavior – analyzes how as a result of EP influenced the change in the working behavior of EP participants (in dynamics and educational results).

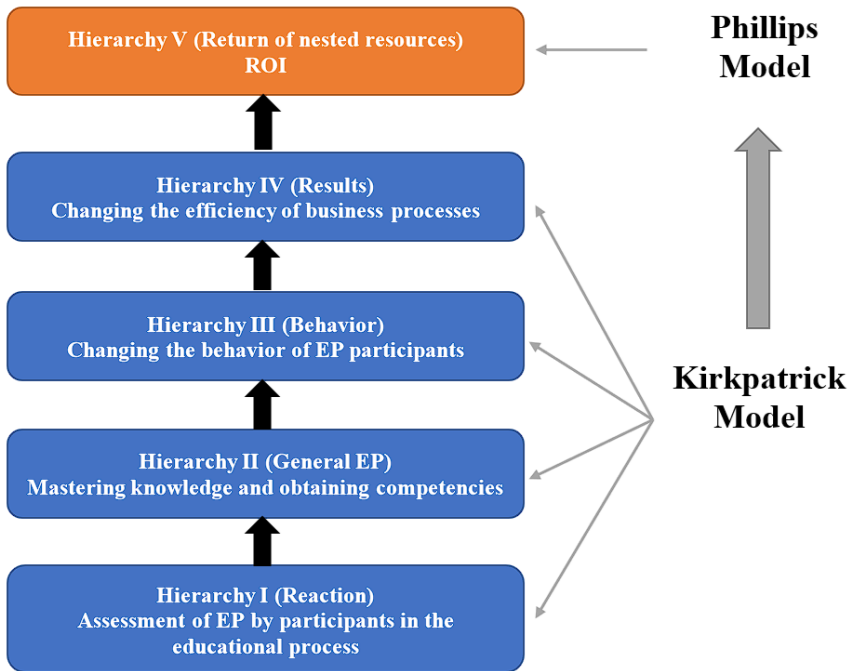


Fig. 1. Hierarchical model of Kirkpatrick – Phillips EP efficiency

4) Hierarchy of training results – analyzes which EP results for a productive structure (business processes) have the greatest impact – reducing resource costs, improving the quality of a business product).

The D. Phillips EP efficiency model (Phillips ROI model) adds a fifth level (hierarchy) of valuation to the classical Kirkpatrick model: return on invested capital (ROI metric). The ROI metric is estimated using the (1):

$$M_{ROI} = F_{Res}/R_{Edc}. \quad (1)$$

Note that here F_{Res} is the total financial result (in fact, the added value of the business product), and R_{Edc} is the total cost of the inventory item.

Note that the presented models should sometimes not be combined into a single Kirkpatrick – Phillips model (in practice, it is often advisable to separate them). The Phillips model not only adds a new hierarchy, but also adds new performance evaluation metrics to existing levels. Thus, metrics are added to the third level (the level of behavior assessment) to assess the reasons for changes that made it impossible for EP participants to apply new knowledge and competencies in their work. At the fourth level (the level of results), the set of tools and metrics for evaluating it is significantly expanded (Revilova, 2015).

At this stage of the study, the fundamental question of evaluating each of the stages of the Kirkpatrick – Phillips model arises. So at the first level of “reaction” it is necessary to qualitatively assess the thoughts and emotional reactions of participants in an electronic emergency. To do this, use the following metrics:

- NPS metric-consumer loyalty index. Participants of an electronic EP are asked to assess their readiness to recommend an EP (electronic course) on a scale from 1 to 10 the results

of the assessment are divided into three groups depending on the points: 1–6 – critical attitude, 7–8 – neutral attitude, 9–10 positive attitude. At the end of the evaluation, the percentage of critics is subtracted from the percentage of supporters.

– CSAT metric-an index of satisfaction of training participants. To calculate it, students are first asked to rate the inventory item or its element (e-course) on a certain scale (for example, from 1 to 10, from “completely dissatisfied” to “very satisfied”).

It should be noted that at the second level of the Kirkpatrick – Phillips model, the knowledge, skills and competencies that EP participants received as a result of passing the educational program are evaluated. It is clear that for this purpose, in the simplest case, it is advisable to use EP test tools (they are the simplest in terms of methodological development and do not require significant resource investments). However, we note that testing alone within the framework of an emergency will not give a complete picture of mastering the curriculum, so other tools are also used at this level (practical tasks, cases, role-playing games, etc.). Note that you need to evaluate your knowledge not only after training, but also throughout the entire inventory item and after – this will help you get more accurate results.

At the third level, changes in the behavior of EP participants after completing the course are evaluated (i.e., whether the EP goals are achieved or not). Therefore, two factors are important for evaluating the effectiveness of an inventory item at this level:

1) Results should be clearly evaluated and formalized (for example, using checklists or regulations). This way you can track and evaluate whether knowledge and competencies have actually been transferred to the practical plane.

2) An important element is the involvement of EP experts and administrators in the assessment of EP – this allows us to consider changes in the educational process systematically (evaluate EP in dynamics) and get more complete data and assessments.

At the fourth level of “results”, a data analysis procedure is performed to determine what specific changes there are in productivity, quality of work (quality of business processes), or other key indicators. This assessment helps to identify the specific significance and effectiveness of the training program (its impact on Business Processes and overall productivity).

It should be noted that it is thanks to the ROI metric that it becomes possible to assess the economic efficiency of an inventory item, and based on the data obtained, it is already possible to directly correlate the productivity of a specialist from the completed inventory item.

The Stafflebim model (CIPP). The block diagram of this model is shown in (Fig. 2). the model allows you to evaluate both the results and the process of learning and improving EP itself. Therefore, this model can be successfully applied for long-term modular training programs (long-term e-courses).

The main idea of this EP assessment model is to answer the following basic set of questions:

1) Context Evaluation – a general assessment of the development context (who, what, and why to teach?).

2) Input Evaluation – general assessment at the input (how to teach and what is planned to get at the end of training?).

3) Process Evaluation – general assessment of the inventory item (how is the training going and what are the interim results of the inventory item?).

4) Product Evaluation – a general assessment of the final result of the inventory item (how was the training process and were the training goals achieved?).

The Bern model (CIRO). Note that this model is a logical continuation of the Stafflebim model – (Fig. 3).

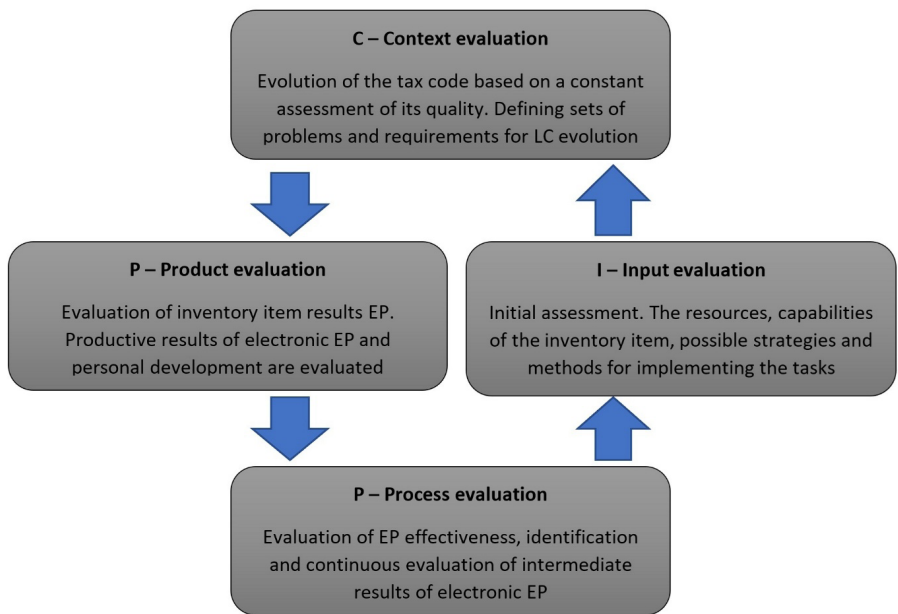


Fig. 2. Model for evaluating the effectiveness of Stafflelims (CIPP)

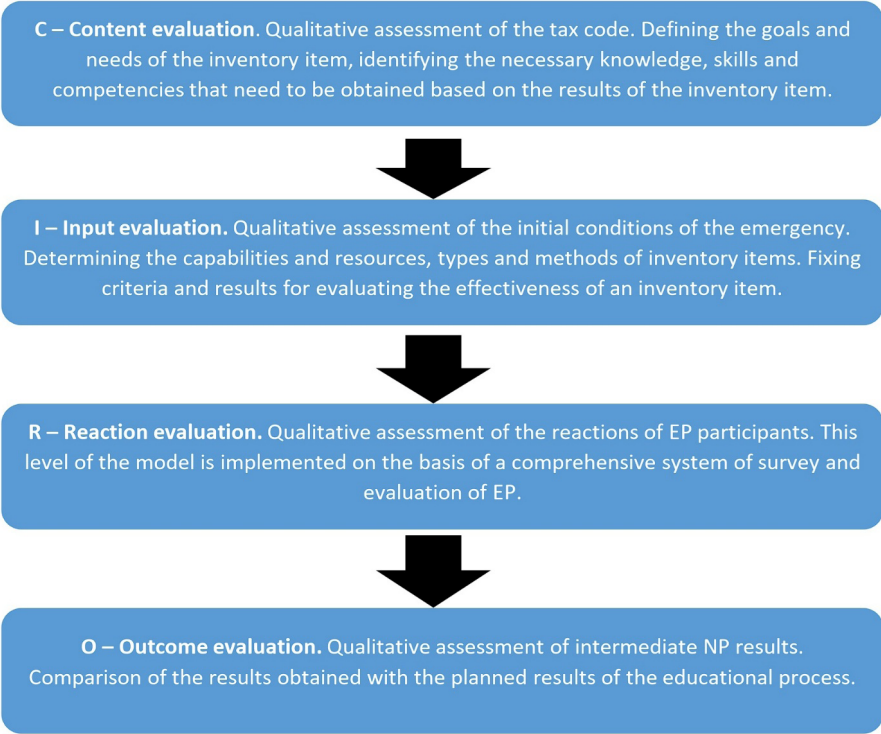


Fig. 3. Bern estimation model (CIRO)

Within the framework of this EP quality model, the following criteria for the overall educational process are evaluated:

- 1) Context Evaluation-a comprehensive assessment of the inventory item content.
- 2) Input Evaluation-assessment of the capabilities and preliminary results of the emergency.
- 3) Reaction Evaluation-assessment of educational reactions of participants in the emergency.
- 4) Out evaluation-a comprehensive assessment of the results obtained.

An important feature of this model for evaluating the effectiveness of EP is that the main attention is paid directly to the participants of EP (the human-centricity component prevails). Their overall perception of EP as a whole affects its effectiveness – an important component of the evaluation model. The model is useful both at the stage of launching an inventory item and at the stage of final evaluation of the effectiveness of the inventory item (based on training results).

Tyler target approach model. This model is based on the step-by-step selection and setting of sets of EP goals. Please note that the procedure for qualitative assessment of inventory items for this model follows the following scheme:

- 1) Primary formation of sets of EP goals and objectives.
- 2) Stage of classification of formed sets of goals and objectives of the inventory item.
- 3) The stage of defining a set of goals and objectives of the EP in terms of the behavior of the EP participant.
- 4) The stage of searching for strategies for verifying the achievement of the goals of an electronic inventory item.
- 5) Stage of development and selection of metrics and methods for evaluating inventory items.
- 6) Stage of collecting statistical data related to the effectiveness of inventory items.
- 7) Stage of comprehensive comparison of EP efficiency data with data on the effectiveness of achieving the desired EP results.

In other words, we can summarize that the main problem of EP (based on the Tyler model) is unclear (not fully defined) educational goals. Tyler's model offers:

- 1) Set detailed and clear EP goals. Classify EP goals each goal is a specific behavior model within the EP.
- 2) Think about how to check that the EP goals have been achieved, i.e. the behavior patterns have been mastered. Situations to check, rating scale.
- 3) Comprehensively evaluate the effectiveness of the inventory item. Collect data on the effectiveness of training and the workflow after – compare.

Note that the Tyler model is similar to the third level (hierarchy) of the Kirkpatrick model, but the processes occurring within the EP are considered in more comprehensive and detailed ways. Despite the tangible advantages of Tyler's targeted approach, it has one fundamental drawback – it is impossible to assess the financial effectiveness of the training conducted. In other words, using Tyler targeted approach, there is no way to use the ROI metric.

Skreven's non-target EP estimation model. Within the framework of this model of EP assessment, the final results of training are the main reference point that needs to be correlated with the initial needs (the need of the organization, educational institution, the needs of the EP participant, the need for business processes). Data for analyzing and evaluating the effectiveness of EP are collected by various methods (tests blocks, observations, sample surveys), then the obtained data are systematized and evaluated by an expert (expert group) to obtain an objective assessment of EP.

So, this model for evaluating the effectiveness of EP, aimed at the result of training, requires a set of external assessments (expert groups) that should not have information about the goals and objectives set for the EP (the requirement for independence). Peer review should determine the full cost and overall value of the training program based on a set of EP results.

In other words, the Skriven's model aims to introduce an expert on the assessment of EP from the outside. This is exactly what distinguishes it from the other models listed in the study above. In the Skriven's model, an external expert has the main task, which is to determine the effectiveness of the inventory item, as well as to assess the final cost of the educational process (the results of the inventory item) based on the results of its implementation. This model takes as its main goal the study of the final results of an emergency. The objectivity of an outside observer (expert group) leads to the convenience of this method if the emphasis is placed on the overall effectiveness of the educational organization. In the case when each member of the EP is evaluated separately, his professionalism and personal educational progress, this model for evaluating the effectiveness of the EP may not be of sufficient quality (the objectivity factor may not be preserved, and the results of the assessments are influenced by the human factor). This model of EP quality assessment allows us to analyze EP and determine its overall results, but it is not able to identify the root cause of low EP efficiency and identify undesirable patterns of behavior of EP participants that affected the final result.

3. Conclusions

So, we can summarize – all the analyzed models for evaluating the effectiveness of electronic EP are built in one way or another in order to conduct a comprehensive, objective and effective assessment of the results of EP. Thanks to the EP efficiency models described above in the section, you can determine the best form, method, and scheme of EP (adapt the EP to the specific need of EP participants) – (Table 1). As a rule, the Kirkpatrick – Phillips model is considered to be a classic approach to evaluating the effectiveness of training. Most other EP assessment models are based on this approach in one way or another.

Table 1

Comparative table of models for evaluating the effectiveness of EP

Comprehensive model for evaluating the effectiveness of EP	Advantages of the model performance evaluations EP	Disadvantages of the model performance evaluations EP	Possibility of effective application within the framework of the electronic EP
1	2	3	4
Kirkpatrick-Phillips hierarchical model	A classic model (hierarchy of two models) for evaluating the effectiveness of EP, which can be adapted to almost any model and scheme of EP organization. An important advantage is the possibility of integrated use of this hybrid model for the sphere of financial investment in EP and its elements (due to the ROI metric).	In classical model implementations, there are limited opportunities to define performance evaluation criteria and specific steps to implement the inventory EP. The fundamental disadvantage of the model is the lack of ability to adapt the performance assessment system to a fixed component of the inventory EP and a specific stage for its implementation.	This model as a whole (or its component) for evaluating the effectiveness of an inventory EP can be applied to an electronic inventory item of an arbitrary scheme and model of the organization. This model for assessing the quality of inventory EP is the most versatile in terms of applied application.

Continuation of Table 1

1	2	3	4
Tyler's target approach model	An important feature is that this model defines specific EP goals. Correct and consistent setting of EP goals and objectives ensures high efficiency of this model in comparison with others.	The fundamental disadvantage of the model is the lack of a direct correlation between the defined EP goals and the final ones results that affect performance EP (the possibility of its correction and improvement). This model does not include the impact on EP results sets of external factors (influence of the social environment, subjective factors of the EP participant).	This model for evaluating the effectiveness of an inventory item can be applied to an electronic inventory item of an arbitrary scheme and organization model. Direct application of the model may be limited due to the lack of an inverse relationship between EP goals and results (this is critical for electronic EP).
Skriwen's non-target model	An important advantage of the model is the ability to conduct an independent external assessment of the effectiveness of EP at the expense of expert groups (the level of external expertise can be adjusted during the evaluation process). It is possible to evaluate both the inventory item as a whole and its individual components.	The fundamental disadvantage of the model is the inability to implement economic metrics for evaluating EP. In other words, it is not possible to perform preliminary calculations in order to predict the preliminary results of the EP as a whole. When working with this model, it is necessary to take into account the fundamental need to involve a third-party specialist (expert groups) to evaluate the EP or its elements. The involvement of external expert groups to evaluate EP makes this model the most resource-intensive (financially expensive) of all those presented in the study.	This model for evaluating the effectiveness of an EP can be applied to an electronic EP of an arbitrary scheme and model of the organization. However, this model is not suitable for business education and the forms of educational process associated with it.
CIPP model	The advantage of the EP assessment model is that both the EP itself and the results of the educational process are considered in a complex. In other words, the model provides a comprehensive approach to correlating the overall plan, forecast, results, and development of the EP as a whole. The presence of an efficient reverse coupling mechanism provides significant advantages over other models.	The fundamental disadvantage of the CIPP model is the inability to conduct an effective assessment of the business component of EP (the inability to comprehensively attract economic metrics for the assessment of EP and integrated evaluation of the effectiveness of EP in material terms).	This model for evaluating the effectiveness of EP can be applied to an electronic EP of an arbitrary scheme and model of the organization, provided that there are no requirements for an economic assessment of the quality of EP. The presence of feedback mechanisms adds advantages over other EP assessment models.

Continuation of Table 1

1	2	3	4
CIRO model	<p>Similarly to the CIPP model, this approach will provide a comprehensive correlation scheme for the EP plan, forecast, and Main results training and development of EP. To a large extent, this is a common advantage in evaluating the quality of EP CIPP and CIRO models.</p>	<p>A fundamental drawback of the model, which also coincides with CIPP models, is the inability to assess the economic component of EP (the inability to work with EP business metrics).</p>	<p>This model for evaluating the effectiveness of an EP can be applied to an electronic EP of an arbitrary scheme and organization model in parallel with models of the CIPP class, without the possibility of taking into account the business components (economic components) of an electronic EP.</p>

Therefore, we can conclude that there is a main problem in the assessment of EP, which is related to the impartiality and objectivity of any conducted program for evaluating the effectiveness of EP, since it is impossible to avoid the influence of the human factor on any assessment system. The experts who provide these processes have their own life experience, professional training and personal qualities, which cannot but leave its mark. You can also add to the above the influence of the acquired knowledge on the expert's personality. Thus, the question arises about minimizing the influence of the human factor on the results of evaluating the effectiveness of EP, which can be achieved either by minimizing external influence, or by minimizing one's own biased opinion about the object of study, its underestimation or, conversely, overestimation, by automating expert assessment based on specialized IS. That is, it is possible to minimize the impact of biases only with a systematic approach to the object of research (evaluation).

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THE MARVELOUS HERTS' AS A LITERARY STRATEGY OF RESISTANCE IN WAR NARRATIVES

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Summary

This article analyzes Viktoriia Mikhieienko's *The Marvelous Herts', or How the Ukrainians and the French Saved a River in Burgundy* as a multifaceted work transcending conventional children's literature. Although officially categorized as a children's book, the narrative explores profound philosophical, cultural, and existential themes through the experiences of seven-year-old Levko and his grandmother Ulia, Ukrainian refugees living in France.

The study employs literary-critical, intertextual, philosophical, and ecocritical methodologies to examine the work's intricate symbolism and broader cultural significance. The central concept of "Herts'" emerges not merely as a physical confrontation but as a philosophical framework encompassing internal, moral, and spiritual struggle. The narrative's ecological metaphor, the battle against the invasive Jussie plant threatening the Arroux, serves as an allegory for contemporary threats to both cultural and natural environments.

The research reveals how V. Mikhieienko constructs an intercultural dialogue between the Ukrainian Cossack ethos and French chivalric traditions through the friendship of Levko and the French girl Eva. The work demonstrates existentialist dimensions, with characters making authentic choices in confronting absurdity and adversity. Grandmother Ulia embodies stoic wisdom, teaching resilience through generational continuity and cultural preservation.

The article concludes that *The Marvelous Herts'* functions as a literary manifesto of the Ukrainian spirit, presenting resistance as both external action and internal transformation, making it a significant contribution to understanding the role of contemporary Ukrainian literature in shaping cultural identity during wartime.

Key words: Ukrainian literature; children's literature; ecological metaphor; intercultural dialogue; cultural identity, philosophical allegory.

DOI <https://doi.org/10.23856/7007>

1. Introduction

A distinctive work has emerged in contemporary Ukrainian literature: *The Marvelous Herts'¹, or How the Ukrainians and the French Saved a River in Burgundy* (hereafter *The Marvelous Herts'*) by Viktoriia Mikhieienko. While officially classified as children's literature, this book transcends the conventional adventure narrative. Dedicated to the author's eight-year-old grandson, it explores profound philosophical, cultural, and social themes through the story of seven-year-old Levko and his family, who relocated to the French town of Velier² with their

¹ A ritualized duel between Ukrainian Cossacks and their enemies preceding battle; single combat between individual warriors before the main engagement, demonstrating martial prowess; a contest or struggle between opponents; also used metaphorically to describe a clash of ideas or perspectives.

² A fictional town invented by the author.

grandmother Ulia, a guardian of Ukrainian cultural heritage. The central narrative centers on the battle against an invasive plant called Jussie that threatens the local river, a struggle that serves as a potent metaphor for the contemporary challenges confronting Ukraine.

This work skillfully blends child-friendly storytelling with profound themes of identity, memory, and resistance. The narrative follows Levko's self-discovery alongside the collective fight to preserve the river and Cossack traditions. A standout feature is the intercultural dialogue illustrated by Levko's friendship with French girl Eva as they explore the heroic traditions of both cultures.

The philosophical depth of the work emerges through the concept of *Herts'*, presented not merely as physical confrontation but as a life philosophy that unites courage, wisdom, and faith. The storyteller highlights values through grandmother Ulia, who shares Cossack wisdom with her grandson and embodies stoic ideals relevant to today's war context. The fight against the Jussie plant becomes an allegory for modern threats, and the river's purification symbolizes renewal and life's victory over destruction.

The author believes that a dominant force shapes every person's destiny, and for her, that force is the Word. She considers literature, theatre, and meaningful communication essential to her life, as words have influenced her experiences and defined her successes and challenges. Identifying as a philologist, she views words as her primary tool for engaging with the world.

At 11 years old, Viktoriia Mikhieienko discovered her passion for writing, creating poems and scripts for school performances. She graduated from Zaporizhzhia Pedagogical Institute in 1983 with a degree in philology, teaching Ukrainian and world literature while staging new scripts each year with her students. Her repertoire included adaptations of works by renowned authors and evolved into original dramatic pieces like *1943*, *Under Fire*, and *Taras*. Additionally, she developed event scripts for various ceremonies and contributed articles to regional publications and professional journals.

In 2017, the writer published two books: *Dzibaldone* (based on experiences working with a children's theater group) and *The Third Doctor* (a poem about pain and verses about love). With the onset of the war, she found herself in France – Gueugnon, Burgundy. She is learning French and writing again – diary entries, posts, and books for children and adults. Now, her Word is both a voice against war and a message of hope, faith, and love for humanity (*The Marvelous Herts'*, or *How the Ukrainians and the French Saved a River in Burgundy* and *The Secret of the Arroux*³).

This book is significant for understanding current trends in Ukrainian literature, showcasing how complex themes can be viewed through a child's perspective. It models resistance through generational continuity, cultural dialogue, and creative energy, making it socially and literarily important. *The Marvelous Herts'* exemplifies how children's literature can interpret contemporary realities and convey essential cultural and moral values.

2. Research Objective

The Marvelous Herts' is a rich work that explores complex cultural, philosophical, and existential themes through its narrative. Following the journey of Levko, his grandmother Ulia, and their friends in France, the story intertwines national identity, historical memory, justice, and collective action.

This analysis aims to uncover the artistic features, cultural context, and philosophical symbolism of the work, highlighting its significance in contemporary Ukrainian literature. By

³ A real-world river.

using the form of a children's fairy tale, the author conveys profound social and ecological ideas that resonate today.

The tale of intercultural interaction and ecological struggle intertwines personal experiences with collective memory, reflecting on contemporary challenges and identity. This makes it a noteworthy phenomenon in the Ukrainian literary landscape.

To conduct a comprehensive analysis of the work's multilayered narrative, the following **objectives** are proposed:

1. The analysis of the plot and thematic structure:
 - to examine the interplay between characters' personal narratives and collective historical consciousness;
 - to investigate the textual embodiment of contemporary sociocultural dynamics within the novel's fictional universe.
2. Deconstruction of symbolism and motifs:
 - to examine the Herts' as a polyvalent philosophical construct;
 - to analyze key symbols via Lyotard's narrative theory.
3. Intercultural Dialogue Analysis:
 - to investigate the interplay between Ukrainian Cossack and French chivalric traditions;
 - to analyze heritage transmission mechanisms through character archetypes.
4. Philosophical Analysis:
 - to identify existentialist influences;
 - to examine Ricoeur's narrative features.
5. Interpretation of Ecological Metaphor:
 - to decode the Arroux's socio-political symbolism;
 - to frame the ecological crisis as a societal allegory.
6. Assessment of Sociocultural Impact:
 - to examine the work's role in national identity formation;
 - to analyze its potential as an intercultural dialogue tool.

3. Methodology of the Study

Scholarly analysis treats the narrative's polyphonic structure as a semantic ecosystem where individual, communal, and national discourses converge. The methodological framework for examining V. Mikhieienko's text includes:

- a) a literary-critical analysis of narrative structure, symbolism, and stylistic devices, emphasizing nonlinearity and polyphony;
- b) an intertextual analysis of connections to Ukrainian Cossack and European chivalric traditions, central to constructing national identity as an *imagined community* (Anderson, 2020: 282);
- c) a philosophical inquiry into existentialist and stoic paradigms that transform historical memory into dynamic identity formation (Babka, 2017: 9);
- d) a cultural approach to identity formation through symbolic systems, particularly under historical duress (Holdenshtein, 2024: 90);
- e) an ecocritical approach of ecological metaphors (e.g., the Arroux) as allegories of sociopolitical conflict;
- f) a communicative and discursive analysis of the text's role in shaping collective memory, especially regarding trauma (Holodomor, World War II, and contemporary warfare).

These methodological approaches collectively reveal how V. Mikhieienko's narrative operates as a dynamic framework, synthesizing individual lived experience with collective memory to produce emergent meanings in response to contemporary sociopolitical realities.

4. Discussion

The struggle for justice: this component of the narrative is grounded in the awareness of historical and contemporary traumas: repressions, discrimination, war crimes. It inscribes personal tragedies into a collective context and forms a moral framework where the division between “us” and “them”, between the oppressed and the oppressors, becomes evident. In this context, the concept of moral truth is particularly important: as P. Ricoeur states, the search for truth in memory is also a quest for faithfulness – a demand and a claim that gives memory its ethical and epistemic significance (*Ricoeur, 2004: 55*). For Ukrainians, justice is not an abstraction but an urgent necessity, rooted in concrete experience and a deep aspiration for truth: “...justice is the demand of millions of people in different countries around the world. We must change the global approach to justice for international crimes. Ukraine also seeks justice” (*Matviichuk, 2024*). The belief in collective action's transformative force forms the narrative bridge between identity, memory, and futurity. This conviction embodies civil society's capacity, through solidarity, grassroots mobilization, and united struggle, to fundamentally reshape existence. Social movements transcend reactive resistance; they constitute society through their very praxis. Charles Tilly emphasizes that social movements are organized campaigns of public claim-making, involving people who often lack formal representation but use collective action to challenge and transform social relations (*Tilly, 2019: 3–4*).

In the Ukrainian context, this has been vividly demonstrated during the Orange Revolution, Euromaidan, etc. The power of collective action in Ukraine has consistently proven effective, with researchers emphasizing that civil activism, especially when triggered by crisis, plays a crucial role in transforming the national community (*Bekeshkina, 2014*). It refers not only to protest, but also to self-organization, the volunteer movement, and civic support for the army.

The Marvelous Herts' constructs a multifaceted narrative framed as an intercultural odyssey of resistance and renewal, where history, ethics, and futurity intersect. This dynamic narrative adapts to political upheavals and cultural transformations.

Using the symbolism of the Arroux, encumbered by an invasive plant, the author parallels global threats to cultural and natural environments. The story of Levko and his friend Eva, who strive to save the river, serves as an allegory for Ukrainians' contemporary struggle for their country. Each *Herts'* represents not just survival but also an affirmation of spiritual resilience. The mention of Grandmother Ulia during the clash with the mayor – “Not the Cossack⁴ who won the fight, but the one who turned aside” (*Mikheienko, 2025: 10*) – emphasizes that true victory lies in the ability to act wisely and unconventionally, even in a hopeless situation.

The author subtly emphasizes the importance of generational unity, as it is Grandmother Ulia, the bearer of the Cossack spirit, who helps the protagonists realize that true struggle is not just about strength but wisdom, perseverance, and prayer. And it is no coincidence that Ulia's refrain, “Hold on, young Cossack – one day you'll be the hetman!” (*Mikheienko, 2025: 2*), becomes the guiding principle that carries Levko through all trials, teaching him patience and faith in his strength.

The Marvelous Herts' is less a children's story than a meditation on human perseverance – on the refusal to surrender even when confronted with overwhelming challenges.

⁴ Cossack (Ukrainian: козак) refers to a member of a historically renowned group of warrior communities originating in the steppes of Eastern Europe, particularly in what is now Ukraine.

5. The Cossack Spirit in European Context: A Cultural Dialogue

Levko is a central character representing the complexity of contemporary Ukrainian identity. Born to a French father and Ukrainian mother in Armenia, he embodies a blend of cultures. His Ukrainian roots, shaped by his grandmother Ulia, influence his worldview and values. Through her stories and rituals, such as training with wooden sabers and communal prayers, Levko learns endurance and strength, connecting him profoundly to Ukrainian history as she describes the Zaporozhian Cossacks as “true knights” (Mikhieienko, 2025: 1).

For Levko, Cossackdom is a living heritage that supports him through challenges far from home. His friendship with Eva, a French girl who identifies as a “knight-maiden,” creates a bond between Ukrainian and European traditions. Their connection starts with a comparison of weapons: Levko proudly presents his saber, used by Cossacks, while Eva showcases her hatchet, once wielded by female warriors in France (Mikhieienko, 2025: 4).

This instant cultural comparison lays the foundation for a deeper dialogue between two national heroic traditions. Their conversations about historical figures and legendary characters – from the Ukrainian Kotyhoroshko⁵ and Kyrylo Kozhumiaka⁶ to French knights Roland and the musketeers – underscore the universality of the struggle for justice and the power of folk memory. Together they learn to respect and understand each other, finding in foreign traditions echoes of their history: “Books about heroes were the best for Levko and Ulia. Kyrylo Kozhumiaka, Kotyhoroshko, Hector, Achilles, Perseus⁷, Roland⁸ – Levko knew everything about them all” (Mikhieienko, 2025: 1).

The climax of this cultural dialogue occurs in the joint struggle to save the Arroux, symbolizing an environmental crisis and the conflict between indifference and responsibility. Levko, embodying the spirit of the Ukrainian Cossacks, and Eva, representing French chivalry, face obstacles together. Their heroism stems not from grand battles but from steadfast moral stands. Their efforts transcend ecological activism, showcasing the potential for rich cultural exchange. *The Marvelous Herts'* emphasizes the importance of embracing different traditions while maintaining one's identity, as Levko and Eva exemplify the emergence of a new synthesis based on mutual respect, historical awareness, and shared values.

6. Existentialist Dimensions of *The Marvelous Herts'*

Despite being categorized as children's adventure fiction, *The Marvelous Herts'* delves into profound philosophical themes, particularly within existentialism. It explores humanity's inner struggles, freedom, and the search for meaning in an absurd world. The protagonists, Levko and his grandmother Ulia, illustrate existential characters facing personal crises. Central to this philosophy is the concept of choice, which defines human essence. Levko's actions exemplify this idea; confronted with indifference from adults and authorities, he chooses to act. This aligns with Sartre's assertion that “existence precedes essence”, emphasizing that individuals create their purpose through their choices in life (Sartre, 1945: 8). In this regard,

⁵ The hero of the Eastern European folk tale of Ukrainian origin of the same name, centered around a boy of extraordinary strength who was born from a pea and freed his own brothers and sisters from the captivity of a serpent

⁶ An East Slavic folk hero (bogatyr), a character from a legend.

⁷ Mythic Warriors: Legends of Courage, Honor, and Destiny in Ancient Greece.

⁸ A medieval French hero who died defending Charlemagne's rear guard at Roncesvalles.

the existentialist work focuses on the themes of freedom of choice and personal responsibility, especially when faced with existential tension, such as confrontation with death, loneliness, absurdity, or the necessity of making difficult decisions (*Lysokolenko et al., 2021: 18*). Attention shifts from external circumstances to the inner world of the protagonist – their doubts, fears, and search for meaning. This approach shapes both the thematic content and the form: open endings, inner monologues, minimalism, heightened psychological depth, and motifs of loneliness, freedom, and absurdity. As Ivanna Devdiuk emphasizes, existential discourse actualizes the transformation of lived experience into linguistic structures, focusing on the ontological, narrative, and metaphysical coordinates of the text rather than its external plot construction (*Devdiuk, 2020: 21*).

This idea resonates with Albert Camus's view, who argued that the essence of philosophical inquiry is the confrontation of man with the absurd. According to him, "There is but one truly serious philosophical problem, and that is suicide" (*Camus, 1991: 5*). This creates the novel's inner tension: the protagonist seeks meaning in a world devoid of it. Levko, despite the pain, chooses life-struggle, solidarity, and spiritual resistance. Similarly, Grandmother Ulia embodies existential stoicism, drawing on experience, memory, and faith. Her teachings, which reflect both national character and the human need to endure trials, resonate with a key tenet of existentialism. As Sartre famously stated: "Man is condemned to be free" (*Sartre, 1945: 22*).

In this philosophical framework, the Herts' in the story becomes an existential act – not just a fight against evil (war, the Jussie plant, the government's apathy) but also an inner battle against fear, doubt, and pain. Grandmother Ulia's words capture this perfectly: "Ne toy sylnyy, khto kamin' verzhe, a khto sertse v sobi derzhe" (True strength isn't moving mountains – it's holding kindness in your heart) (*Mikhieienko, 2025: 17*) – the phrase resonates with Nietzsche's thought: "If we possess our why of life we can put up with almost any how" (*Nietzsche, 1911: Aph. 12*). Equally important is existential solidarity – when the protagonists unite in their shared struggle for the Arroux. Just as Camus' Sisyphus discovers meaning in the effort itself, Levko and Eva find meaning through action, through active resistance to absurdity and chaos. The community's collective endeavor embodies a dialogue between cultures and generations that conquers alienation.

Thus, *The Marvelous Herts'* is a vivid example of existential literature. Through deep symbolism, the personal dramas of its characters, and their striving to change the world even when it seems absurd, the author creates a work that compellingly demonstrates: a person is what they make themselves. And Herts' is a mode of being in a world where "The nothing itself nihilates" (*Heidegger, 1993: 58*), but it is precisely through struggle, action, and faith that being acquires meaning.

A primary indicator of a literary work's depth and multidimensionality is the motif of the heart, which, from the opening pages, transcends the notion of a mere physical struggle to serve as a profound metaphor for internal, moral, and spiritual conflict.

A key concept of the work is Herts' – a multifaceted symbol that extends far beyond mere physical confrontation. In its traditional sense, Herts' is associated with a contest, competition, or battle between warriors, testing strength and honor. However, in Viktoriia Mikhieienko's books, this concept acquires a deeper philosophical meaning, encompassing internal, moral, and existential struggles.

How Grandmother Ulia teaches Levko: "Herts' is not always fought with sabres – often, it's a clash of thoughts, feelings, and deeds" (*Mikhieienko, 2025: 21*).

In the narrative, Herts' becomes a multifaceted symbol of resilience, wisdom, and raw combat spirit. It's both duel and introspection – steel against steel, will against fear. A warrior's

test where survival demands mastery of blade and mind alike, forging meaning in the clash of individual honor and shared purpose.

7. Ecological Metaphor of War

The Arroux, suffocating under the invasion of the aggressive Jussie plant, serves as a powerful symbol not only of local ecological disaster but also of a broader, all-encompassing process of destruction of natural and cultural environments under the pressure of external threats and adversities. “People caused it, so people must fix it” (*Mikhieienko*, 2025: 6) – this thought permeates the actions of the heroes who take responsibility for saving the river. This image gains particular significance in the context of Ukraine’s history – a country that has waged an unwavering struggle from generation to generation to preserve its identity, territorial integrity, and natural resources under difficult political and military conditions. Like a river that flows through centuries, Ukraine resists attempts at destruction, preserving its roots and strength.

Through this symbol, the author masterfully demonstrates that the struggle for nature is simultaneously a struggle for spiritual, cultural, and national survival. She shows that protecting the environment cannot be separated from preserving the memory, traditions, and values that form the essence of a people. The activism of Levko and his friends in the book becomes a vivid example of how even small, seemingly insignificant steps can have profound meaning and great impact. It is precisely these steps, united in a chain of collective actions, that can become the driving force of large-scale changes and the restoration of balance between humanity and nature, between past and future.

Philosopher Emmanuel Levinas speaks of this as follows: “No tear should be lost, no death should remain without resurrection” (*Chomu sliozy*, 2020).

Throughout the entire tale, the image of water weaves like a crystal thread – the most ancient symbol in Ukrainian folklore. It is a symbol of purification and flowing Life. In the work, water appears in several forms: tears, ice, river water itself, and rain.

We can observe how the main heroine often cries – “grieves”, “laments”, and “...living tears always tremble in her greenish eyes. They tremble and do not dry...” (*Mikhieienko*, 2025: 2). Initially, her tears are for her nephew who died in the war, then she mourns the mutilated river (“And large tears, abundant and pure, dripped into the muddy water” (*Mikhieienko*, 2025: 20), and at the end – she cries for the vanished spring that once shone “like a living tear” (*Mikhieienko*, 2025: 21). It seems she cries too often. But this is her salvation. Tears, lamentation (as part of folk tradition) – are both a reaction to injustice and a way to rid oneself of pain that tears the heart apart. “Ulia crouched down in front of the boy, eye to eye. And in both their eyes, those living tears tremble” (*Mikhieienko*, 2025: 21). The grandmother and grandson share a common grief (the war in Ukraine, the death of a loved one), and the tears in both their eyes unite and strengthen them. “Tears are the path to God”, says Anne Lécu, a French Dominican, philosopher, prison doctor, and author of *Des larmes (Tears)* (*Chomu sliozy*, 2020). Searching for the silted spring, remembering her deceased nephew, Ulia cries and turns to God. And when she prays, the tears in her eyes transform into ice. (And the tears turned to ice in Ulia’s eyes, and shone like the winter sun (*Mikhieienko*, 2025: 20). For she turns to Heaven “respectfully, yet sternly” (*Mikhieienko*, 2025: 20). The tears transform into ice, that is, pain – into steel, helplessness – into determination, despair – into faith that a way out will be found. And the way out – is Victory. Existential rebellion? Rather a conversation of equals – between a Human who makes a choice, and God, who seems to test the Human through this situation and allows them to feel their own strength.

Water in the work also exists in various forms. It is the river, which is essentially water itself. But initially this water delights the eye (“The river is not wide, stretches far-far away – no end in sight. All dotted with sedge tufts and adorned with meadows of tall yellow flowers – like the sun spilled in the water” (*Mikheienko, 2025: 4*), then it turns out to be a place where all living things die (“...only a thin stream and one spring remained from me, like the last living tear” (*Mikheienko, 2025: 5*), and later the water almost completely disappears (“Whether river or a string of enormous puddles... The riverbed – like scorched earth” (*Mikheienko, 2025: 17*). Water, as a symbol of Life, is under threat. “Grant, God, that the river and all that is in it may drink. Grant, God, Your living, healing water” – Ulia prays (*Mikheienko, 2025: 21*). And water appeared, like a miracle, like salvation, like Life itself. “And it shone crystal-clear in the hollow. The water in the pit, under the roots, instantly brightened, grew bolder, took dominion, and then overflowed the edge and headed toward the river. Pure, like a living tear” (*Mikheienko, 2025: 21*).

The heroes of the work wash themselves with spring water, which is also a symbolic ritual of unity with nature. After correcting the people’s mistake regarding the river, the heroes see that the riverbed, dried up by Jussie, is black and terrifying. They have won – but at what cost? Hope for the better is expressed by Grandfather Jean: “Don’t worry... Our river will be reborn. When the rains come – it will drink, fill up and live” (*Mikheienko, 2025: 19*). Thus, the image of rain appears as a symbol of rebirth and purification. “Outside it began to rustle abundantly. In Burgundy, the rainy season was beginning...” (*Mikheienko, 2025: 22*). And to the sound of the saving rain, Ulia sees her living nephew in a dream, walking toward her and smiling. And this final scene on the banks of the Dnipro – the mighty Ukrainian river – symbolizes Victory and rebirth.

“And she dreamed of Khortytsia. And the Dnipro. And the cliffs. And Levko, barefoot, with a little saber, galloping across the sand. And Romchuk, handsome and cheerful, is walking. And she, happy, caresses him and says:

– Alive! Alive! I didn’t believe it... I knew...” (*Mikheienko, 2025: 22*).

8. Philosophy of Stoicism and Hope

Grandmother Ulia embodies stoic wisdom – she not only teaches Levko to accept life’s difficulties with dignity but also demonstrates inner resilience and self-control. She convinces him that not everything in the world depends on us, and that the most important thing is the ability to control one’s reaction to external challenges. Her words and actions inspire the boy to patience, perseverance, and faith in the better, emphasizing the strength of spirit and inner peace that allow one to maintain balance even in the most difficult circumstances. “Molytva v serts – slavni Hertsi” (Triumph in battle comes on the wings of prayer) (*Mikheienko, 2025: 2*), – Ulia repeated, teaching Levko that true strength is born from faith and spiritual resilience, which nourish every action and give meaning to the struggle.

Stoicism in the work intertwines with existentialism, creating a unique philosophical synthesis. This synthesis lies in the fact that the struggle for change does not reject the acceptance of those aspects of life that we cannot control. The author shows that precisely this duality – an active position and simultaneous acceptance – is the profound meaning of Hertsi’. Thus, Hertsi’ is not reduced merely to external struggle or persistent resistance, but becomes an internal act of courage, where a person finds the strength to live and act despite the unpredictability and absurdity of the world.

Therefore, grandmother Ulia is not simply a mentor to Levko – she is a symbolic image of spiritual strength that combines the wisdom of ancient Stoics with the modern existential challenge of living with full responsibility for one's choices and actions.

9. Conclusion

The Marvelous Herts' is significantly more than just a children's book. It is a true manifesto of the Ukrainian spirit, in which Herts' emerges not simply as physical struggle or combat, but as a philosophical way of existence. This work reveals a worldview grounded in such fundamental values as courage in the face of difficulties, honesty in actions, persistence in achieving goals, and deep love for one's native land and its traditions. It is precisely these traits that form the inner core of the heroes and simultaneously reflect the collective character of a nation that, despite all trials, preserves its identity and strives for freedom.

Ulia, embodying this spiritual wisdom, reminds Levko that true Herts' occurs not only on the battlefield, but also in thoughts, feelings, and actions – in every choice that defines a person. Herts' is not only a confrontation with external evil, but also the ability to preserve one's humanity, dignity, and inner integrity, regardless of all circumstances.

That is why *The Marvelous Herts'* is a book not only for children, but for all who seek to understand the profound meaning of life and what it means to be a person who does not give up. It is a work about the strength of spirit, about indomitability, about how important it is to fight not only externally, but also within oneself, remaining true to one's ideals and values.

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PROJECT TECHNOLOGY IN THE CONTEXT OF THE COMPETENCE SYSTEM FOR TRAINING EDUCATORS

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Summary

The article presents the results of a theoretical and practical study on the issue of using project technologies in the system of professional training for future teachers. The emphasis is placed on defining the essence of project technology through positioning its target orientation, basic characteristics identified through the theoretical study of the problem. The results of the research on the level of student's ability/readiness for project activity are presented based on basic quality criteria, and the dependencies identified in their context are interpreted.

Based on the generalization of the process and results of experimental learning, the authors substantiate approaches to adequately organizing the educational activities of future teachers, concerning various formats of using project technologies in the context of the educational process. Examples of educational tasks in the framework of studying the academic discipline "Project technologies" are demonstrated, and the main accents of the process of ensuring adequate content and methodological support for the use of project technologies are highlighted.

Key words: project; Project technologies; competence education; subject-subject relationships.

DOI <https://doi.org/10.23856/7008>

1. Introduction

Project-based learning, the use of project technologies in professional training systems, is becoming increasingly relevant. It aligns with modern educational standards associated with the development of key competencies required for effectively solving problems in constantly changing situations. The term "project-based world" also indicates the scale of the problem. The need for understanding the basics of project design in general, and specifically within the professional activities of future educators, is primarily driven by the fact that project technology has a wide range of applications at all levels of the education system. Teachers, in particular, can utilize various forms of project design: a) In organizing educational activities for students; b) In developing and implementing work forms and events that aim to achieve specific outcomes that can be implemented in practice; c) In the process of sociocultural design, which allows for the scientifically substantiated formation of the educational environment and ensures the social adaptation of students; d) In individual trajectories of professional self-development, both within the framework of professional development and beyond (holistically, throughout life).

Project technologies hold particular value during the transition to innovative educational standards, which are based on competency-based education technologies. The processes of acquiring competency-based education and project technologies by future teachers are inter-related and mutually reinforcing. Mastery of project technologies enhances the development of integrated, general, and professional competencies in accordance with higher education

standards. Conversely, the higher the level of formed competencies, the more effective the process of acquiring project technologies becomes.

It is important to find out the essence of Design Technologies, and their basic characteristics, to correctly approach the design process, focusing on key/system-forming quality indicators. This is since in the practice of educational activities there is a fairly active use of these technologies, a significant number of which are presented in information sources. The problem is that various information sources contain a significant number of authors' projects, which are not such because they do not meet their main characteristics and quality criteria.

The results of theoretical research and analysis of the practical implementation of project technologies in professional education systems demonstrate that, despite positive trends towards increasing the importance of innovative technologies, there are instances of formalism in their practical application. There are many reasons for this, but the most common problem is the design of educational activities based on information and reproductive education, the system of subject-object relationships in its structure. The main contradiction lies in the fact that innovative technologies, which include project technologies, are implemented only based on personal, competence-oriented education, and subject-subject relationships of its participants.

Indeed, the use of project technologies based on innovative/competency-based approaches can provoke a conflict with the traditional information-reproductive system of organizing activities. As a result, we have a significant number of projects that are created as projects in terms of form, but they are not such in terms of meaning, functional content, or characteristic features. The correct use of project technologies in the professional education system requires a systematic understanding of their essence, goals, and functional characteristics, as well as the specific structural organization based on them. This understanding helps prevent the manifestation of formalism or imitative practices in their practical application.

The purpose of the article/investigation is to analyze the essence of project technologies, identify their target orientation and basic characteristics, and justify the features of implementation in the process of experimental training.

The following methods were used in the investigation:

Theoretical (analysis, comparison, synthesis), based on the results of which: the essence of project technologies was analyzed through a comparative analysis of various researchers' positions, the purposes of their use in the process of professional training of future educators were substantiated, and the leading characteristics were identified, which became the basis for determining the basic quality criteria.

Forecasting and modelling methods, which served as the basis for the development of the training course, the definition of its content and technological content and an integrated approach to the organization of the educational process.

Diagnostic methods (questionnaires, testing, essays, methods of mathematical statistics) were used to determine the actual state and problems of readiness of future educators to use project technologies. These methods helped to assess the effectiveness of the educational course developed based on the aforementioned theoretical positions.

2. Conceptual and Theoretical Foundations of Project-Based Technologies

Project technologies (in education) regardless of the level) are the subject of research by various scientists (e.g., Bashinska (2013), O. Borodienko (2020), L. Dovgan (2017), V. Pochuyeva (2021), V. Priymak (2021), T. Silakova (2017), H. Romanova (2019), V. Radkevych (2020), Z. Ryabova (2005), T. Panayotova (2012), K. Semyzorova (2012), J. Dewey

(1935), W. Kilpatrick (1935), M. Knoll (1993), R. Howell (2003), who interpret the essence of the concept, focusing on aspects that are the object of scientific research for them. Thus, the founders of the project method, American Scientists Dewey and Kilpatrick, justifying the project method, focused on the activity of the subject of training, and the practical value of the acquired knowledge. They proposed building education on an active basis, through practical student activities, focusing on their personal interests and the practical relevance of the knowledge acquired for their future lives (*Knoll, 1993: 58–63*).

R. Howell systematically explores the problem of projects in the context of ensuring an interactive form of activity, the realism of problems that group members work on. "The project method is an organized approach to learning in collaboration, in which students acquire and utilize knowledge and skills to solve real problems through thorough investigation" (*Howell, 2003: 13*). V. Killpatrick considered project technology based on the fact that "education is life, not preparation for life" (*Kilpatrick, 1935: 161–167*).

Researcher T. Silakova characterizes the essence of project technologies, proving the importance of harmonizing theory and practice, and combining academic knowledge with practical ones. In particular, it states that "the essence of project technology is to stimulate students' interest in specific problems that require a certain amount of knowledge, and through project activities involving the solution of one or a series of problems, demonstrate the practical application of acquired knowledge from theory to practice, harmoniously combining academic knowledge with pragmatic ones, maintaining an appropriate balance at each stage of learning" (*Silakova, 2017: 153–158*).

The authors of the practical guide "Project Activity in the System of Vocational (Professional-Technical) Education" delve into the activity aspect of project-based technologies in more detail, which involves a certain level of process structuring. They define a project as "a set of purposeful, change-related, and temporally sequenced, one-time, comprehensive actions (measures or works), aimed at achieving a final result under conditions of limited resources and specified start and completion dates" (*Radkevych, Borodienko, Pukhovska, Samoilenko, Radkevych, Bazeliuk, 2020: 12*).

Researcher T. Dovbenko puts the result component as the basis for the quality of project activity and pays attention to the final "product" of the project implementation, which can be seen and evaluated from the point of view of practical use. The method of projects is based on the idea that reflects the essence of the concept of a "project" and its pragmatic orientation towards the result obtained when solving a practical or theoretically significant problem. The main thing is that this result can be seen, understood, and applied in real practical activities. To achieve such a result, one must possess the ability to think independently, and identify and solve problems, utilizing knowledge from various fields. It requires the capacity to predict outcomes and potential consequences of different problem-solving approaches, as well as establish cause-and-effect relationships (*Dovbenko, 2005: 47–52*).

We consider the approach valuable, according to which attention is focused on the formation of metasubject characteristics in the process of working on projects and their gradual development. In particular, the project method is interpreted by V. Pochuyeva as "a means of learning when students acquire knowledge, skills and abilities, as well as metaprofessional qualities in the process of planning and performing practical tasks that are gradually becoming more complex" (*Pochuyeva, 2021: 448–452*).

The analysis of definitions of the concept of "project" by domestic and foreign authors has made it possible to identify its fundamental characteristics, among which the most significant ones are:

- Practice-oriented approach, which involves directing activities to solve specific goals that are necessary and of practical significance;
- The purposefulness of the project, which is implemented through setting precise goals, which should be characterized by measurability and positioning of the expected results;
- Clear logic and step-by-step actions in the framework of transforming the set goals into project results;
- The uniqueness of the project, which is related to a specific situation, its characteristic features;
- The adaptability of the project, according to which the transfer of the method of solving the problem to other conditions requires taking into account their specifics and the corresponding approval period;
- Time constraints, according to which it is necessary to accurately calculate the process and its structural organization;
- Focus on the available resource base and content and technological opportunities that can be used within the project;
- The ability to maintain a balance between theoretical and practical knowledge at every stage of training;
- Availability of mobile diagnostic tools that make it possible to "measure" the effectiveness of project activities, identify achievements and weaknesses;
- The presence of an analytical and reflexive component makes it possible to comprehensively understand the effectiveness of activities so that the development of the next project can take into account the work experience gained.

3. Strategic Goals of Implementing Project-Based Technologies in the Context of Competency-Based Education

The analysis of theoretical sources on competency-based education issues and the practical use of project-based technologies in educational activities at various levels has allowed for the identification of a complex set of goals for the active implementation of project-based technologies. These goals are considered the most significant for the current stage of professional education development and the adherence to modern higher education standards:

- transformation of the basic standards of European education into a national system, among which the values of personality-oriented, competence-based education are of particular importance;
- increasing the level of practice orientation of educational activities, strengthening the integration of theory and practice in the professional education system;
- Increasing the level of utilization of the research component within the structure of educational activities involves a comprehensive analysis of the problem within a defined context. It includes forecasting and designing effective solutions, as well as conducting diagnostic measurements at various stages of project implementation.
- ensuring the possibility of designing an individual educational trajectory in the process of professional development of a future specialist;
- training a specialist with a high level of competitiveness who can not only effectively solve professional problems in situations that are constantly changing
- development of the ability to work in teams with effective forms of cooperation and constructive communication, a clear distribution of functions, and the subject-subject nature of relationships between project performers.

4. Research Methodology and Experimental Design

Based on the aforementioned characteristics and goals of project-based activities, a criterion-based diagnostic framework was developed, enabling the assessment of the actual readiness level of master's level students for project-based activities. The criteria were grouped into four blocks, which allowed for the diagnosis of the following aspects: 1) Knowledge of the competency model of education (innovative block). 2) Attitude towards project-based activities as an effective method of implementation (motivational block). 3) Knowledge of theoretical and practical foundations of project-based activities (cognitive block). 4) Readiness for project-based activities (personal characteristics, skills) (practical block). 5) Level of project utilization in educational activities and in life experiences (experiential block). For each criterion, self-assessment methods were used for a certain set of indicators, and the author's questionnaires and tests for each block of criteria were developed. Generalizations of the results showed such dynamics of indicators.

Within the research framework, a descriptive (two-level) and formative experiment was conducted to determine the extent to which the formation of project-based activity competence occurs during the study of various academic disciplines when using innovative technologies. The research aimed to identify the dynamics of developing this competence in the context of specialized training, specifically the educational course "Project Technologies" within the professional preparation of special education teachers at Kamianets-Podilskyi National University. The experiment involved 32 students from the second year and 38 students from the fourth year (first level of the descriptive experiment), as well as 71 master's students specializing in special education (distance learning) for the descriptive and control experiments. The descriptive experiment was conducted at the beginning and completion of the "Project Technologies" course.

Table 1

Indicators of readiness of students of different courses for project activities

Criteria	II course	IV course	V course (Masters) before the experiment	V course (Masters) after the experiment
innovative	12,8%	21,6%	23,8%	68,8%
motivational	18,1%	30,4%	35,1%	87,5%
cognitive	9%	18%	20%	70,1%
practical	29,6%	33,0%	36,1%	72,3%
experienced	18%	24,8%	25%	24,6%

Initially, diagnostic assessments were conducted based on the specified parameters among students from the second and fourth years. This provided us with an understanding of the extent to which the actual formation of project-based activity competence occurs within the structure of educational activities. We are talking about students who were engaged in traditional educational programs and project technologies studied superficially in the context of pedagogical, psychological disciplines and methods of teaching professional subjects, as well as through the use of these methods in organizing the educational process at the University. As the results of the ascertaining stage of the study showed, there were no significant changes in students of the second and fourth courses. In particular, the innovation criterion from the second to the fourth year increases by 8.8%, motivational – by 12.3%, cognitive – by 9%, practical – by

3.4%, and experimental – by 6.8%. In other words, there is a certain process of increasing quality indicators for these parameters, but they are insignificant.

A more detailed analysis of questionnaire responses, test performance, and research interviews revealed that, in general, students are aware of the relevance of project-based technologies in both educational and future professional activities. However, these knowledge levels are mostly fragmented, superficial, and lack a comprehensive understanding of the subject matter. This means that the ability to use project technologies in practical activities is minimal. It is characteristic that the highest indicators of readiness are obtained according to the criterion of readiness for project activities (personal characteristics, skills). Moreover, significantly higher indicators were observed in terms of personal readiness for project utilization, ranging from 29.6% to 33.0%. Specifically, students expressed their enjoyment in analyzing situations, modelling solution options, and forecasting effectiveness. They displayed an inclination towards creativity and perceived it as a factor for self-realization. They also expressed a preference for working in groups and forming team relationships. Students are young people who project prospects and program their competitiveness in the labour market. Graphically, the results of the ascertaining experiment are shown in the diagram (Fig. 1).

During the control experiment, it was found that the experimental groups exhibited a significant increase in the level of competence among the participants across almost all quality criteria. Specifically: Innovation criterion: The ability of fifth-year students to engage in project-based activities increased by 45%. Motivational criterion: 52.4% increase in motivation. Cognitive criterion: growth of 50.1%. Practical criterion: growth of 36.2%.

A graphical representation of the results of the control experiment is shown in the diagram (Fig. 2).

The significant improvement in the readiness indicators for project-based activities among future teachers after experimental training can be explained by the fact that the educational program was designed according to a step-by-step logic of developing theoretical and practical competencies based on the criteria embedded in the diagnostic program. In addition, during the training, students carry out their educational projects and theoretical material was structured in such a way as to provide theoretical and methodological support for this process.

Unexpectedly, the results showed minimal growth in the indicators for the experiential criterion, which represents the level of project utilization in educational activities and life.

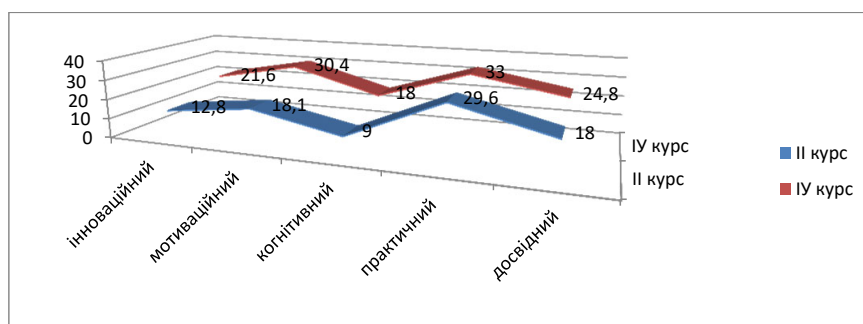


Fig. 1. The diagram depicting the dynamics of the development of project-based activity competence among future educators (second and fourth-year students) in the context of traditional education

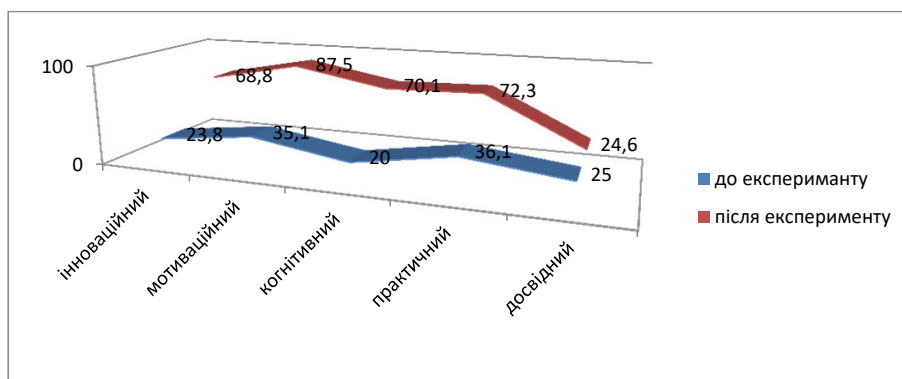


Fig. 2. Diagram of the dynamics of the development of future teachers' ability for project-based activities before and after experimental training

5. Results and Discussion of Experimental Findings

A more detailed analysis of the diagnostic textual materials revealed that the same group of students (25%) evaluated their ratings as inflated at the final stage of the experiment. This was because they had a rather vague understanding of projects and attributed programs and activities that are often referred to as "projects" in daily life but do not meet the criteria of project-based activities and their structural organization.

The conditions for achieving these objectives include an appropriate format for organizing the educational activities of future educators, which involves: a) The possibility of including special disciplines such as "Project Technologies" in the educational program (for example, as elective courses). b) Integration of the content module "Project Technologies" within the context of pedagogical disciplines. c) Utilizing project-based technologies in the process of studying other academic subjects. Even though we are talking about various opportunities for the formation of project competencies of future teachers, it is worth noting positions that will be common for all options, meet the above characteristics, which are naturally transformed into basic quality criteria. This can be demonstrated through the formulation of educational tasks within the framework of studying the subject of "Project Technologies." For example: Provide evidence that project technologies can be implemented within the competency-based education system. Interpret the possibilities of project activities as a means for students to explore their own identity, develop the ability to establish proper relationships with others, and achieve a socially significant position as active agents. Design a project aimed at applying knowledge and skills to solve real-life problems. Explain the significance of formulating the main problem and didactic goal within the execution of an educational project. What is the logic of working on a training project, and the stages of its organization? Describe the features of the first stage of Project organization, in particular the choice of the type and topic of the project, the formulation of the leading problem and the didactic goal. Demonstrate by example; what is the essence of forming working groups/teams for students' project activities? What are the conditions for ensuring their effectiveness?

Overall, the practice of experimental teaching has shown that the effective implementation of project technologies in the system of professional education for future educators should

be supported by appropriate content and methodological guidance. In particular, the main emphasis should relate to positions aimed at:

- enhancing the level of student agency, which determines their own trajectory of professional development, optimal for their potential and initial assets, as a mobile subject capable of lifelong professional self-improvement.
- ensuring a high level of integration of theory and practice, moreover, theory should be perceived as a real, effective, and most importantly – no alternative means of effectively solving practical problems;
- integrating personal and professional meanings (students analyze a situation/problem, comprehend its essence, and investigate it based on their own ideas and developed strategies of action): in this way, competencies are formed based on a "self-concept," and therefore the process of learning initiates the formation of a personally oriented concept, methodology, and style of future professional practice.
- dominance of research activities, which are especially relevant at the stages of complex analysis of the problem in the context of a certain situation; design and structuring of activities, conducting diagnostic measurements at the beginning and the end of the project;
- organizing teamwork with effective forms of collaboration and constructive communication, clear allocation of functions, and subject-to-subject relationships among project participants.
- pragmatic orientation of the project, awareness of its value for the development of professional competencies, ensuring future competitiveness in the labour market of all participants in the educational process;
- flexibility of the managerial component of project activity, the ability to modify it depending on the effectiveness of the process, mobility of positions of its participants, and the ability to change roles, and perform functions.

The conducted experimental training also demonstrates that project-based activities in the system of professional preparation of future educators contribute to the development of their stimulating and motivational basis through the pragmatic orientation of projects and the realization of their value in the context of becoming highly competitive professionals. It enables them to effectively solve professional problems in constantly changing situations.

6. Conclusions

The results of theoretical analysis and experimental training have shown that an innovative, person-centred education system, which includes project-based technologies, is not an end in itself. It should be perceived by all participants in the educational process as a fundamental condition for the development of professional competence and, consequently, the competitiveness of future specialists. It is important to understand that competence is not merely the acquisition of traditional knowledge and the ability to apply it in practice (classical approach), but rather an activity carried out according to one's concept, content, technology, and style. Competence is formed as a symbiosis of scientific knowledge (both theoretical and practical) and self-actualization of the individual within its context.

During the process of mastering project-based activity technologies, it is important to ensure a systematic understanding of their essence, basic characteristics, and goals that specify the type of educational activity and are realized through the use of project-based technologies. This is a prerequisite for developing a comprehensive understanding of the essence and

content-technological support of the project-based activity for future educators during their professional development stage.

Understanding the essence, goals, and anticipated outcomes of project-based activities, as well as their characteristics, allows for differentiation between genuine project-based activities and formal ones that merely exhibit superficial project features. The effectiveness of project-based activities is ensured through the flexibility of the management component, allowing for adjustments based on the progress of the process. It also relies on the mobility of participants' positions, and their ability to change roles and perform functions, ultimately contributing to productive teamwork.

In this context, it is important to recognize that an educational project is not simply a formal process of preconceived and designed actions. Rather, it is a means to establish a system for developing the professional competencies of a specialist. Within this system, a comprehensive approach is applied to address any relevant problem in a situation that is never repeated in the same way.

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L'IMAGE DU POÈTE DANS LE RECUEIL DE RENÉ CHAR "FUREUR ET MYSTÈRE"

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Résumé

Cet article explore la représentation du poète dans le recueil "Fureur et Mystère" de René Char, considérée comme un élément crucial de sa vision poétique. L'étude s'appuie sur la combinaison des aspects personnels, historiques et métaphysiques, grâce auxquels le poète se présente comme une entité aux multiples facettes: combattant, témoin, mystique et interprète. L'article met en exergue que malgré les travaux approfondis des chercheurs français, en particulier Olivier Belin, Christine Dupouy et Stéphanie Thonnerieux, sur la stylistique, la géopoétique et la philosophie de R. Char, l'image du poète dans "Fureur et Mystère" demande une analyse plus détaillée.

L'étude examine les concepts principaux "image artistique" et "image de l'auteur", ainsi que leur influence sur l'établissement de l'identité poétique. Le poète chez R. Char ne se contente pas d'être un observateur ou un ornement littéraire: il est un participant impliqué, tiraillé entre des forces antagonistes – fureur et mystère, lumière et obscurité, action et silence. Cette dichotomie est omniprésente dans l'œuvre et définit l'identité du poète, qui se transforme en un être déchiré, simultanément meurtri et vecteur d'espoir, marginal tout en étant au centre.

En examinant des éléments tels que les métaphores, les antithèses, les parallélismes et des fragments des "Feuillets d'Hypnos" et du "Partage formel", l'auteur montre que la représentation du poète chez R. Char symbolise une tension intérieure, une recherche spirituelle et une résistance éthique. Ces aspects se dressent contre l'obscurité de l'époque grâce à la force du langage poétique.

Mots clés: image artistique, poète, métaphore, antithèse, dominante.

DOI <https://doi.org/10.23856/7009>

1. Introduction

L'œuvre de René Char a été minutieusement étudiée par plusieurs chercheurs français, dont les recherches d'Olivier Belin, Christine Dupouy et Stéphanie Thonnerieux se démarquent.

Olivier Belin étudie l'impact du surréalisme sur la poésie de R. Char, le percevant comme "un support et un stimulateur" pour sa production ultérieure. Dans son écrit "La "voix d'encre" de René Char". Dans "Silence et Poésie dans Fureur et Mystère", il se concentre sur le "silence" linguistique, examinant la manière dont le silence et la musicalité des mots s'entrelacent dans le rythme interne de l'œuvre (Belin O., 2016).

Christine Dupouy met en évidence l'aspect géopolitique: elle retrace les origines de R. Char en Provence, le lien avec le décor montagnoux qui constitue non seulement la structure imaginaire, mais aussi la tension ontologique de son œuvre (Dupouy C., 1987).

Stéphanie Thonnerieux analyse les techniques stylistiques de sa poésie et se concentre spécifiquement sur les temps verbaux en tant qu'instrument de fixation de la mémoire, de

l'expérience et du temps subjectif. D'après elle, le style de R. Char représente non seulement une valeur formelle, mais également un projet éthique et intellectuel: le poète ne se contente pas d'observer la réalité, il s'engage plutôt dans une conversation audacieuse et touchante avec elle (Thonnerieux S., 2000).

Toutefois, aucun de ces chercheurs ne se focalise sur l'étude de la structure complexe de l'image du poète en soi – sur son aspect contrasté, son intensité éthique, son dynamisme philosophique et sa subtilité métaphysique dans le recueil "Fureur et Mystère".

2. Les définitions conceptuelles: "image artistique" et "image de l'auteur"

On peut trouver la définition suivante dans l'encyclopédie de littérature: "Une œuvre d'art est un miroir de la réalité à travers l'art, une illustration précise et également synthétique de l'existence humaine, transformée en fonction du standard esthétique de l'artiste, créée grâce à l'imagination artistique" "L'art visuel est également un outil de compréhension et de modification du monde, une forme intégrée d'illustration et de communication des sentiments, des idées, des ambitions, des impressions esthétiques de l'artiste" (Kovaliv Yu., 2007: 139–140).

L'œuvre artistique se caractérise par sa faculté de reproduire la réalité tout en créant un univers fictif. L'artiste tente de comprendre certains phénomènes et de les reproduire à travers sa propre perception de la vie, ses tendances et ses lois. C'est exactement la structure fictive de l'œuvre qui détermine sa valeur esthétique et son sens, car le processus de pensée par images est à la base de la réalisation artistique.

L'expression "image de l'auteur" fait référence à une version distincte de l'auteur-en-personne, garantissant la cohérence de l'œuvre. L'image de l'auteur fonctionne comme un alter ego – le narrateur – créé par l'écrivain à partir de son autoportrait destiné au lecteur. Dans cette recherche, l'accent est précisément mis sur l'image du poète.

L'article vise à examiner par quels moyens poétiques R. Char construit son "Je", et comment l'expérience de la guerre, la Résistance, la quête existentielle et la réflexion métaphysique sont présentes dans sa poésie.

3. L'image du poète dans "Fureur et Mystère"

Dans cet ouvrage, René Char fusionne habilement les aspects personnels, historiques et métaphysiques de la vie. En tant que poète engagé dans la Résistance durant la Seconde Guerre mondiale, il utilise sa poésie comme un espace de confrontation entre dichotomies: révolte et contemplation, action et silence, rupture et espoir. Le poète y est dépeint de manière contrastée, complexe et théâtrale. R. Char ne le dépeint pas comme un spectateur détaché de la beauté, mais comme un participant actif dans les processus existentiels, éthiques et historiques.

Le titre lui-même, "Fureur et Mystère", encapsule le thème central du recueil: le contraste, qui façonne non seulement le contenu, mais aussi l'image du poète. Dans sa poésie, la "fureur" n'est pas une émotion désordonnée, mais plutôt l'origine de l'énergie qui fait vivre les mots ; le terme "mystère" évoque une profondeur métaphysique, un mutisme intérieur. L'association de ces concepts n'est pas évidente: chacun présente ses facettes éclatantes et sombres, ses éléments positifs et négatifs – "fureur" renvoyant au *furor* latin (inspiration, passion, destruction) ; "mystère", englobant la problématique du mal suprême autant que la croyance et l'acte de création. C'est cette dualité qui propulse l'ensemble de l'œuvre de R. Char.

Le poète se présente à la fois comme un accompagnateur spirituel et comme un observateur blessé de son temps. Il porte le fardeau de la souffrance, endosse la responsabilité et

poursuit l'éveil spirituel. Sa voix n'est pas un accessoire d'embellissement, mais un outil de délivrance et de souffrance.

Dans "Seules demeurent", R. Char dessine le portrait du poète comme acteur essentiel du combat spirituel, un porteur de clarté au milieu des ombres. Ce poète perçoit, éprouve et transforme la réalité, la douleur, la mort et l'espoir en une nouvelle forme d'expérience.

Dès le début avec le poème "Argument", la direction se dessine "*L'homme fuit l'asphyxie*", une asphyxie qui n'est pas seulement existentielle, mais aussi mentale. Le poète "*déboise son silence intérieur et le répartit en théâtre*" (Char R., 2005: 19), où la poésie s'érige en acte de purification, de résistance et de métamorphose.

Dans l'ensemble, R. Char perçoit le poète comme étant à la limite entre le bien et le mal, le silence et l'expression, la vie et la mort et cette dichotomie prédomine sur l'intégralité du recueil.

La métaphore, qui constitue l'un des principaux moyens d'expression du contraste, est utilisée dans la poésie de R. Char non pas pour embellir, mais pour transformer la réalité. Dans le poème "Force clémente", on peut lire: "*le cœur d'eau noire du soleil a pris la place du soleil*". Le soleil, représentant la clarté, cède sa place à "*le cœur d'eau noire*" (Char R., 2005: 36). En d'autres termes, même la source d'espoir peut être supplantée par une ténèbre intérieure. C'est précisément en prenant conscience de ce remplacement qu'émerge l'action du poète.

L'antithèse, qui structure de nombreux poèmes, agit tout aussi puissamment. Le poète note dans "Calendrier": "*J'ai congédié la violence... L'oracle ne me vassalise plus*" (Char R., 2005: 26) en rejetant la violence et la servitude, R. Char déclare une liberté intérieure. Cependant, ce n'est pas une harmonie tranquille, mais une tension poussée à son paroxysme.

Le parallélisme contribue également à la construction de l'image du poète, lui offrant une solennité rythmique. Par exemple, dans "Jeunesse", les constructions conditionnelles comme: "*Si j'avais été muette... Si les collines avaient vécu... Si l'éclair m'avait ouvert sa grille...*" (Char R., 2005: 25) illustrent une recherche d'identité constante à travers des tableaux fictifs. Ces répétitions ne mènent pas à une réaction, mais créent un espace d'émergence de la présence: "*Éloge, nous nous sommes acceptés.*" (Char R., 2005: 25).

R. Char ne redoute pas l'expression poétique du "Je": "*Je suis le poète, meneur de puits tari que tes lointains, ô mon amour, approvisionnent*" (Char R., 2005: 71). Son identité poétique se forme non pas comme quelque chose d'homogène, mais comme un ensemble de fragments qui, à travers des éclairs, des percées et une condensation progressive, dessinent la nature complexe et contradictoire de la personnalité créatrice.

Le poète est une personne tourmentée, alimentée par sa tension intérieure: "*Être poète, c'est avoir de l'appétit pour un malaise dont la consommation, parmi les tourbillons de la totalité des choses existantes et pressenties, provoque, au moment de se clore, la félicité*" (Char R., 2005: 76). Ce "malaise" est presque considéré comme une maladie sacrée: "*maladie sidérale*" (Char R., 2005: 105) – un mouvement cosmique vers l'idéal, la beauté, le sens et le ciel.

Le poète est à la fois alimenté et perturbé. Il est guidé par des "*dieux puissants et fantastiques*" (Char R., 2005: 75,) cependant, il éprouve la douleur de l'écart entre l'idéal et la réalité. La poésie découle de cette disjonction, comme une tentative de fusionner le non-existant et l'existant. R. Char explique ainsi cette origine: "*un être qui projette et d'un être qui retient. À l'amant il emprunte le vide, à la bien-aimée, la lumière. Ce couple formel, cette double sentinelle lui donnent pathétiquement sa voix*" (Char R., 2005: 76). Ce "couple formel" est une image clé dans le cycle "*Partage formel*". R. Char parle du poète comme d'un être qui, en même temps, divise et relie, agit et retient. Il lui est propre une "*exaltante alliance des*

contraires" (Char R., 2005: 69), et il doit maintenir l'équilibre: "*Le poète doit tenir la balance égale...*" (Char R., 2005: 66). Le poète amasse puis répartit l'énergie: "*Accumule puis redistribue. Sois la partie du miroir de l'univers la plus dense, la plus utile et la moins apparente*" (Char R., 2005: 127).

Il se décrit comme étant à la fois "exclu et comblé": "*Je suis l'exclu et le comblé*" (Char R., 2005: 46).

Sa capacité de transformation est centrale à son action: "*Le poète transforme indifféremment la défaite en victoire, la victoire en défaite, empereur prénatal seulement soucieux du recueil de l'azur*" (Char R., 2005: 66), on le décrit comme étant "extravagant" et "magicien de l'insécurité" (Char R., 2005: 66) est un personnage instable, mais vibrant.

La particularité de l'image du poète chez R. Char réside dans son ouverture au paradoxe. Le poète est celui qui accorde un droit à la contradiction, en la libérant par la conscience. Même la mort ne suscite pas chez lui de désespoir, car il est capable de transformer: "*Le poète ne s'irrite pas de l'extinction hideuse de la mort mais, confiant en son toucher particulier, transforme toute chose en laines prolongées*" (Char R., 2005: 73). "*Toucher particulier*" est la clef de l'unité qui naît de la fin.

Il est à la fois métaphysicien et herméneute, transmutant la fatigue en résurrection par conversion, traduction et transformation: "*un cycle de fatigues en fret de résurrection*" (Char R., 2005: 74). Poète est un "*point de diamant*" (Char R., 2005: 74), se tenant entre le réel et le transcendant.

Il est le "*Grand Commenceur*" (Char R., 2005: 79), insufflant de la nouveauté en période de crise, et "évalue correctement dans le supplice" pour maintenir l'équilibre.

Dans les vers "*nous tenons l'anneau où sont enchaînés côte à côte, d'une part le rosignol diabolique, d'autre part la clé angélique*" (Char R., 2005: 19), l'auteur proclame ouvertement l'appartenance du poète aux deux principes. C'est un symbole du combat intérieur entre passion et sagesse, désordre et ordre suscitant chez le lecteur un sentiment de mystère, de beauté et de vérité éprouvée à travers l'épreuve.

4. Conclusions

Dans "Fureur et Mystère", la représentation du poète est hautement paradoxale. Il est à la fois guerrier et mystique, prophète et témoin, homme d'histoire et de transcendance. Par le biais de la tension éthique, de la blessure métaphysique, de l'amour en tant que résistance, du silence intérieur et de l'expression vocale, René Char façonne le poète du vingtième siècle qui s'exprime non pour la beauté, mais pour la vérité.

Ce poète n'est pas un abri dans l'art, mais une réintégration dans le monde avec une perspective rafraîchie. Sa mission consiste à "diffuser la lumière", même si cela provoque des blessures. Dans l'art de ses mots, la poésie n'est pas une décoration, mais un défi du monde – ce qui donne à "Fureur et Mystère" sa valeur contemporaine: un modèle de discours capable de tenir bon, d'inspirer, de diriger et de soigner. Le poète n'est pas un simple réceptacle d'inspiration passive, mais un architecte actif d'une nouvelle réalité, anticipant l'avenir. Son image s'écarte de l'idéal romantique pour s'ancrer dans la modernité, où la poésie représente une intrusion, une tension, une recherche. Le portrait du poète ne laisse pas le lecteur de marbre: il provoque de l'empathie, de l'inquiétude, de la réflexion, une secousse existentielle. La poésie n'est pas perçue comme un simple embellissement, mais plutôt comme la lourdeur intrinsèque de l'existence.

Pour faire court, dans "Fureur et Mystère", la représentation du poète symbolise un état d'esprit complexe, contradictoire et tendu, qui illustre les épreuves et les drames du vingtième

siècle. René Char suggère une poétique de la parole en tant qu'action, décision éthique et épuration spirituelle, rendant ainsi son œuvre toujours d'actualité. Et c'est là que réside la dominante cognitive du texte, dans la représentation du poète comme une figure qui ne se limite pas à capturer l'expérience, mais qui la saisit, la modifie et lui donne une direction vers l'avenir.

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PRINT OR PLAY: VERBAL AND MULTIMODAL NARRATIVE PECULIARITIES

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Summary

This article explores the narrative representation of *Nancy Drew: The Phantom of Venice* in two media formats: the printed novel by Carolyn Keene and the 2008 video game adaptation. The study focuses on the transformation of verbal storytelling into a multimodal communicative experience in a quest-type video game, examining how narrative elements are preserved, adapted, or altered. Particular attention is paid to the concept of ludonarrative dissonance, where the storyline and gameplay mechanics may conflict, potentially disrupting player immersion.

The research draws on J. Huizinga's theory of play and James Joyce's epiphanic model, conceptualizing the game as an alternative form of cultural expression and reader's multi-existence. By comparing Nancy's character dialogue in the novel and the game, the study highlights changes in sentence structure, communicative intent, and character interaction.

Quantitative analysis reveals a shift from narrative-heavy text in the book to dialogue-driven gameplay, with the novel containing 39% of author's narrative and 61% of characters' dialogue, while the video game features only 18% of author's narrative content and 82% of characters' dialogue. The study also examines the illusion of choice in the game and the psychological appeal of multiple possible outcomes, contrasting the linearity of print fiction with the interactive nature of digital storytelling.

Ultimately, the article argues that while the video game adaptation retains core narrative elements, its structure reflects the needs of digital communication and player agency. This shift enables a deeper form of immersion, self-projection, and cognitive engagement, illustrating how video games reshape traditional literary experiences into dynamic, player-driven narratives.

Key words: video game, novel, narrative, dialogue, sentence, verbal communication, multi-existence, ludonarrative dissonance, interaction, multimodality.

DOI <https://doi.org/10.23856/7010>

1. Introduction

The present study addresses the problem of representing a narrative of a literary work through verbal means in a printed edition and through multimodal communicative tools in a video game. It is evident that electronic media provide a convenient means for disseminating information, including the plot of a literary text. Human – computer dialogue offers certain advantages, creating an illusion of direct and personal communication that can be initiated or ended at any moment without causing discomfort. In the process of interpersonal interaction, three interrelated aspects are usually distinguished: communicative (information exchange), interactive (organization of interaction), and perceptive (communication partners' perception of each other) (Morozova, 2012; Puchalska-Wasył, 2010). Thus, human communication is, on the one hand, an exchange of information, and on the other, a means of self-expression.

The development of electronic means of interpersonal communication has contributed to the progress in the area of encoding narrative messages within video games. A game possesses all the necessary properties for a person seeking new possibilities, self-development, social relevance, and a fulfillment of dreams and desires (Pozharytska et al., 2023). It serves as a way to fill emotional loneliness and realize unfulfilled aspirations.

A new academic field of **game studies** has emerged quite recently, from the ludology vs. narratology debate, associated with Espen Aarseth (Aarseth, 1997), Gonzalo Frasca, and Jesper Juul. Researchers of classical **narrative** (R. Barthes, I. Bekhta, M. Blauverg, J. Bruner, C. Griffin, T. van Dijk, I. Morozova (Morozova & Ershova, 2019), P. Ricoeur and others) generally do not consider the verbal components of video games, whereas **ludologists** (M. Eskelinen, S. Chatman, R. Chernov, J. McGonigal (McGonigal, 2011), J. Schreier (Schreier, 2017)) primarily focus on the psychological aspects of video games without providing detailed analyses of their verbal content.

The relevance of this research stems from both the underdevelopment of the problem of communicative correspondence between ludonarrative in video games and the printed versions of the same plot, and the growing popularity of video games in contemporary culture. The object of this study is Nancy's character lines in the novel *Nancy Drew: The Phantom of Venice* by C. Keene (Keene, 1985) and her communicative contribution in the 2008 video game under the same title (*Her Interactive*, 2008). The subject of the study is the specifics of information transfer and verbalization in the novel and in the quest-type video game.

The main aim of the research is to establish correlations between the printed version of C. Keene's *Nancy Drew: The Phantom of Venice* and its multimodal representation in the eponymous video game. To achieve this aim, the following tasks were set:

- to characterize the video game as a specific form of plot representation of a literary work;
- to identify the causes of ludonarrative dissonance in the game;
- to determine the degree of “free” choice available to the player;
- to conduct a comparative analysis of the types of sentences used by Nancy Drew as a character in the novel and the game.

The conceptual foundation of the research lies in the classical theory of the play-origin of culture as outlined in Johan Huizinga's *Homo Ludens* (Huizinga, 2005: 251) and in James Joyce's epiphanic model (Fomenko, 2006). At the core of this conceptual framework is the idea of play as a possibility of simultaneous multi-existence, which becomes the structural basis for human activity (Pozharytska, 2016; Pozharytska et al., 2023). James Joyce's innovative shift from linear to rhizomatic artistic thinking finds a vivid reflection in video games. His epiphanic model makes the reader a participant in the literary discourse (Fomenko, 2006). Renowned scholar of literary semantics, A. Bell, notes that the essence of the work is not revealed to readers-players, but evolves according to their cooperative efforts with authors-publishers... (Bell, 2010: 46).

2. Nancy Drew as a Typical Quest Video Game: Plot, Interface, and Ludonarrative Dissonance

There are various classifications of video games (Pozharytska, 2021), but many of them are conditional, since often games combine features of several categories. This study focuses on the **quest-type video game**, where the player moves from task to task, solving a main logical problem, with communication mainly conducted through text-based information. This genre, in our opinion, is the most suitable correlate for a detective novel.

Nancy Drew is a series of games about the girl detective Nancy Drew, based on books written by a group of authors under the pseudonym Carolyn Keene. *Nancy Drew: The Phantom of Venice* is the 18th quest game in the series (*Her Interactive*, 2008), based on the 1985 book of the same name (*Keene*, 1985). The player progresses through the game according to the plot of the novel. The developers have added several side mysteries, which must be solved to complete the game.

From a psychological perspective, the game's influence on the player's personality is binary in nature and does not depend solely on the individual or the game properties (*Pozhar-ytska et al.*, 2023). This effect results from the interaction between the game matrix (its characters, plot, and dynamics) and the player's psyche (including emotions, fantasies, mental imagery, etc.) (*Johnson*, 2012; *McGonigal*, 2011; *Morozova et al.*, 2021). This combination sometimes creates the conditions for **ludonarrative dissonance** – a term introduced by game designer Clint Hocking in 2007 – which describes a contradiction between the discourse conveyed through the story and environment and that conveyed through gameplay. This contradiction leads to a lack of immersion, or even detachment from the narrative. Although the term “dissonance” has a negative connotation, many researchers treat it as an inherent flaw of video game storytelling.

According to E. Aarseth, a video game is a unique “cybertext” in which the gamer acts as the protagonist of the narrative (*Aarseth*, 2001). Notably, players never see Nancy's face in the game. She appears from behind or from a top-down view, and even photographs of her are blurry or obscured. This feature enhances immersion and encourages the player to merge with the character.

The *Nancy Drew* games use a typical quest interface. Most of the time, the player controls Nancy Drew, travels through a virtual world, interrogates suspects, gathers evidence, solves puzzles, and investigates mysteries. In *The Phantom of Venice*, Nancy goes to the world's romance capital – Venice – where the gamer sees canals, gondolas, narrow streets, and cozy cafés through the character's eyes. Nancy is tasked with helping the police catch a masked thief, nicknamed “the phantom” because he/she leaves no traces and vanishes into thin air. A “Second Chance” feature allows players to retry a failed moment without replaying from a save point.

3. Novel Vs Video Game Experience

Our observations confirm that locations in the game and the novel coincide completely, differing only in their interior or exterior descriptions. In most cases, players can interact only with selected parts of the environment. Some objects drive the game forward – for example, interacting with a costume triggers a dance puzzle in *The Phantom of Venice*.

In every *Nancy Drew* novel, the heroine always solves a mystery, finds a criminal, and prevails. In the game, however, the player can lose – by making an incorrect choice or failing a task, resulting in “*Nancy is dead*.” (*Her Interactive*, 2008). The likelihood of success depends on the player's age, experience, and chosen difficulty.

Our carried out online survey has revealed an average success rate of 64% and a “failure” rate (use of retries) of 36%. The ratio of players who never finished the game to those who did by any means is 15% to 85%. This indicates that only one in three players can complete the game without hints, and roughly one in eight abandons it entirely. This pattern supports the hypothesis that the popularity of quests stems from their competitive nature and a relative freedom of existential choice they offer.

In the printed version of the novel, the reader always acts as a passive partner of the author (Morozova & Ershova, 2019; Morozova & Pozharytska, 2021). The comparative analysis of narrative representation in the book and its multimodal reflection in the game leads to the following generalizations. Beyond the obvious substitution of narrative with visuals in the game, there is a difference in the number of suspects. The game introduces more characters – a generous artist, an elderly countess, a curious journalist – each with their own goals, making them potential culprits. This expansion naturally affects the ratio of narrative to dialogue. In the novel, narrative constitutes 39% and dialogue 61%; in the game, ludonarrative makes up 18% and virtual dialogue 82%. This dominance of dialogue in the game is explained by the need for player interaction with non-player characters, making dialogue the primary narrative mode.

4. Video Game Narrative: Structural & Communicative Peculiarities

Our study found significant differences in the distribution of sentence types. Simple syntactic constructions dominate in the game (73.4%), followed by compound (14.2%) and complex (12.4%) sentences. In the novel, simple sentences appear less frequently (55.6%), while complex ones account for 29.4%, and compound – for 15%. In-game complex sentences tend to be explanatory, e.g., “**He says** it wasn’t him. **He says** someone else wrote the note and left the sausages for me.” (Her Interactive, 2008)

Nancy’s statements in the novel are more extended and polite, often including emotional descriptions or social cues, e.g., “I’ll be glad to come, she said warmly. And don’t worry, Tara, you’ll bear up, I’m sure of that Just think how happy your Dad will be to know you’ve come all that way for his sake” (Keene, 1985).

In terms of the communicative aim, the video game shows a sharp increase in interrogative structures, especially wh-questions designed to maintain dialogue and offer choices, e.g., “Why would someone do it?”, “What did he want to say?”, “Why does everyone’s phone number begin with five five five?” (Her Interactive, 2008). Nancy frequently motivates or advises, e.g., “Let’s spy on him, and we may find something” or “I would check this room one time more, maybe we have missed something.” (Her Interactive, 2008) These examples also reveal a trend for illusory freedom: although framed as suggestions, such actions are mandatory for progression.

5. Conclusions

In conclusion, the increase in dialogue in the video game format brings it significantly closer to real-life interpersonal communication, fostering a sense of immediacy and participation that is largely absent in traditional print narratives. This dialogic expansion not only enhances immersion, but also facilitates a deeper emotional and psychological involvement, allowing the player to project their own identity onto the protagonist. The dominance of syntactically simple interrogative structures serves a dual function: it lowers the cognitive threshold for interaction, making the game more accessible, while simultaneously promoting critical thinking and sustained engagement through choice-based progression.

Unlike the passive consumption, typical of reading a book or watching a film – where the narrative unfolds independently of the audience’s input, – a quest video game places the player in an active, decision-making role. The presence of multiple narrative paths and alternative endings empowers players to shape the storyline in accordance with their preferences, actions, and

problem-solving strategies and grants them multi-existence. This interactive structure fosters a unique process of self-exploration, in which players not only engage with the fictional world but also reflect on their own choices, values, and reactions.

The possibility of replaying the game and discovering new outcomes further amplifies its appeal, encouraging players to test different strategies and adopt various perspectives. This flexibility contributes to a sense of autonomy and creative freedom, positioning the video game as a powerful medium for both entertainment and introspective development. In this way, the digital adaptation of *Nancy Drew: The Phantom of Venice* transcends mere transmedial translation, emerging as an interactive, multimodal experience that redefines narrative participation and expands the boundaries of character embodiment and story ownership.

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FROM IDEAS TO STANDARDS: BORYS SHALAGINOV'S CONTRIBUTION TO THE FORMATION OF FOREIGN LITERATURE AS AN ACADEMIC DISCIPLINE

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Summary

This article analyzes the significant contribution of the prominent Ukrainian scholar Borys Shalaginov to the development of normative documents for the school course of foreign literature in institutions of general secondary education in Ukraine. His key scientific positions regarding the course concept, principles of structuring educational information, and the role of the state standard and curricula are outlined. Particular attention is paid to Shalaginov's vision of the educational value of art as a means of affirming fundamental values that strengthen the human community. The article highlights his proposed principles for selecting works for school study, which include high artistic and aesthetic and pedagogical value, humanistic content, psychological appropriateness for specific age groups, scientific and theoretical representativeness, and a text volume suitable for classroom work. It is emphasized that these principles remain relevant today, especially with the deep penetration of digital technologies into schooling. The article also examines Professor Shalaginov's role in creating school curricula for foreign literature, which, unlike previous ones, fostered the formation of a personality rooted in national cultural heritage yet open to global ideas and values. It is proven that his programs created prerequisites for the synthesis of national and universal values. The conclusion is made that Borys Shalaginov's scientific and methodological ideas serve as a foundation for the further development of literary education in the New Ukrainian School.

Key words: Borys Shalaginov, state standard, literary education, teaching methodology, curricula, educational reforms, value-based approach.

DOI <https://doi.org/10.23856/7011>

1. Introduction

Studying and analyzing the creative works of scholars whose contributions were foundational in a particular field of science is essential for its further development. Today, research that spurred changes in various spheres of independent Ukraine's life at the outset of its formation holds particular interest. Such changes also affected the secondary education system, which faced pressing questions about how the generation of young Ukrainians should enter the 21st century, how the state would ensure the successful integration of its citizens into the global cultural space, and what the markers of an educated individual would be. One way to address these issues was the introduction of a compulsory foreign literature course for schools with Ukrainian as the language of instruction. This innovation, in turn, presented a challenge for the academic and teaching communities: it was necessary to develop a concept for teaching the new

subject, define principles for the interconnected study of Ukrainian and foreign literature, form a literary canon for school study, and formulate state requirements for education as the basis for the sociocultural development of youth.

Borys Shalaginov's works played a significant role in addressing these tasks. He is a contemporary researcher of Western European literature, Doctor of Philological Sciences, Professor at National University "Kyiv-Mohyla Academy," Honored Worker of Science and Technology of Ukraine, and author of numerous publications in philology and teaching methodology. His name is widely known among scholars, foreign literature teachers, philology students, publishers, and all readers interested in the art of words. Borys Shalaginov is an active participant in academic gatherings, a regular contributor to professional journals, and the author of textbooks on foreign literature and history for institutions of general secondary and higher education in Ukraine. For many years, he initiated numerous innovations that formed the basis of foreign literature teaching methodology. This marked a decisive stage in the formation of a new methodological discourse, as school theory and practice rapidly shed old ideological dogmas and stereotypes.

2. Analysis of Research and Publications

Borys Shalaginov's works have fueled scientific discourse in the field of literature teaching methodology for four decades, offering answers to a wide range of pressing questions. Scholars turn to his scientific and pedagogical experience when researching the potential of literature as an educational subject (U. Baran, N. Hrytsak, O. Isaieva, Zh. Klymenko, V. Papushyna, L. Udovychenko, L. Chumak, etc.), reading motivation as a methodological problem (U. Baran, M. Dorichenko, O. Isaieva, T. Kachak, Zh. Klymenko, H. Shvets, etc.), peculiarities of working with contemporary student readers (N. Hrytsak, N. Borysova, O. Isaieva, T. Kachak, Zh. Klymenko, O. Kuchai, N. Lohvynenko, V. Martynenko, L. Matsevko-Bekerska, V. Papushyna, etc.), problems of academic and school analysis of literary works (N. Hrychanyk, O. Isaieva, L. Klymenko, O. Polishchuk, O. Slyzhuk, V. Tymenko, L. Chumak, etc.), and issues of introducing elements of comparative literature into school education (T. Batrak, N. Hrytsak, L. Yevchina, Zh. Klymenko, Ye. Kremendiuk, I. Maranska, H. Minych, I. Nebelenchuk, M. Pyrys, O. Poliak, L. Chumak, etc.).

The purpose of this article is to analyze one facet of the scholar's scientific creativity: namely, his contribution to the development of normative documents for organizing the educational process in foreign literature in Ukrainian schools.

3. Presentation of the Main Research Material

Borys Shalaginov's pedagogical views, rooted in the ideas of German classical philosophy, were highly valuable for the new methodological discourse.

The scholar believes that the educational value of outstanding works of art at all times lies in the affirmation of fundamental values that form and strengthen the human community and ensure its viability for millennia. High art is not merely a passive mirror; it forms and affirms values that penetrate human consciousness through science, philosophy, and religion, as well as through aesthetic experiences. This is precisely why studying literature is essential during school education. Such an understanding of literary development, freed from entrenched Soviet dogmas, formed the basis for teaching the art of words in Ukrainian schools, and Borys Shalaginov played a significant role in this.

At the beginning of the foreign literature course implementation in schools, there arose a need to create a comprehensive normative document – the State Standard of General Secondary Education. This standard would reflect the projected final outcome of school education while simultaneously taking into account the real capabilities of students and the education system itself to achieve it, effectively implementing state policy in education. The work of scholars on creating the state standard began in 1994, and in 1996, by a decision of the collegium of the Ministry of Education of Ukraine, the Concept of the State Standard of General Secondary Education of Ukraine was approved (*Kontseptsiiia*, 1996: 7). Borys Shalaginov contributed to the development of the educational field "Languages and Literatures," specifically its literary component. In collaboration with literary scholars and methodologists, including Lesya Miroshnychenko, Doctor of Pedagogical Sciences and Professor in the field of literature methodology, who co-authored many of his later works, they formulated the core content of the document. Subsequently, the scholar repeatedly addressed academics and teachers, explaining the conceptual basis of the "Foreign Literature" subject, commenting on the standard's components, and clarifying the content of the basic and compulsory levels of teaching the subject. In his speeches and publications, Borys Borysovykh consistently advocated for democratic changes in literary education, creative approaches to developing alternative curricula and textbooks, and seeking new ways of structuring educational material. He also called for the development of new principles for conducting lessons, arguing that the educational standard is merely a general "concept of literary knowledge that has fundamental importance for student socialization." This concept serves as an "Ariadne's thread," without which "the course cannot exist" (*Shalahinov*, 2013: 12).

The authors of the document thoroughly considered the age-related psycho-pedagogical characteristics of students' perception of literature and focused on forming basic knowledge, skills, and abilities. They also addressed the problem of cultivating fundamental societal values, which would later form the basis of the value-based approach to organizing education in the New Ukrainian School (*Stepanenko*, 2023: 407). At the end of the 20th century, this problem was frequently discussed in professional publications and became an important component of the academic debate surrounding universal and national values in works of literary art (*Udovychenko*, 2022: 14).

It is important to acknowledge Professor Shalaginov's critical assessment of the Standard (*Svitova*, 1997: 16), which he helped prepare, and his sincerity and impartiality (according to numerous reviews from foreign literature methodologists) in its analysis. He himself initiated a number of changes to the Standard: he considered it necessary to add authors' biographies and information about their iconic texts to the learning objectives to create a holistic understanding of artists' works in students, as well as information about specific literary eras, movements, trends, and an optimal volume of theoretical and literary concepts that would help students perceive a literary work as a whole (*Shalahinov*, 2013: 97).

Borys Shalaginov's formulated principles for selecting works for the school literature course are important: high artistic and aesthetic value; humanistic content; psychological appropriateness for a specific age group; high pedagogical value; clearly expressed scientific and theoretical representativeness of the work; and a text volume convenient for classroom work (*Shalahinov*, 2013: 190). The implementation of these principles yields a significant educational effect and promotes students' spiritual growth.

To this day, these principles remain dominant in the selection of works for textual study by authors of model literature curricula and practicing teachers. Some of them, such as psychological appropriateness for a specific age group and a page volume convenient for classroom work, have gained particular relevance in recent decades due to the deep penetration of digital

age technical means into schooling. Borys Borysovykh's raised questions about children's own reading circles and the dosage of literary texts (*Shalahinov, 2008; Shalahinov, 2013*) have become the subject of extensive discussion (*Zarubizhna, 2003; Moklytsia, 2002*) and a catalyst for new research on schoolchildren's reading needs and interests (*Mykhalchuk, 2012: 21*).

Our conclusions on these issues align with B. Shalaginov's concept. They are highlighted in an interview for the "New Ukrainian School" editorial board (*Pasko, 2024*). and are confirmed by the results of the survey "What foreign literature works do students like most," conducted by I. Pas'ko (*Pasko, 2024*).

Professor Borys Shalaginov made a significant contribution to the development of another important normative document – the school curriculum for foreign literature. Along with scholars such as Ye. Voloshchuk, V. Hladyshev, T. Denysova, D. Zatonskyi, V. Zvyniatskovskyi, O. Isaieva, Z. Koryliuk, Zh. Klymenko, Yu. Kovbasenko, O. Kutsevol, I. Limborskyi, L. Miroshnychenko, L. Myronenko, I. Moiseiev, D. Nalyvaiko, I. Popova-Bondarenko, T. Potnitsieva, O. Pronkevych, T. Sverbilova, Yu. Sultanov, T. Cherednyk, and others, he actively participated in the academic discussion about educational content, which unfolded in professional publications ("Vidrodzhennia," "Slovo i Chas," etc.). This discussion revolved around informational oversaturation, bias, and subjectivity in the selection of works for study, an unmotivated significant number of Russian literature works, and so on. Constructive criticism also targeted the first approximate curriculum, prepared by an authorial team led by K. Shakhova, which was the main one until 1998 and "turned out to be, in essence, a mechanical transfer – with certain reductions and simplifications – of a university foreign literature curriculum to secondary school" (*Nalyvaiko, 2003: 7*).

One of the significant outcomes of this discussion was the creation of alternative school curricula (in chronological order) by M. Boretskyi, and by authorial teams led by I. Panchenko, Yu. Kovbasenko, and B. Shalaginov. The latter creative team included scholars O. Isaieva, Zh. Klymenko, L. Miroshnychenko, O. Korniienko, and teachers N. Dorofeieva and S. Rudakivska (*Zarubizhna, 2001; Prohramy, 2003*). The availability of a whole spectrum of curricula democratized the educational process: teachers gained the opportunity, depending on objective and subjective conditions (the level of students' academic achievement, their interests and needs, the provision of literary and educational materials, etc.), to choose the one that could be effectively implemented in each particular situation.

It is worth noting that before offering the curricula to teachers, the authorial team led by B. Shalaginov developed their scientific and methodological concepts (*Shalahinov, 2000; Shalahinov, 2001; Shalahinov, 2003; Shalahinov, Miroshnichenko, 2000*), practically tested them, and took into account substantial comments and suggestions (*Dumky, 2000; Sultanov, 2001*).

In his curricula, Borys Shalaginov implemented the principles he advocated (*Shalahinov, 2001: 6*) and embodied his strategic idea that the study of foreign literature, alongside fostering national and civic identity, should be based on a value-based approach and open up broad opportunities for engaging students through the art of words with the riches of world culture. The curricula developed with B. Shalaginov's participation fully created "prerequisites for the formation of a personality rooted in national cultural ground and at the same time open to other cultures, their ideas and values, capable of synthesizing national and universal values" (*Shalahinov, 2001: 7*). In our opinion, the strong points of these curricula, which distinguish them favorably, include reliance on the psycho-pedagogical characteristics of literature perception by students of different age groups; the study of literary works proven by school practice; textual study of small-volume literary works in their entirety; gradual deepening of reader interpretation through logically structured expansion of educational information; introduction

and use of terminological apparatus synchronously with the study of Ukrainian literature (when literary concepts are first worked on in the native literature course, and then deepened and expanded using materials from foreign authors' works); a thoughtful balance of time for textual and overview study of works; and stimulation of students' independent reading activity.

4. Conclusions and Prospects for Further Research

Borys Shalaginov's methodological ideas and developments are alive and well: they are both the subject of discussions around current topics and the foundation for new research into optimal ways for the further development of the New Ukrainian School. Undoubtedly, they will elevate literary education in Ukrainian schools to a new level and help shape a young generation worthy of both its thousand-year history and the 21st century. In this work, we did not touch upon the issue of implementing a value-based approach in literature teaching, which B. Shalaginov paid considerable attention to and which is on the agenda and widely discussed by scholars and teachers. We plan to dedicate a separate publication to this extensive topic.

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DEVELOPING THE MECHANISM OF PSYCHOLOGICAL INDUCTION IN MEDICAL STUDENTS

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Summary

The article presents a theoretical justification and a conceptual model for developing the mechanism of psychological induction in medical students as an effective means of fostering professional identity, emotional competence, and ethical culture in future physicians. The relevance of the study is driven by the growing significance of affective and value-based components in medical education, as well as the insufficient theoretical and pedagogical exploration of the phenomenon of psychological induction. The article aims to design a conceptual model of psychological induction, define its structural components, identify pedagogical conditions for its implementation, and outline the expected outcomes. The research methodological framework is grounded in systemic, competency-based, and humanistic approaches, as well as concepts of social learning, reflective pedagogy, and narrative medicine. The proposed model integrates four interrelated components (cognitive, emotional, behavioral, and reflective), which enable profound value-emotional transformation during students' professional formation. The article defines key pedagogical conditions that support the model's effectiveness: a safe educational environment, a person-centered and humanistic teaching style, emotionally rich instructional methods, development of reflexivity, and the creation of moral choice situations. Strategies for implementing the model into educational practice are proposed, including integration into academic disciplines and modules, redesigning pedagogical interactions, faculty training, and methodological support. Expected outcomes of the model's application are outlined, and potential limitations are identified. Prospects for further research involve empirical validation of the model's effectiveness and its adaptation to various educational contexts in medical training.

Key words: psychological induction, professional identity, emotional competence, medical education, ethical culture, model, pedagogical conditions.

DOI <https://doi.org/10.23856/7012>

1. Introduction

In today's world, where clinical practice is increasingly accompanied by high emotional strain, ethical dilemmas, and a heightened risk of professional burnout, the development of emotional maturity, empathy, and inner resilience in future physicians has become particularly critical. Medical education can no longer be confined to the transmission of knowledge and technical skills alone; it must foster the holistic development of the individual, encompassing ethical orientation, the capacity for self-reflection, and readiness for humanistic engagement with patients (*Entertainment News*, 2024; *Utiuzh et al.*, 2021; *Yasin et al.*, 2020; *Perrigault & Greco*, 2022; *DeFoor et al.*, 2020).

The growing emphasis on the humanization of medical education necessitates the search for effective pedagogical mechanisms that facilitate not only cognitive assimilation but also the student's emotional and value-based immersion into the professional context (*Andersson et al., 2022; Alharbi, 2025; Aghabarary & Khedmatizare, 2025*). One such underexplored yet promising mechanism is psychological induction – a process of indirect emotional and value-oriented influence that emerges within educational interactions and fosters a deep identification with the medical profession.

Despite growing interest in the emotional competence of future healthcare professionals, the systemic implementation of psychological induction in educational settings remains insufficiently developed. The structure of this mechanism, its core components, and the pedagogical conditions for its realization have not been clearly defined, which limits its practical application in institutions of higher medical education. In this context, it is essential to conceptualize psychological induction through the lens of contemporary pedagogical and interdisciplinary approaches. A more detailed analysis of the academic literature allows for the clarification of the theoretical foundations of this phenomenon and the identification of existing scholarly gaps that require further exploration.

Purpose – to theoretically substantiate and develop a model for the formation of the psychological induction mechanism in medical students as a means of fostering their professional identity, emotional maturity, and ethical responsibility.

Research objectives:

- to analyze the current state of scholarly research on the problem of psychological induction in higher education, particularly in the context of training future physicians;
- to identify the theoretical foundations underlying the functioning of the psychological induction mechanism (including psychological, pedagogical, and interdisciplinary approaches);
- to develop an original model for the formation of the psychological induction mechanism in medical students;
- to determine the pedagogical conditions for implementing this model within the educational process of higher medical institutions;
- to systematize the expected outcomes of the model's implementation and outline prospects for its further empirical investigation.

2. Main part

Analysis of current research. Contemporary psychological and pedagogical sciences increasingly focus on the development of emotional competence, professional identity, and a humanistic orientation in future physicians. These aspects are viewed as key prerequisites not only for high-quality professional training but also for students' psycho-emotional resilience in the challenging environment of clinical practice.

Several researchers emphasize the humanistic dimension of the educational process, which should foster the value-based development of the future physician's personality. For example, O. Zadorozhna highlights the role of the university environment as a determinant in the formation of humanistic values, while O. Isaeva and M. Shumylo view the humanization of education as a core condition for the moral development of medical professionals (*Zadorozhna, 2024; Isaeva & Shumylo, 2024*). Both perspectives emphasize the importance of emotional engagement in educational interactions, although with different emphases: the former at the institutional level, and the latter at the personal level. A different perspective is offered by O. Lazurenko and N. Smila, who examine professional formation through the lens

of psychological support and the integration of psycho-emotional mechanisms into the learning process (*Lazurenko & Smila, 2024*). Their approach emphasizes not only humanistic but also competency-based foundations, framing student support as a deliberate pedagogical instrument.

The issue of professional identity is also explored by N. Didyk and colleagues, who focus on emotional stability as a key factor in effective self-determination within pre-tertiary education (*Didyk et al., 2023*). In this context, it is worth mentioning O. Kraieva and N. Romanenko, who underline the dynamic nature of identity as shaped by social transformations. This approach broadens the understanding of identity as both an individual and a sociocultural phenomenon (*Kraieva & Romanenko, 2019*).

Theoretical foundations for understanding professional identity as a structured construct are outlined in the work of H. Prib and L. Begeza. Unlike earlier authors, they propose a conceptual model of the identity formation process, allowing it to be treated as an object of pedagogical modeling (*Prib & Begeza, 2020*). N. Tertychna adds to this spectrum by drawing attention to the development of professionally significant qualities, such as stress resistance, moral responsibility, and self-regulation, all of which are closely associated with a specialist's psychological resilience (*Tertychna, 2021*).

In the context of current challenges, especially the full-scale war, the research by A. Shulhai and co-authors is particularly valuable. They investigate emotional burnout syndrome in medical students, identifying several critical factors, including a lack of psychological support and general overload, that significantly reduce young people's capacity for emotional self-regulation (*Shulhai et al., 2023*).

A growing interest in the humanistic transformation of medical education is also evident in international academic discourse. Issues such as professional identity, emotional competence, and ethical resilience are recognized as essential elements in training modern physicians amid the increasing complexity of interpersonal and systemic challenges. For instance, S. Post et al. propose a three-component taxonomy of virtues and character traits as the foundation for developing a physician's professional identity. Unlike approaches that focus solely on functional competencies, the authors emphasize the role of moral character and psychological stability as the foundation of ethical medical reasoning (*Post et al., 2024*).

Another significant trend is the integration of social-emotional learning and a meaningful reconsideration of the role of interpersonal interaction. Johnsen JK and colleagues investigate the experience of dental students with emotional learning through storytelling. Their findings highlight the effectiveness of emotionally oriented methodologies in fostering empathy, self-reflection, and ethical decision-making under pressure (*Johnsen et al., 2023*).

Emotional adaptation and social inclusion are examined by Liu and co-authors, who focus on the relationship between social-emotional competence, self-esteem, and overall adaptability among students. These findings are of practical significance for understanding psychological induction as a mechanism of integration into the professional environment (*Liu et al., 2023*).

Significant attention in international literature is also devoted to the institutional conditions for developing professional resilience. For instance, Abbasi Abianeh and colleagues outline global trends in the transformation of higher medical education, emphasizing humanization, digitalization, and social responsibility as key priorities for future development (*Abbasi Abianeh et al., 2022*).

In the domain of specialized emotional training for medical professionals working in crisis settings, particularly in disaster contexts, Kasselmann et al. stress the need for well-structured psychological modules (*Kasselmann et al., 2021*). Similar conclusions are drawn by Olsson S. and collaborators, who analyze Sweden's experience with integrating disaster medicine

into core medical curricula (Olsson *et al.*, 2025). Both studies underscore that emotional competence and psychological preparedness must be embedded not only in communication-related but also in functional components of medical education.

Thus, both national and international research highlight essential aspects of humanization, emotional competence, and professional development in the training of future physicians. At the same time, the concept of psychological induction as an integrated pedagogical mechanism remains underdefined and is scarcely represented in theoretical models. There is a lack of conceptual frameworks that describe the mechanism of its formation, the pedagogical conditions for its implementation, or the strategies for integrating it into educational practice. This creates a clear scholarly gap that the present study aims to address.

Results and discussion. The concept of psychological induction has an interdisciplinary origin, situated at the intersection of psychology, pedagogy, sociology, and professional education. In classical psychology, it is understood as the process by which an emotional state, value orientation, or behavioral pattern is transmitted from one individual to another through interpersonal interaction (daSilva & Wood, 2024). Foundational contributions by L. Vygotsky, A. Bandura, and G. Allport explored phenomena such as behavioral modeling, social contagion, and imitation, which laid the theoretical groundwork for contemporary understandings of induction as a form of subtle influence achieved through shared emotional experience and reflection (Vygotsky, 1978; Bandura, 1977; Allport, 1954).

In pedagogical discourse, psychological induction is understood as an indirect form of influence, manifested through emotionally enriched interactions between participants in the educational process. It activates deep personal mechanisms such as reflection, empathy, and moral engagement, and goes beyond the transmission of knowledge to involve emotional and value-laden immersion (daSilva & Wood, 2024; Delgado Bolton & García Luna, 2025).

Recent studies emphasize the growing importance of the affective dimension in education, especially in human-centered professions such as medicine. Emotional involvement, empathy, and the ability to make ethical judgments are seen as the results not only of cognitive development but also of inductive influence. In medical education, psychological induction is particularly relevant, as students operate in a context of elevated emotional intensity, responsibility, and uncertainty – factors that create a natural environment for activating the inductive mechanism (Zary *et al.*, 2024; Hooker *et al.*, 2023; Çırak *et al.*, 2025; Ruitenberg & Kumagai, 2024).

Unlike emotional contagion, which is impulsive and unconscious, psychological induction involves the conscious internalization of values and meanings transmitted through modeled behavior, narratives, role-based interactions, and clinical case analysis. It is implemented not so much through instruction as through example, engagement, and the educator's presence as a carrier of professional ethics (Delgado Bolton & García Luna, 2025; Aghamohammadi-Kalkhoran *et al.*, 2025; Carey & Grant, 2022).

In the pedagogical context, psychological induction serves as a systemic mechanism of transformation, integrating emotional interaction with reflection and behavioral practice. This mechanism is especially effective in the training of future physicians, as it enables the transformation of learning situations into experiences of moral growth, supports the formation of an internalized professional identity, and fosters ethically motivated reasoning.

In summary, psychological induction in education is a complex, interdisciplinary phenomenon that operates at the intersection of cognitive, emotional, behavioral, and reflective domains. Within medical education, it holds particular significance by enabling not only the adoption of humanistic values but also their deep integration into the student's personality

through educational interaction. This, in turn, necessitates the development of a structured model that reflects the mechanisms, conditions, and pedagogical potential of psychological induction.

The modern system of medical education reveals a noticeable imbalance between students' high academic performance and their insufficient psychological maturity, emotional competence, and ethical-value-based self-reflection. Despite the inclusion of courses in medical ethics and deontology, most educational programs remain focused on the declarative assimilation of humanistic norms rather than their deep integration into the student's structure.

In response to this challenge, a model was developed to explain the formation of the psychological induction mechanism, which is interpreted as a tool for profound emotional and value-based transformation in medical students. The model is grounded in an interdisciplinary methodological framework, including the systems approach (*Ludwig von Bertalanffy, 1968*), humanistic pedagogy (*Rogers, 1961; Korczak, 2018*), social learning theory (*Bandura, 1977*), and reflective psychology (*Schön, 1983; Mitchell*).

The model comprises four interrelated components that form a unified and dynamic structure of psychological induction:

- *Cognitive component* – involves the awareness of professional values, ethical norms, and typical clinical situations involving moral choice. It is activated through case analysis, micro-scenarios, and professional dilemmas.

- *Emotional component* – fosters emotional responsiveness to situations that evoke empathy and compassion. It is implemented through narrative medicine, viewing and discussing film clips, and examining complex clinical stories.

- *Behavioral component* – reinforces humanistic behavioral models in real or simulated contexts. It is facilitated through role-playing, simulation-based learning, and professional training exercises.

- *Reflective component* – involves processing acquired emotional and behavioral experiences and shaping the physician's internal identity. It is developed through reflection journals, student portfolios, and group discussions on ethics.

- The model is based on the principles of:

- *Holism*, ensuring the interconnectedness of cognitive, emotional, behavioral, and reflective components;

- *Dynamism*, allowing for the flexible activation of components depending on the pedagogical context;

- *Ecological validity*, ensuring respect for the student's personal space, avoiding coercion, and promoting gentle ethical influence;

- *Variability*, enabling adaptation to the content and format of the educational interaction.

The model's structure is illustrated in the figure below (Fig. 1).

The presented model illustrates the cyclical nature of psychological induction: cognitive comprehension forms the foundation for emotional engagement; emotional responses transform into behavioral reactions; and behavior, through reflection, is consolidated at a new level of professional consciousness. Thus, the model functions as a self-reinforcing system of internal personal growth.

Its distinctive feature is openness to variability: components can be activated in different sequences depending on content, pedagogical objectives, and interaction context. This structure enables the effective implementation of models in both traditional classroom training and simulation-based, multidisciplinary, or interprofessional learning formats.

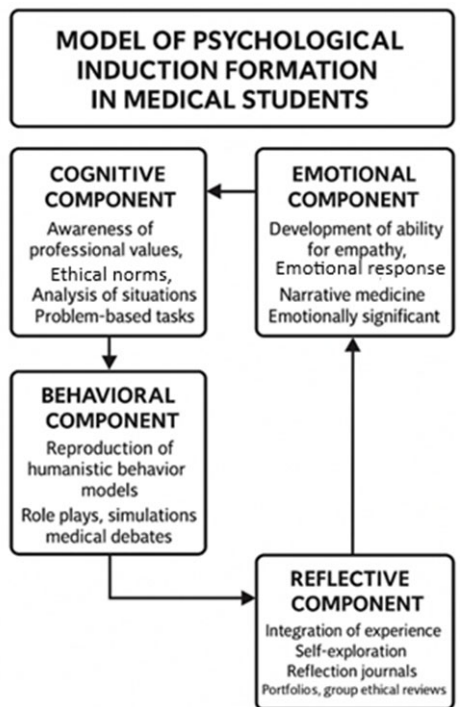


Fig. 1. Model of psychological induction mechanism formation in medical students

Effective implementation of the psychological induction mechanism in the educational process requires creating a comprehensive pedagogical environment that fosters students' emotional engagement, develops empathy, promotes reflective thinking, and encourages internal acceptance of professional values. The determination of pedagogical conditions is based on the analysis of contemporary theoretical approaches to developing emotional competence, reflective thinking, and professional identity (Abbasi Abianeh et al., 2022; Liu et al., 2023; Johnsen et al., 2023), as well as on humanistic learning principles recognized as effective in medical education (Post et al., 2024; Delgado Bolton & García Luna, 2025).

We identify the following key pedagogical conditions that facilitate the activation of the psychological induction mechanism:

1. *Ensuring a safe and emotionally supportive environment.* The presence of a psychologically comfortable space where students are not afraid of making mistakes promotes the revelation of their emotional potential and openness to inductive influence. A safe environment serves as a prerequisite for reflective immersion in ethical dilemmas, the formation of empathetic attitudes toward patients and colleagues.

2. *Person-centered humanistic style of pedagogical interaction.* The figure of the instructor as a moral authority and model of ethical behavior plays a key role in triggering induction. The instructor's involvement, sincerity in communication, and readiness for dialogue create conditions for transmitting values not through instruction, but through example. Consequently, pedagogical influence becomes emotionally significant and is accepted at a profound level.

3. *Application of emotionally rich teaching methods.* Psychological induction is activated through methods that evoke emotional resonance and stimulate internal identification with the professional role. These include:

- narrative medicine (analysis of patient stories, autobiographical narratives);
- viewing and analyzing film excerpts depicting morally complex clinical situations;
- role-playing games and simulation cases modeling ethical decision-making situations;
- inductive essays in which students contemplate their position in the context of ethical dilemmas.

4. *Creating situations of moral choice and ethical reflection.* Induction is strengthened when the learning process includes situations where students must not only acquire knowledge but also make personal decisions and contemplate their consequences. Ethical case analyses, group reflection, and clinical ethics discussions promote the internalization of values and transformation of attitudes.

5. *Stimulating reflective culture.* Psychological induction involves not only emotional immersion but also an understanding of the experience. The development of reflectivity is ensured through observation journals, portfolios, essays, and small-group discussions. This allows for the integration of induced values into the student's belief system.

6. *Engaging students in emotionally significant educational events.* Effective student participation in activities that require not only intellectual but also moral response: meetings with patients, volunteer practices, debates, and intervision groups. Such engagement forms the practice of ethical sensitivity and social responsibility.

The pedagogical conditions for implementing the psychological induction model should be directed not only toward changing students' behavioral reactions but primarily toward creating space for emotional experiences, moral choices, and personal identification with the profession. This extends the preparation of future physicians beyond formal education into the realm of profound internal growth.

Successful implementation of the psychological induction model in the educational process requires not only the creation of appropriate pedagogical conditions but also a structured implementation strategy that ensures its systematic nature, phased approach, and pedagogical integrity. This involves integrating the model into various aspects of content, forms, methods, and the organization of learning, which will allow students to develop not only professional knowledge but also a deep emotional and ethical engagement with their future profession.

Because of this, we propose the following strategic steps for implementing the psychological induction model in medical student training:

1. *Integration of the model into the humanities and clinical cycle disciplines.* Model components can be logically embedded into the content of disciplines oriented toward forming ethical thinking and professional responsibility, specifically: "Fundamentals of Medical Ethics," "Psychology," "Palliative Care," and "Introduction to Clinical Medicine." This approach promotes not only knowledge acquisition but also the formation of internal professional identity based on empathy, compassion, and moral self-determination.

2. *Using the model as a foundation for interdisciplinary modules.* The model should be implemented in the format of comprehensive educational modules that combine clinical situations, ethical cases, simulation training, role-playing exercises, and reflective practices. For example, the module "Physician and Patient: Communication, Responsibility, Trust" can serve as a platform for students to engage in deep immersion into complex emotional and ethical scenarios, followed by reflection.

3. *Redesigning learning scenarios and educational interaction.* The model involves transitioning from a reproductive teaching style to creating situations of moral choice, emotional

resonance, and behavioral identification. It is recommended to prioritize small-group work formats, facilitation methods, discussion, and problem-oriented technologies that activate not only cognitive but also emotional student engagement.

4. *Preparing instructors as key carriers of inductive influence.* One of the key conditions for successful implementation is the development of professional-ethical, emotional, and facilitative competencies in educators. The instructor should serve not only as a knowledge transmitter but primarily as an example of humanistic interaction, a source of empathetic influence, and reflective support for students.

5. *Creating methodological support for model implementation.* Effective model implementation requires developing appropriate educational-methodological tools, including case banks with ethical situations, reflective analysis algorithms, simulation scenarios, instructions for writing inductive essays, sets of reflection questions, and materials for organizing small-group analyses.

Thus, the proposed strategy involves a comprehensive and systematic embedding of the psychological induction model into the organization of the educational process in medical institutions of higher education. Its implementation allows not only to activate deep psychological mechanisms of ethical development in future physicians but also to create a foundation for forming a humanistically oriented professional identity under conditions of high emotional demands in the clinical environment.

The practical implementation of the model should be deployed in stages, from pilot testing on individual disciplines to gradual integration into interdisciplinary modules and mentorship systems. It is expected that the leading effectiveness indicators will be increased levels of student reflectivity, development of empathy, ability for ethical analysis of situations, as well as a reduction in manifestations of emotional burnout. Despite potential barriers (notably, the need for faculty professional development and institutional support for changes), the proposed model has a high degree of adaptability to various educational contexts of medical training.

Implementing the model for forming the psychological induction mechanism in medical students involves achieving comprehensive results that encompass the cognitive, emotional, reflective, and behavioral aspects of the future physician's personality. Unlike traditional knowledge acquisition, this involves a profound transformation of internal beliefs, ethical orientations, emotional sensitivity, and self-reflection of the future physician.

Taking into account the component structure of the model, expected results can be systematized in a correspondence table between each component and target effects (Table 1).

Table 1

Expected Outcomes by Model Components

Model component	Expected outcomes / Effects
Cognitive	Awareness of ethical norms; understanding the role of humanistic values in medicine; ability to analyze clinical situations involving moral choices
Emotional	Development of empathy, capacity for compassion, emotional engagement in patient interaction, and ability to recognize others' emotions
Behavioral	Reproduction of humanistic behavioral models; improvement of communication strategies; development of partnership-based interaction
Reflective	Ability for self-observation; reflection on one's actions; formation of professional identity; reduction of professional burnout risk

All components interact with each other, forming a dynamic system in which cognitive comprehension promotes emotional engagement, emotional experiences transition into behavioral reactions, and through reflection, these influences are integrated into the personal structure of the future physician. This approach enables not only pedagogical but also profound professional and ethical effects, which have direct significance for the quality of clinical thinking, patient interaction, teamwork, and psychological resilience in professional activity.

Thus, the psychological induction model aims to form a holistic, empathetically mature, and ethically motivated professional personality capable of acting under conditions of high moral responsibility, emotional tension, and the human complexity inherent in contemporary medical practice.

The proposed model for forming the psychological induction mechanism in medical students has several advantages that determine its innovative potential in the educational process. Its interdisciplinary nature ensures the combination of concepts from psychology, pedagogy, medical ethics, and professional identity theory. At the same time, the model's structure is holistic, as it synchronizes cognitive, emotional, behavioral, and reflective components, allowing for a comprehensive influence on the formation of an ethically mature physician's personality.

The emphasis on emotional experience and reflection, which promotes deeper internal assimilation of professional values, represents a particular value. The model demonstrates high adaptability, as it can be implemented in various educational formats, ranging from traditional classes to simulation scenarios. Special attention should be given to its preventive potential, as the activation of reflective thinking and the development of emotional competence create conditions for reducing the risk of professional burnout among future physicians.

However, implementing the model requires overcoming several challenges. First, the practical realization of the inductive mechanism is possible only under conditions of high professional readiness of the instructor, specifically, their emotional maturity, ability to provide reflective support to students, and skill in facilitating moral-ethical discussions. Second, model implementation requires a supportive educational environment that maintains humanistic practices, interdisciplinary interaction, and pedagogical flexibility. Under conditions of academic overload or administrative inertia, such conditions may not always be ensured. Additionally, the personal changes envisaged by the model are difficult to measure quantitatively in a short-term format, which complicates the evaluation of its effectiveness using standard instruments.

Despite the outlined barriers, the model has a high degree of adaptability and can be effectively integrated into various medical education contexts provided there is methodological support, qualified faculty guidance, and institutional openness to pedagogical innovations.

3. Conclusion

The conducted research enabled the conceptualization of psychological induction as a crucial mechanism for shaping the professional identity and ethical culture of future physicians. The proposed model is based on the coordinated interaction of four components (cognitive, emotional, behavioral, and reflective) and reflects the dynamics of personal growth of medical students in an emotionally rich educational environment.

The model functions as a pedagogically guided process of value transformation that allows not only the assimilation of humanistic orientations but also their integration into the future physician's professional "self". Of particular significance are emotional engagement, reflective comprehension of experience, and the instructor's example as a carrier of professional ethics, as factors that activate inductive influence.

The expected results presented in the article demonstrate the model's potential as a tool for developing empathy, moral resilience, professional maturity, and psychological self-regulation in students. At the same time, pedagogical conditions and implementation strategies have been analyzed, paving the way for the practical application of the model in higher medical education.

Prospects for further research include the empirical verification of the proposed model's effectiveness, the development of quantitative and qualitative assessment methodologies for its results, and its adaptation to different stages of specialist training in the field of medicine. Particular attention should be given to studying the impact of psychological induction on preventing professional burnout, forming team ethics, and developing clinical thinking.

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THE FUNDAMENTAL ROLE OF ACADEMIC INTEGRITY IN THE AXIOLOGICAL STRUCTURE OF THE EUROPEAN EDUCATIONAL SPACE

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Summary

In the article, the authors define the concept of 'academic integrity' and determine the relationship of academic integrity with the main European values, such as academic freedom, critical thinking and trust, emphasising its role in the formation of a reliable and transparent educational environment. It is noted that in the context of rapid digitalisation and globalisation, where the availability of information is increasing, the issue of honesty and originality in educational and scientific activities becomes extremely important. Academic integrity acts as a fundamental ethical principle that guarantees the quality of the educational process, the reliability of scientific research and the legitimacy of qualifications. The authors analyse various dimensions of integrity – systemic, institutional, collegial and individual – demonstrating the complexity of its implementation and support at all levels of the educational space. Modern mechanisms for ensuring and promoting academic integrity are considered, including legislative initiatives, institutional policies, the role of European networks and the use of technological solutions to combat plagiarism. As a result of the pedagogical discourse, which was based on the analysis of scientific sources and self-reflection of experience, it was established that academic and pedagogical staff, as carriers of academic culture, are obliged to comply with the requirements of academic integrity in their professional activities.

Key words: academic integrity, plagiarism, european values, education, educational process.

DOI <https://doi.org/10.23856/7013>

1. Introduction

The rapid digitalisation of the educational space is one of the main challenges for modern academic integrity. While information technology expands access to scientific resources and improves knowledge sharing, it also creates new challenges for maintaining integrity in education. After the Law of Ukraine «On Education» in 2017 legislated the principle of academic integrity, the Ministry of Education and Science of Ukraine developed methodological recommendations for heads of educational institutions. These recommendations emphasize the importance of compliance with the norms of academic integrity by all participants in the educational process: teachers, researchers and students. Particular emphasis is placed on the

obligation of the administration of educational institutions to implement effective mechanisms to prevent and detect violations of academic integrity. This is key to ensuring a quality and fair educational environment.

Integration of Ukrainian higher education into the European space is impossible without a deep understanding of modern European practice of quality assurance in higher education, as well as knowledge of relevant models and international standards. In this context, academic integrity plays a fundamental role in the axiological structure of European education. It is an integral part of the quality system that guarantees the credibility of educational qualifications and research, and is therefore a prerequisite for successful integration.

The issues of researching academic integrity in educational institutions are reflected in the works of L. Kartashova, S. Alekseeva, V. Romakin, V. Sherstyuk, V. Kasadzhuk, T. Tymochko, O. Semenoh, V. Sherstyuk, M. Zharykov, O. Korobkin, T. Becher, V. Humboldt, and others.

2. Analysis of the definitions of «academic integrity»

Academic integrity, often identified with scientific honesty, is a key ethical principle governing educational and research activities. It requires unconditional adherence to high standards of honesty, intellectual integrity, and moral transparency at all stages of academic work, from teaching and conducting research to preparing publications (*Alekseeva, 2024*).

As the scientists note in their research (*Bilous, Pylypchuk, 2019*), «...academic integrity is a fundamental component of a quality educational process and effective research. Its provision is the result of consolidated efforts all subjects of the academic community – students, research and teaching staff, administrative staff of educational institutions and state education authorities».

In particular, in the Law of Ukraine of 05.09.2017 «On Education», Article 42 V of the Law defines academic integrity as «a set of ethical principles and rules established by law that should guide participants in the educational process during learning, teaching and conducting scientific (creative) activities in order to ensure confidence in learning outcomes and/or scientific (creative) achievements».

The analysis of scientific research and own pedagogical experience leads me to the conclusion that academic integrity encompasses several interrelated dimensions, each of which plays a role in the formation of an honest and high-quality educational and scientific environment:

- The systemic dimension. At this level, the principles of academic integrity are enshrined in legislation and regulations at the level of the entire higher education and research system. The introduction of strict sanctions for violation of these norms is a key tool for eradicating negative phenomena and forming a new culture of integrity in the academic environment. This creates a legal framework for the functioning of an integrity system.

- The institutional dimension. This refers to the implementation of the principles of academic integrity at the level of specific educational institutions. This includes the development and implementation of corporate codes, rules of conduct and organisational documents that reflect integrity values. The institution establishes sanctions for non-compliance with these rules, which helps to cultivate academic integrity among its staff and students.

- The collegial dimension. This level refers to the academic community as a whole, bringing together all participants in educational and research activities: students, postgraduate students, teachers and administrators. It emphasises mutual responsibility and joint efforts to uphold the principles of integrity.

– The individual dimension. This is the level of the individual – student, teacher, researcher or manager. It focuses on personal and professional ethics, as well as the desire to maintain one's reputation and gain respect in the academic environment.

It is important to note that the individual and collegial levels relate to personal relations, while the institutional and systemic levels relate to regulatory and administrative regulation and responsibility.

3. Academic Integrity as a Guarantee of Higher Education Quality in Europe

Modern European practice is based on a centuries-old tradition of academic freedom, responsibility and the pursuit of truth. The European educational area is based on a number of axiological values that are an integral part of its identity. These include academic freedom, institutional autonomy, critical thinking, pluralism, openness and democracy. Academic integrity is not a separate element, but is organically woven into this value structure, being its essential condition.

Academic freedom implies not only the freedom to teach and research, but also the responsibility for its fair use. Dishonest practices, such as plagiarism or falsification, undermine the very idea of academic freedom, turning it into permissiveness (*Harashchuk, Kutsenko, 2019*).

Critical thinking is the foundation of the European educational tradition, and it can only be developed in an environment where the independence of thought, originality and truthfulness are valued.

Trust and transparency, which are fundamental to integrity, allow for the mutual recognition of qualifications and the mobility of students and teachers within Europe.

Thus, academic integrity acts as a moral compass and ethical framework that guides and supports the values of European education.

Academic integrity in Europe is implemented at several interrelated levels, each of which plays a unique role in its support and promotion. At the institutional level, the principles of academic integrity are embodied in specific policies and practices of higher education institutions. This allows system-wide norms to be adapted to the specifics of each university or college:

– Codes of academic integrity and ethics. Most European universities develop their own codes that detail the expected standards of behaviour for students, faculty and administration. These codes are often part of the statutes or internal regulations.

– Rules and procedures. Clear rules are in place for citation, presentation of research papers, examinations, and procedures for dealing with integrity issues (e.g., disciplinary committees).

– Training and awareness programmes. Universities organise trainings, seminars and information campaigns for students and teachers on academic integrity, its importance and the consequences of violations.

– Use of software. Systems for checking texts for plagiarism are actively used, which is an important tool for preventing and detecting dishonest practices.

– Quality assurance models. Academic integrity is integrated into internal quality assurance systems, which involves regular monitoring and evaluation of compliance with relevant standards.

At the institutional level, the principles of academic integrity are reflected in a number of key documents that regulate the activities of higher education institutions. These include the charter, collective agreement, internal (labour) regulations, code of academic integrity and corporate ethics, and the university development strategy (programme).

At the systemic level, the principles of academic integrity are enshrined in national legislation and international agreements, creating a legal and regulatory framework for their functioning. Many European countries have implemented provisions on academic integrity in their laws on education and science. For Example, in Ukraine, this is the principle of academic integrity enshrined in the Law of Ukraine "On Education" of 2017, which provides for liability for its violation. Within the Bologna Process (European Higher Education Area – EHEA), academic integrity is recognised as a key element of quality assurance and mutual recognition of diplomas. The Bologna Process documents, such as the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG), directly or indirectly require compliance with the principles of integrity. Numerous recommendations and reports from the Council of Europe and the European Union (e.g., the European Code of Conduct for Research Integrity) are aimed at harmonising approaches to academic integrity and combating dishonesty in the Member States.

These systemic measures create a unified legal framework that allows for the formation of a new culture of rejection of dishonesty in the academic environment.

European networks and associations play a key role in coordinating efforts, sharing experiences and developing common standards of academic integrity. For example, the European Network of Academic Integrity (ENAI), founded in 2017, is a leading organisation that brings together experts, researchers and practitioners in the field of academic integrity. It conducts research, organises conferences, workshops, and develops guidelines and tools for educational institutions. Their Guidelines for Developing Effective Academic Integrity Policies are an important resource for European universities. The European University Association (EUA) is actively working to improve the quality of higher education, and academic integrity is an integral part of its agenda. The EUA conducts research, publishes reports and organises events aimed at strengthening integrity in European universities. The European Higher Education Quality Assurance Agency (ENQA), as the main network of quality assurance agencies, integrates academic integrity requirements into its accreditation standards and procedures. The establishment of a working group on academic integrity in 2020 underlines its importance for the external quality assurance system. The Council of Europe actively cooperates with universities and educational institutions to develop recommendations and programmes aimed at promoting integrity, including the "Compendium of Best Practices for Promoting Academic Integrity during Covid-19" (2021).

These organisations contribute to a common understanding and approach to academic integrity across Europe. In European universities, academic integrity is seen as an integral part of the quality of the educational process. This approach is enshrined in the Bucharest Declaration of Ethical Values and Principles for Higher Education in the European Region, adopted in September 2004 at an international conference in Bucharest. In the Values and Principles section of the Declaration, the importance of academic ethics, culture and community is clearly outlined, and the role of academic integrity is emphasised in such aspects as teaching and learning, democratic and ethical leadership and governance, research based on academic integrity and social responsibility (*Dzhurylo, 2022*).

The Paris Communiqué of 25 May 2018 emphasises the fundamental importance of academic freedom and integrity, institutional autonomy, as well as student and staff participation in the governance of higher education and social responsibility for it. These values are the foundation of the European Higher Education Area (EHEA).

As these principles have been challenged in some countries in recent years, European Ministers are strongly committed to promoting and defending them across the entire EHEA through intensive political dialogue and cooperation.

Given the long experience of combating dishonesty, European universities justifiably qualify it as a significant threat to academic security. This leads to the development and implementation of institutional regulations, including systems of penalties and sanctions. The vast majority of European higher education institutions operate on the basis of their own Codes of Ethics, which consolidate the principles of responsibility, competitiveness, public service, ethical behaviour, law-abidingness, support for international cooperation and environmental respect. The current trends in the development of academic integrity in the European context are characterised by the influence of globalisation, the integration of professional ethics and deontology into the educational process, and increased informatisation.

4. Conclusions

The modern educational process should be based on the principles of honesty, responsibility, transparency, respect and ethics, while integrating innovative technologies and advanced techniques. Academic staff, researchers and teachers, as carriers of academic culture, are obliged to comply with the requirements of academic integrity in their professional activities. This includes: mandatory references to sources when using other people's ideas, developments, statements or information; compliance with the legislation on copyright and related rights; provision of reliable information on research methods and results, sources used and own pedagogical (research, teaching, creative) activities; maintaining a research protocol; monitoring compliance with academic integrity by students; and objective assessment of learning outcomes. Academic integrity is not just a set of rules, but a fundamental value guide underlying the quality of higher education in Europe. It is a prerequisite for building trust in educational qualifications, the reliability of scientific research, and ensuring sustainable development of society. In the context of rapid digitalisation and globalisation, the importance of academic integrity only increases, as it is a guarantee of the authenticity of knowledge and professional competence of graduates.

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INNOVATION, WORK, SOCIETY

THE MORAL AND ETHICAL DIMENSION OF THE EUROPE
AN CONVENTION ON THE PROTECTION OF HUMAN RIGHTS
AND FUNDAMENTAL FREEDOMS**Yuriy Bahriy**

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Summary

The article highlights the problem of the moral and ethical dimension of the European Convention on Human Rights and Fundamental Freedoms. It emphasizes that for modern humanity, in the context of the attack of global dictatorships on the democratic world, it is very important to preserve and effectively utilize those legal acts that have become expressions of international legal standards, as they possess a profound humanitarian moral and legal significance. One of such international acts is the ECHR. This is an international legal act that embodies the universal humanistic experience. It is drafted in the framework of the natural law approach, which combines law with the spiritual culture of humanity, morality, ethics, religion, and God. The convention enshrines the principles of natural law, which, as distinctive programmatic guidelines for legislative activity, direct it towards a humanistic approach, orienting it towards the affirmation and protection of essential aspects of human existence and natural human rights. These principles, enshrining universal values and meanings, are intended to protect individuals and their rights from the arbitrariness of state power.

The signatory states of the Convention are obliged to adhere to these legal standards in dealing with human beings. These principles, traditions, customs, values, meanings, etc., embody the fundamental principles of human existence. They concentrate everything that is universal, humanistic, and essential for people to fully develop and improve; without them, human existence is partial, incomplete, and distorted, which is why violating them is unacceptable. Each article of the Convention is filled with deep moral and ethical content. Each article, without exaggeration, embodies legal morality.

Ukraine, having signed the Convention in 1997, undertook the obligation to implement its provisions into national legislation and to align legal practices with the legal standards enshrined in the Convention. Legal reform in modern Ukraine is aimed at transforming the legal sphere into a humanitarian one, filled with moral and legal content, thus overcoming the bankrupt legal reality.

Key words: European law, international legal standards, principles of law, natural law, morality, moral values and principles, universal values, norms of international morality, jusnaturalism, legal reform.

DOI <https://doi.org/10.23856/7014>

1. Introduction

The modern democratic world is facing a powerful onslaught from global dictatorships, which means that human rights are under significant threat. Each dictatorship primarily attacks individual human rights, which, in turn, constitute a threat to it. It is currently very important to preserve and protect the effective mechanism for the protection of human rights that has developed in the European legal space over the last half a century. One of the important components of this mechanism is the European Convention on Human Rights (ECHR), which emerged as a result of the international community's reflection on the bitter experience of the brutal onslaught of European dictatorships in the first half of the 20th century on human rights. The ECHR belongs to those legal acts that can, without exaggeration, be considered an outstanding spiritual and cultural achievement, the culmination of the legal accomplishments of the European meta-ethnos. Jurists rightly analyze the ECHR as a source of national law, as the embodiment of legal standards, as a tool for the protection of violated human rights (*Andriychuk, O. 2007*), (*Paliuk, V. 2004*), (*Zaitsev, Yu. 2004*), (*Bordun-Komar, N. 2021*), (*Bratasyuk, V. 2015*), (*Kaplina, O. 2007*), (*Lazovsky, A. 2019*). However, in addition to this, this legal act is an international document that demonstrates the unity of morality and law, certifying their inseparability, interdependence, and mutual necessity. This legal act, as a specific constitution of human rights of the European meta-ethnos in the application of the European Court of Human Rights, has become an effective mechanism for restoring violated justice and human rights.

2. The European Convention on Human Rights and Fundamental Freedoms as an embodiment of universal human spiritual experience

The ECHR as an international legal act in a concentrated form is the embodiment and expression of law as a universal, human, supranational phenomenon. Such an interpretation is possible only within the framework of the natural law approach, which does not reduce law to the "letter of the law," but thinks of it as inseparable from the human spiritual and cultural dimension, considering it as a specific quintessence of universal human values. Such an interpretation of the ECHR is very important for modern Ukraine, which is slowly overcoming the legalistic approach to law and to which it is currently very important to infuse legal reform with a moral-legal content. Jusnaturalism represents a special way of philosophical thinking aimed at justifying the moral nature of legal provisions, the sources of which are the ideals and principles of natural law (*Bachynin, V. 2002*), (*Bratasyuk, M. 2014*).

How did the very idea of creating such a specific 'international code of human rights' (*Paliuk V. 2004*), (*Bilas, Yu. 2011*) for the legislative consolidation of fundamental human rights at the intergovernmental level come about? To answer this question, one must refer to significant events of the first half of the 20th century, namely: the strengthening of the role of the USA in international politics after World War I, its horrific consequences for people, the escalation of European dictatorships during the interwar period, and particularly the scale of the assault on human rights by German Nazism and its catastrophic consequences for Europeans during World War II. All of this together showed how vulnerable a person can be in the face of total violence from state power, which led to the need for the formation of a new world order and the creation of an effective mechanism for the protection of human rights. The activity of states in consolidating human rights, the individual was intensified by a number of states in the first half of the 20th century. A number of international legal acts emerge, in 1950 – the Convention for the Protection of Human Rights and Fundamental Freedoms (*Bilas, Yu. 2011*). Alongside this,

there emerged a belief that mere recognition of human rights is insufficient for their protection, and that a more effective mechanism is necessary – and Europeans create the European Court of Human Rights.

Legal scholars believe that it is obvious that the foundation of the entire European construction of human and civil rights is the "natural law doctrine with the idea of the existence of a certain set of fundamental rights and freedoms independent of society and the state" (Bykov, O. 2018), (Bordun-Komar, N. 2021), (Bratasyuk M. 2014). As we mentioned earlier, the natural-law approach contains a powerful charge of humanism. This doctrine, which began to take shape in antiquity and became a European legal tradition, recognizes natural human rights as inherent to human existence and therefore inalienable. Article 2 of the French Declaration of the Rights of Man and of the Citizen of 1789 states that "the aim of any political association is the preservation of the natural and inalienable rights of man. These are liberty, property, security, and resistance to oppression" (Bilas, Yu. 2011). It is precisely due to this doctrine that in the 20th century there was a transition of natural law norms into positive legal norms, international and national state legislation.

With the establishment of the UN and the adoption of the Universal Declaration of Human Rights after World War II, for the first time in history, a list of fundamental human rights and freedoms was established that are to be protected worldwide, the legal content of these rights and freedoms was agreed upon, and the lawful cases for permissible restrictions were defined (Bordun-Komara, N. 2021), (Parashchuk, L. 2021), (Popadynek, M. 2021). Thus, the basic principles of a fundamentally new, truly legal thinking and application of law were created, in contrast to the legalistic approach that had dominated international life up to that time. Later, more than 120 countries around the world recognized the norms of the Universal Declaration at a constitutional level. The list, content, and permissible restrictions of the rights and freedoms contained in it have transformed into universally recognized customary norms of international law. Today, they are perceived as international human rights standards, the inviolability of which must be upheld by all countries that have recognized this international legal act.

International human rights standards are interpreted differently by lawyers. Among Ukrainian lawyers, there is a position that they do not amount to anything substantial; they are general ideas and provisions that should not be taken into account because they are vague, and national legislation is more effective and quite suitable for protecting human rights (Melnyk, M. 2025). According to another viewpoint, international standards are limited to legal principles, but they serve as a foundation for resolving legal issues, including the protection of human rights (Khvorystiankina, A. 2005). They are necessary in order to "organize the communal life of a legal society" (Maksimov, S. 2016). Indeed, the effective application of European law is possible through understanding the role and purpose of general principles of law. The principles of natural law, being unique program-oriented foundations of legislative activity, direct it towards a humanitarian course, focusing on the affirmation and protection of essential aspects of human existence and natural human rights. These principles very aptly concentrate the spiritual-humanitarian potential of humanity.

We are more inclined to the interpretation of international legal standards in the broad sense proposed by S. Holovaty, T. Fuley, V. Paliy, and others: legal standards are generally recognized by the international community as principles of law, traditions, customs, legal norms, categories, legal institutions, and especially legal values, etc. (Holovaty, S. 2009), (Bordun-Komar, N. 2021), (Fuley, T. 2015). International legal standards are not artificially created constructs. These principles, traditions, customs, values, meanings, etc., embody the

fundamental bases of human existence. They concentrate everything that is universal, humanitarian, and essential, without which people cannot fully develop, improve, and without which human existence is partial, incomplete, and distorted.

European law is not a static phenomenon, but on the contrary – it is a truly 'living', dynamic, flexible entity. It strives to 'keep up' with life, exists in constant development, and improves through interaction with the national law of the EU member states (*Zaytsev, Yu. 2004*), (*Bilas, Yu. 2011*), (*Popadynec M. 2021*), (*Bratasyuk, V. 2015*).

In the Treaty on European Union, paragraph 3 of the preamble and paragraph 1 of Article 6 enumerate the main principles of liberty, democracy, the rule of law, respect for human rights, and fundamental freedoms (*Treaty on European Union*). Among these principles, the principle of the inalienability of natural human rights holds an important place, as their realization is the fulfillment of human needs, without which a full-fledged human existence is simply impossible (*Bratasyuk, M. 2014*).

Ukrainian legal experts emphasize that the European Convention on Human Rights and Fundamental Freedoms establishes the most successful system of international law principles for the protection of human rights in the world, and establishes one of the most developed forms of international legal procedure (*Holovaty, S. 2006, Kozyubra, M. 2005*). The Convention is a "living" document that must be interpreted "in light of the conditions of today," and the unity of methodological approaches based on the precedential practice of the Court, combined with a diverse and multifaceted toolkit for assessing the circumstances of the case and the positions of the parties, allows for the creation of what is called "living" law of the Convention" (*Bilas, Yu. 2011*), (*Zaytsev, Yu. 2004*). It is unfortunate that humanity had to endure two world wars to realize the necessity of forming such an effective legal mechanism for protecting human rights from the arbitrariness of power.

3. The Moral and Ethical Content of the ECHR

It was mentioned above that international human rights standards can only be adequately interpreted within the framework of the natural law doctrine, which views law as a spiritual and cultural phenomenon, a form of existence of the universal human spiritual experience. This legal doctrine, in contrast to legalism, perceives law as inseparable from such an organic spiritual and cultural regulator of social relations as morality, its principles and values, ethics, religious norms, etc. The principles of law are based on values; law itself is a form of being of universal human values. It is these values, according to a number of legal scholars, that are the primary source of legal standards and norms (*Bilas, Yu. 2011*), (*Bordun-Komor, N. 2021*), (*Shevtsova, A. 2024*). Scientists note that, since there is no clear list of standards and principles of human rights, and their content is expressed in the process of implementing European justice, this also reflects the jusnaturalist nature of European standards.

In this context, it would be appropriate to mention the well-known interpretation of law by the Constitutional Court of Ukraine, which in its Decision of November 2, 2004, stated that law cannot be reduced solely to legislative norms, as they may contradict fairness. It includes legal ideology, in particular the idea of justice, traditions and customs legitimized by society, principles and values of morality, etc. (*Decision of the Constitutional Court of Ukraine, 2004*). In this interpretation of law, the Constitutional Court of Ukraine took the positions of the natural law doctrine, overcoming the legalist doctrine that dominated in the legal sphere of Ukraine at that time. By the way, this interpretation of law was criticized by representatives of the legalist doctrine, who called it romantic rather than legal and scientific.

However, this decision of the Constitutional Court of Ukraine dated November 2, 2004, gave an additional impetus to Ukrainian legal scholars in overcoming the bankrupt legalistic worldview and thinking, which, as is known, severed the law from spirituality and culture, from morality, religion, humanity, and God. They perceived law as a purely authoritative-political phenomenon, a system of universally binding behavioral rules established by authority and protected by it from violations. The 'letter of the law,' embodying the will of power, was considered in legalism as a higher value alongside humans, universal human values, justice, God, and so forth. It is clear that such repressive thinking is incompatible with democratic principles and values, which is why changing it to humanitarian thinking is a necessity for societies that are on the path to building democracy. Contemporary Ukraine is making this shift, although it is difficult and not as fast as it should be.

Despite all the differences between law and morality as regulators of social relations, it is worth emphasizing that they are united by a common ground – namely, universal human values and meanings. Values such as the person, their life, dignity, honor, freedom, natural rights, justice, equality, their equal scale for legal subjects, good faith, compassion, humane treatment of all living things, the common good, etc. – these are moral-legal values, common to both morality and law. In general, morality is a fundamental basis for making legal decisions, for the existence of law. The experience of totalitarianism, whether German or Moscow, proves that if universal human morality is destroyed, law suffocates; it has no foundation for its existence.

International human rights standards, being an expression of universal human values and ideals, embody a new form of humanism, in contrast to anthropocentric humanism, universal, planetary humanism, as it is aimed at protecting not only the individual and their rights but being as such (*Bordun-Komar, N. 2021*).

Important international acts are filled with moral content, which enshrine and reveal the moral principle of respect for the individual by the state. At the same time, this principle is a principle of law. Human rights and freedoms are a systemic phenomenon, enshrined in the Vienna Declaration and the Programme of Action adopted at the World Conference on Human Rights in 1993. These documents emphasize: 'All human rights are universal, indivisible, interdependent, and interrelated.' Furthermore, they emphasize the fundamental requirements regarding the state's attitude towards human rights: 'The international community must approach human rights globally, on a fair and equal basis, with the same approach and attention.' /.../ States, regardless of their political, economic and cultural systems, are obliged to promote and protect all human rights and fundamental freedoms" (*Vienna Declaration, Programme of Action, 1993*). In these lines, there is a deep moral and ethical subtext, conveying an attitude toward a person as a special value. An international standard such as the principle of respect for human rights, while being a moral principle, is clearly articulated in the Statute of the Council of Europe (*Statute of the Council of Europe, 1949*).

The EU Charter of Fundamental Rights embodies the mega principle of the rule of law, which is a concentrated expression of legal standards. Legal practice based on principles other than the rule of law cannot be correct, just, humane, or objective, scholars rightly emphasize. We would only add that it must also withstand the test of morality. The new version of Article 8 of the Treaty on European Union enshrines an element of European human rights standards: the principle of equality for all subjects of law. (*Treaty on European Union*). This principle expresses respect for the dignity of all subjects of law; being legal, it is also moral.

N. Bordon-Komar (2021) rightly emphasizes that European standards of law, human rights, and fundamental freedoms, once recognized and implemented in practice, gain the force

of norms of international morality and international law, becoming substantively expanded and deepened, which is also asserted by O. Lohvynenko, V. Kampo, V. Bratasyuk and others.

These rights and freedoms must be respected by state institutions and their officials; the rights and freedoms enshrined in the ECHR are universal in nature, guaranteed to all persons under the jurisdiction of the participating states according to the principle of legal equality, including stateless individuals or citizens of other states; the ECHR affirms the principle of non-discrimination regarding the rights and freedoms it enshrines; restrictions apply only for purposes provided for by the Convention.

Currently, Ukrainians are suffering from total violence perpetrated by Putin's Russia. This is not only illegal, it is immoral. The ECHR prohibits the suspension of fundamental rights and freedoms such as: the right to life, the prohibition of torture, slavery or servitude, as well as the retroactive effect of the law (no punishment without law) in the event of war or a state of emergency. The Convention establishes the individual's right to effective legal remedies in national instances.

The ECHR guarantees a number of rights, each of its articles has a moral content, protecting moral principles and values. Article 2 protects every person from deprivation of life – this right is guaranteed to everyone, without any discrimination. Article 3 of the Convention establishes the prohibition of torture, as well as inhuman or degrading treatment or punishment, and protects the physical integrity of the individual; Article 4 of the Convention prohibits slavery and servitude, forced and compulsory labor, including in prisons. The right to liberty and personal security, which reflects the level of democratic development, is established by Article 5 of the Convention. This is the right of an individual not to be subjected to arbitrary deprivation of liberty (detained, arrested, imprisoned, or taken into custody), along with specific guarantees for a person deprived of liberty. Article 6 of the Convention guarantees everyone the right to a fair and public hearing in determining their civil rights and obligations or in the course of any criminal charge against them. As we can see, each article demonstrates a deep respect for the human 'self', human dignity and honor, and for inalienable human rights, so the moral dimension of the content of these articles is beyond doubt.

Article 18 of the ECHR prohibits restrictions by the signatory states on human rights beyond the limits and purposes specified by the ECHR. It is unacceptable to impose unlimited, excessive, and unfounded restrictions on human rights, which sounds very moral. Article 7 of the Convention protects a person from punishment for committing a criminal offense that was not classified as a crime at the legislative level at the time of its commission. Article 8 of the Convention establishes the principle of respect for private and family life, home, and correspondence secrecy. The European Court of Human Rights interprets this right in light of the provision set out in paragraph 2 of Article 8, which states that 'state authorities may not interfere with the exercise of this right'.

More examples can be given from the Convention that demonstrate the unity of law and morality; however, it seems that the ones presented are sufficient to leave no doubt about this unity.

4. The significance of European human rights standards for the legal reform of modern Ukraine

Ukraine, having chosen the path of integration into the European legal space, must accordingly reform its legal sphere. This reform cannot be limited to just changing legislation, as our reformers initially thought. As a member of the Council of Europe, Ukraine is obliged to align its laws and practices with European standards, particularly in line with the provisions

of the Convention on the Protection of Human Rights and Fundamental Freedoms (*Law of Ukraine dated February 23, 2006 No. 3477-IV, as amended on December 2, 2012*).

Ukraine inherited a heavy legacy in the legal sphere after gaining independence – a legal reality devoid of moral-legal content, the dominance of the 'letter of the law' in all elements of this reality. This meant that there was no place for a person in this pseudo-legal reality at all. This was the essence of totalitarianism – the total lack of rights for the people, the elevation of state power over them, the humiliation of human dignity, the denial of natural non-alienable human rights, and so on. This meant not only humiliation, negation of rights, but also the denial and undermining of morality, universal values, and principles that are the fundamental foundations of human existence. Choosing the democratic path of development meant for Ukrainians the inevitability of conducting deep, total legal reform.

The essence of legal reform in modern Ukraine should lie in filling legal life with the spirit of law, with a humanistic and moral content. Reform should consist not only of formal, superficial changes but also of profound substantive changes. This essence of reform is well articulated by M. Kozyubra, who emphasized: "...the limitation of discretionary powers, that is, the decision-making by state bodies and officials at their own discretion, as a component of the rule of law and the state of law, requires, first of all, that the activities of both the state as a whole and its bodies, including the legislative one, be subordinate to the affirmation and assurance of human rights and freedoms... Inalienable and inalienable rights and freedoms of a person stand in the way of arbitrariness not only of the executive and judicial authorities but also of parliament, limiting its freedom of discretion in enacting laws (*Kozyubra, M. 2005*). Subjects of law enforcement should evaluate the situation not so much by its formal compliance with the law, the will of the state, but by its compliance with human morality and human individuality. We resonate with the position of R. Zipelius, who emphasizes that "today the possibility of not applying the law that does not fulfill its purpose and clearly contradicts existing moral requirements, natural law, and common sense is recognized, since law must be an instrument for establishing justice" (*Zippelius, R., 2004*).

As mentioned above, the European Convention on Human Rights has a powerful moral and legal significance, embodying the standards of law that it represents. The implementation of its provisions in practical legal fields, in legislative activities, and in the sphere of justice is capable of ensuring proper respect for Ukrainians by the state, a real opportunity to exercise their inalienable rights, and to receive corresponding protection for them (*Tertishnyk, V. 2017*). (*Shevtcova, A. 2024*).

The execution of this complex task requires the state and society to be adequately prepared in terms of worldview and thinking – this applies to both state officials and citizens, whose legal awareness must transform into legal consciousness; in political terms – as long as the oligarchic regime exists, real legal transformations are unlikely to occur. There is simply a need for a strong will, courage, and civic maturity of the law enforcement subjects to apply the practice of the European Court of Human Rights and European legal standards. This real work will yield the appropriate results – Ukraine will emerge as a rule of law.

5. Conclusions

In summary, the following conclusions can be drawn:

– law cannot exist outside of moral principles. The unity and interdependence of morality and law cannot be questioned. Morality is a fundamental basis of human existence and legal decisions;

– despite all the differences, which are many, morality and law share common essential characteristics – these are common universal human values and meanings, enshrined in moral-legal principles; – European legal standards, enshrined in the European Convention on Human Rights and Fundamental Freedoms, have a deeply humanitarian nature.

– European standards of law, enshrined in the European Convention for the Protection of Human Rights and Fundamental Freedoms, have a profoundly humanistic moral and legal content. They are a remarkable result of the universal spiritual and cultural experience in the field of law; therefore, their practical application will result in the creation of a humanistic legal space (*Law of Ukraine of 23.02.2006 No. 3477-IV (as amended on 02.12.2012)*).

– the essence of legal reform in modern Ukraine should lie in the transformation of the legal sphere towards its humanization, filling it with moral-legal content, which can be particularly facilitated by the application of European legal standards in legal practice and legislative activities. It is precisely through the substantive implementation of legal standards that are filled with universal moral content that the legal reality of modern Ukraine should change, rather than superficially and formally, as is unfortunately the case today.

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THE FUNCTIONING OF THE HUMAN RIGHTS MECHANISM DURING THE WAR IN UKRAINE

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Summary

The article is devoted to identifying the features of the functioning of the mechanism for ensuring human rights during the war in Ukraine. The author determined that the main burden for ensuring human rights in Ukraine during the war fell on the Head of State, Parliament, Government, courts, the Constitutional Court of Ukraine, the Ombudsman, the Prosecutor's Office, law enforcement agencies, local government bodies, local state administrations. At the same time, in connection with the war, in addition to the powers of peacetime, the above-mentioned public authorities experienced an additional burden due to the consequences of military actions. In addition to public authorities in Ukraine, there is a bar association and public organizations and political parties that also participate in the human rights process, their activities must be legal, timely and effective.

One of the main problems of directly ensuring human and citizen rights and protecting and restoring violated rights lies not only in the area of gaps in legal regulation, but also in the area of insufficient material and human resources to ensure the implementation of relevant activities by public authorities.

As a result of the introduction of martial law in Ukraine, temporarily, for the period of the legal regime of martial law, the possibility of restricting such rights and freedoms of a person and citizen has been introduced: the right to inviolability of the home, the secrecy of correspondence, the right to privacy, freedom of movement, the right to freedom of thought and speech, the right of citizens to participate in the management of state affairs, to elect and be elected, the right to peaceful assembly, the right to property, the right to entrepreneurial activity, the right to work, the right to strike, the right to education. All other rights and freedoms guaranteed by the Fundamental Law of Ukraine must be fully ensured.

To fulfill this constitutional duty of the state, public authorities must simplify bureaucratic procedures, optimize document flow processes, apply an individual approach and the principle of the rule of law.

Key words: martial law, constitutional duty, public authorities, ensuring human rights, digitalization process, full-scale war.

DOI <https://doi.org/10.23856/7015>

1. Introduction

Ukraine is currently going through a terrible stage in its recent history. The full-scale war that began in February 2022 affected not only every citizen of Ukraine, but also all people around the world. The martial law introduced in this regard has introduced a special legal regime, which, although it provides for the possibility of restricting human rights, must still ensure compliance with the rule of law and the possibility of exercising the rights and freedoms

of man and citizen. This article is devoted to certain aspects of the functioning of the mechanism for ensuring human rights during the war in Ukraine.

The purpose of this study is to identify the features of the functioning of the human rights mechanism during the war in Ukraine, by performing the following tasks:

- to determine the current state of the functioning of the human rights mechanism in Ukraine;
- to study the legislative novelties regarding the functioning of the human rights mechanism in Ukraine;
- to identify problematic aspects of the functioning of the human rights mechanism in Ukraine;
- to suggest ways to improve the functioning of the human rights mechanism during the war in Ukraine.

The methodological basis of the study is a set of modern methods of scientific knowledge, the application of which is based on systemic and dialectical approaches. Which made it possible to investigate certain aspects of the functioning of the mechanism for ensuring human rights during the war in Ukraine, by clarifying the components of this mechanism, the features of the legal regime of martial law, which affects its functioning.

The article uses the following methods of scientific knowledge: logical-semantic – for analysis and deepening the conceptual apparatus; classification and grouping – for systematization of scientific views on the functioning of the mechanism for ensuring human rights; ways of improvement the functioning of the mechanism for ensuring human rights during the war in Ukraine are made using the method of legal modeling.

2. Constitutional and legal bases Providing Human Rights during the War

The painful and tragic stage in the history of Ukraine, which we are experiencing now, applies to everyone and touches all spheres of public life. The issues of functioning of the mechanism of protection of human rights are no less acute, and accordingly, solving problems and challenges in the field of human rights should be one of the primary tasks of the state. Because no circumstances release the state from the duties taken by it, in accordance with Art. 3 of the Constitution of Ukraine, Part 2 of which stipulates that "human rights and freedoms and their guarantees determine the content and orientation of the state. The state is responsible for its actions to the person. The assertion and protection of human rights and freedoms is the main duty of the state" (*Konstytutsiia Ukrainy, 1996*).

Full-scale invasion of the territory of Ukraine, and accordingly the threat of national security led to the need to introduce on February 24, 2022 by the Presidential Decree № 64/2022 of martial law throughout Ukraine in order to direct the activities of the bodies of protection and defense of Ukraine for a defense nature in order to repeat the aggressive actions of the Russian Federation (*Ukaz Prezydenta Ukrainy, 2022*).

In accordance with paragraph 3 of this Decree, in connection with the introduction of martial law in Ukraine temporarily, during the period of action of the legal regime of martial law, the constitutional rights and freedoms of man and citizen, provided by Articles 30–34, 38, 39, 41–44, 53 of the Constitution of Ukraine. We are talking about the right to inviolability of the home, the secrecy of correspondence, the right to privacy, freedom of movement, the right to freedom of thought and speech, the right of citizens to participate in the management of state affairs, to elect and be elected, the right to peaceful assembly, the right to property, the right to entrepreneurial activity, the right to work, the right to strike, the right to education (*Ukaz Prezydenta Ukrainy, 2022*).

However, Art. 64 of the Constitution of Ukraine, establishes that in the conditions of martial law or emergency, certain restrictions of rights and freedoms may be established, indicating the term of validity of these restrictions. In the context of martial law or emergency, certain restrictions of rights and freedoms may be established, indicating the duration of these restrictions. The rights and freedoms provided for in Articles 24, 25, 27, 28, 29, 40, 47, 51, 52, 55, 56, 57, 58, 59, 60, 61, 62, 63 of this Constitution (*Konstytutsiia Ukrainy, 1996*) cannot be restricted (*Konstytutsiia Ukrainy, 1996*).

Doroshenko V. analyzing the legal mechanisms for the protection of human rights during the war, stays that the legal system includes both national and international forms and ways of protection of human rights during the war, each of which can be used by persons who have been violated by their rights and freedoms in wartime. In order to record all cases of human rights violations in the territory of Ukraine, public authorities, in order to collect evidence for each criminal and other offense, which was committed through the armed aggression of the Russian Federation, created a separate intergovernmental platform for the formation of the evidence base of criminal acts of the aggressor state. These innovations will facilitate the formalization of citizens' appeals to protect their violated rights during the war, which is correlated with the European integrational orientation of Ukraine (*Doroshenko, 2023: 325*).

Madalitsa V. having examined the mechanism of protection of social human rights in the context of martial law, it notes that the realization of the social function of the state and protection of human rights in the conditions of war is an extremely difficult task that requires innovative approaches, coordinated work of state bodies and active international cooperation. Successful integration of digital technologies, increased cyber security, improving legal regulation and improving the efficiency of the institutional system are key elements of improvement. In addition, the author notes that increasing the digital literacy of the population is an integral part of the prospects for improving social protection mechanisms. Teaching of citizens, including elderly and socially vulnerable groups, the use of modern technologies will help to overcome digital inequality and provide equal access to social services (*Madalyts, 2025: 46*). We can only partially agree with this position, because if a person wants to communicate with public authorities using information technologies, the state should provide him/her with this opportunity. However, if a person wants to communicate in other forms (telephone, correspondence, personal reception), their functioning should also be ensured.

It is believed that the state in the field of human rights protection during the war should fulfill the following functions: to provide at least minimal conditions for citizens to preserve their sense of human dignity; to create conditions for developing mutual respect not only between citizens but also between citizens and the state; not to take discriminatory measures, because the physical, political or financial superiority negates the sense of human dignity; to form a tolerant attitude towards other citizens, despite some differences – physical, mental, racial, gender; to develop a sense of responsibility both for the state that must fulfill its functions and the citizens themselves, who should be aware of their responsibility for their actions and choice (*Demchenko, 2023: 147*).

We can only partially agree with this position, in the aspect that the right to respect for the honor and dignity of a person should be ensured in the conditions of war, as well as the prohibition of discrimination. But we stand in the position that the state, even more so in war, should ensure the rights and freedoms of man and citizen in full, given only constitutional restrictions on rights, if they are introduced in accordance with the Basic Law.

Moza A., Moza V. believe that the strengthening of the protection of the rights of the person is obvious, especially in such areas, where the control of legality alone is not enough.

The authors believe that the improvement of the mechanism should be based on the creation of a concept that will first of all include the following provisions: consolidation of a high degree of independence of law – making processes and bodies that implement law-making and human rights activities in the system of state authorities of Ukraine; reducing the formalization of procedures for consideration of complaints granted from citizens to violate their rights and freedoms, the restriction of which is impossible even in the conditions of martial law and contradicts the provisions of the Constitution of Ukraine; free assistance, including information and explanatory services, continuous legal support and support, as well as meeting other needs of citizens in the context of law-making and human rights activities (*Motsa A., Motsa V., 2022: 288*).

This position, in our opinion, is justified, the mechanism of human rights must be transformed in connection with the war and the challenges it brought. Considering the fact, that cases of human rights violations have increased significantly.

3. Subjective composition of the mechanism of human rights in Ukraine

Regarding the functioning of the mechanism for ensuring human rights during the war in Ukraine, the main criterion for effectiveness is undoubtedly the activity of the relevant public authorities. It is known that the mechanism for ensuring human rights includes the President of Ukraine, the Verkhovna Rada of Ukraine, the Cabinet of Ministers of Ukraine, courts, the Constitutional Court of Ukraine, the Commissioner for Human Rights of the Verkhovna Rada, the Prosecutor's Office, law enforcement agencies, local self-government bodies, local state administrations. The listed entities, in accordance with the powers granted to them, must ensure human rights. In addition to public authorities, there is a bar association in Ukraine, as well as public organizations and political parties, which also participate in the human rights protection process.

Today, it is already possible to state the fact that the war has caused new challenges in the field of ensuring human rights of a systemic nature. Thus, analyzing the results of the work of the Ombudsman (*Shchorichni ta spetsialni dopovidi, 2024*), we can talk about the following problems that have arisen in the field of ensuring human rights as a result of the full-scale invasion: access to education for children and youth from the temporarily occupied territories of Ukraine, protection of the rights of civilians deprived of personal freedom as a result of armed aggression against Ukraine, missing under special circumstances, and members of their families, prisoners of war and illegally detained civilians, observance of the rights of national minorities (communities) and indigenous peoples in the context of the armed aggression of the Russian Federation against Ukraine.

4. The role of government in the functioning of the human rights mechanism

In accordance with part 2 of Article 116 of the Constitution of Ukraine, the Cabinet of Ministers of Ukraine shall take measures to ensure the rights and freedoms of man and citizen (*Konstytutsiia Ukrainy, 1996*).

This provision is duplicated in part 2, Part 1, Article 2 of the Law of Ukraine “On the Cabinet of Ministers of Ukraine”, as one of the main tasks of the Government, with the addition that the Cabinet of Ministers of Ukraine must create favorable conditions for the free and comprehensive development of the individual (*Shchorichni ta spetsialni dopovidi, 2024*).

“To uphold the rights and freedoms of man and citizen” are sworn in, including newly elected members of the Government (Article 10 of this Law), Article 19 includes “resolving

issues of ensuring the rights and freedoms of man and citizen” within the competence of the Government. Article 20 defines in Clause 3, Part 1 areas of the Government's authority, such as legal policy, legality, ensuring the rights and freedoms of man and citizen, in which, in particular, the Cabinet of Ministers of Ukraine takes measures to protect the rights and freedoms, dignity, life and health of man and citizen from unlawful encroachments, protect property and public order, ensure fire safety, fight against crime, prevent and counteract corruption (*Shchorichni ta spetsialni dopovidi*, 2024). The Government also directs and coordinates the work of central government bodies to observe the rights and freedoms of man and citizen (Article 21). And Article 32 defines the basis for the interaction of the Cabinet of Ministers of Ukraine with the Ombudsman.

As for the implementation of the relevant provisions, the digitalization process plays an important role in wartime conditions, so on the official website of the Cabinet of Ministers of Ukraine, the “Services” section redirects to “State Services Online”, that is, “Actions”. The menu of relevant services, in particular, includes issues that arose and remain relevant precisely in connection with the war, namely: protection of citizens during the war – all about state assistance for displaced persons and victims of a full-scale war; social protection – information on the provision of social assistance to socially unprotected categories of citizens, pension services, guardianship and care; war veterans – all about services for participants in hostilities, persons with disabilities as a result of the war, war participants, victims of the Revolution of Dignity and family members of deceased (deceased) war veterans, Defenders of Ukraine (*Hid z derzhavnykh posluh*, 2025).

One of the main problems of directly ensuring human and civil rights and protecting and restoring violated rights lies not only in the area of gaps in legal regulation, but also in the area of insufficient material and human resources to ensure the implementation of relevant activities by public authorities.

For example, on February 23, 2023, the Verkhovna Rada of Ukraine adopted Law № 2923 “On Compensation for Damage and Destruction of Certain Categories of Real Estate Objects as a Result of Hostilities, Terrorist Acts, and Sabotage Caused by Armed Aggression of the Russian Federation against Ukraine, and the State Register of Property Damaged and Destroyed as a Result of Hostilities, Terrorist Acts, and Sabotage Caused by Armed Aggression of the Russian Federation against Ukraine”, which determined the legal and organizational principles for providing compensation for damage and destruction of certain categories of real estate objects. Accordingly, the mechanism became operational in May 2023. In the same year, 2.8 thousand Ukrainians purchased new homes for housing certificates, which they received as compensation for destroyed housing (*Krasnenko*, 2025). At the same time, as of December 2024, the Ombudsman's office noted that during the full-scale war of Russia against Ukraine, at least 3.5 million people lost their homes (*Andalitska*, 2024). As of May 12, 2025, according to official information from the Ministry of Community and Territorial Development, over 100 thousand Ukrainians were able to receive funds for repairs or certificates for the purchase of new housing during the 2 years of the relevant program, e-Recovery. Of these, 9.6 thousand have already purchased new homes. More than 93 thousand were granted compensation for the restoration of housing after damage for a total amount of 9.8 billion hryvnias. Of these, 8.9 billion hryvnias have already been transferred to applicants (*2 roky yeVidnovlennia*, 2025).

Analyzing the above figures, the following conclusions can be drawn: the e-Recovery program is working, but not even half of the people who need it have received compensation. And here, it should be noted that the program does not take into account people who lost their homes as a result of the hostilities that took place from 2014 to 2022.

5. Conclusions

The introduction of martial law on February 24, 2022 by Decree of the President of Ukraine № 64/2022 on the entire territory of Ukraine temporarily, for the period of the legal regime of martial law, introduced the possibility of restricting such rights and freedoms of a person and a citizen: such as the right to inviolability of the home, the secrecy of correspondence, the right to privacy, freedom of movement, the right to freedom of thought and speech, the right of citizens to participate in the management of state affairs, to elect and be elected, the right to peaceful assembly, the right to property, the right to entrepreneurial activity, the right to work, the right to strike, the right to education. All other rights and freedoms guaranteed by the Fundamental Law of Ukraine must be fully ensured.

The mechanism for ensuring human rights includes the President of Ukraine, the Verkhovna Rada of Ukraine, the Cabinet of Ministers of Ukraine, courts, the Constitutional Court of Ukraine, the Verkhovna Rada Commissioner for Human Rights, the Prosecutor's Office, law enforcement agencies, local self-government bodies, and local state administrations. At the same time, the war also affects the functioning of the listed entities, since in addition to their peacetime powers, they have been subjected to additional burdens caused by the war. In addition to public authorities in Ukraine, there is a bar association, public organizations, and political parties that also participate in the human rights process; their activities must be legal, timely, and effective.

Public authorities that must ensure respect for human rights and guarantee the possibility of protecting rights in wartime conditions are subject to additional burdens, and accordingly must develop ways to ensure the protection and restoration of violated rights by simplifying bureaucratic procedures, optimizing document flow processes, and applying an individual approach and the principle of the rule of law.

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STRONG LOCAL SELF-GOVERNMENT AS A LEVER TO COUNTERACT THE USURPATION OF POWER IN TRANSITIONAL DEMOCRACIES (RUSSIA AND BELARUS AS EXAMPLES)

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Summary

The article examines the problem of limiting local self-government in Russia and Belarus as one of the key factors of power usurpation. The authors analyze the constitutional and legal regulation of local self-government in both countries, paying attention to the existing mechanisms of influence of presidents and central authorities at the local level. In particular, they study the peculiarities of the formation of local self-government bodies, the scope of their powers and the real possibilities of implementing independent policy at the local level. It is emphasized that despite the formal guarantees enshrined in the Constitutions of the Russian Federation and Belarus, local self-government in these countries is largely controlled by the state authorities. This creates preconditions for the centralization of governance and a decrease in democratic control by citizens. The authors emphasize the importance of developing strong local self-government as a safeguard against the usurpation of power, supporting their position with comparative legal analysis and examples from Ukrainian legislation.

Key words: democratization, transitional democracy, transitology, centralization of power, authoritarianism.

DOI <https://doi.org/10.23856/7016>

1. Introduction

As a rule, the scientific literature studies the positive experience of foreign countries in order to implement it in domestic legislation. This also applies to issues of public administration and local self-government. At the same time, the experience of countries with an authoritarian model of building and functioning of public authorities remains virtually unexplored. First of all, we are talking about Russia and Belarus. The legislation of these countries on local self-government differs, as does the way in which local self-government was significantly weakened in order to concentrate power in the hands of individual rulers. However, it is extremely important to study the negative experience in order to prevent this from happening in Ukraine. Moreover, Ukraine is one of the transitional democracies in the post-Soviet space, where there are concrete examples of weakening the role of local self-government in order to usurp power.

The topic of mechanisms to counteract the usurpation of power in transitional democracies has already been addressed in the publication of the same name (*Boldyriev S., Linyk M., 2025*). It provided a non-exhaustive list of such mechanisms. Strong local self-government should be added to this list. The same position is shared by D. Pinchuk: “A necessary stage in the construction of a democratic, law-based social state, which Ukraine is constitutionally proclaimed to be, is the formation of viable and effective local self-government” (*Pinchuk D., 2010: 81–82*). This is a thesis that can be applied to any transitional democracy in the world. Strong local self-government obviously poses a threat to authoritarian regimes in Russia and Belarus and other countries. In these countries, local self-government is suppressed in many ways, and this study will analyze only some of them.

In general, it should be understood that the concept of strong local self-government includes many aspects: financial, logistical, organizational, institutional (the scope of powers of local governments, the way they are formed, the degree of their independence, etc.), other forms of local democracy (e.g., local referendum, self-organization bodies), and so on. This list can be used to classify the limitations of local self-government in Russia and Belarus.

2. The Constitution of the Russian Federation

The study of the status of local self-government should begin with constitutional regulation. Thus, the Constitution of the Russian Federation contains only 5 articles devoted to local self-government: Articles 12, 130–133. The articles contain mostly general (deliberative) theses that can be interpreted in different ways and, accordingly, developed differently at the level of federal legislation. Particularly noteworthy is part two of Article 130, which establishes that local self-government in Russia is exercised by citizens through referendums, elections, other forms of direct expression of will, through elected and **other local self-government bodies**. Other local self-government bodies, on the one hand, may be bodies of self-organization of the population, but on the other hand, the provision legalizes the formation of unelected bodies with an indefinite list of powers that will address issues of local importance. It is unlikely that in this case we can talk about independence and self-government. O. Batanov noted the problem back in 2015: “Russia is undergoing a dynamic process of reforming federalism and municipalism towards the formation of its centralized model, in the course of which there is a danger of crossing the line beyond which little remains of federalism and municipalism” (*Batanov O., 2015: 61–66*). The line has long been crossed.

The Basic Law of the Russian Federation does not provide for a procedure for the formation of local self-government bodies and does not list them. In contrast, the Ukrainian Constitution regulates these issues by the provisions of part three of Article 140 (“local self-government bodies: village, settlement, city councils and their executive bodies” (*Konstytutsiia Ukrainy vid 28.06.1996 r.*)) and part one of Article 141 (“the council... consists of deputies elected by the residents... on the basis of universal, equal, direct suffrage by secret ballot” (*Konstytutsiia Ukrainy vid 28.06.1996 r.*)). The Constitution of Russia contains only a provision that the population independently determines the structure of local self-government bodies (part one of Article 131), although even on this issue the local population cannot go beyond the limits established by federal law. It can be argued that the Constitution of the Russian Federation does not actually guarantee local self-government.

Moreover, after the amendments to the Constitution of Russia came into force on July 4, 2020, part one of Article 131 was supplemented by the first paragraph, which directly empowered state authorities to participate in the formation of local self-government bodies,

appointment and dismissal of local self-government officials. The appointment of local self-government officials by the state authorities contradicts not only the principles set out in the European Charter of Local Self-Government, but also the essence of local self-government in general.

The ambiguity of the provision of part two of Article 132, according to which local self-government bodies may be vested with certain state powers, is also a cause for concern. Consideration of such a possibility as a *right* of local self-government bodies or as their *obligation* is within the competence of the legislature.

3. The Constitution of Belarus

The Constitution of Belarus provides for a broader regulation of the status of local self-government, but this does not contribute to increasing its independence – on the contrary, the Basic Law contains provisions that weaken the institution of local self-government to the extent that the restrictions can only be compared to Russian legislation. The problem of centralization of power in Belarus has already been written about by scholars S. Tymofieiev – “there is a centralization of power, since the heads of local councils are also the heads of the relevant executive committees, and their candidacies must be approved by the president” (Tymofieiev S., 2015: 120–123) – and T. Tarasenko: “the Belarusian model of local government organization provides for the consolidation of the vertical subordination of executive committees of different territorial levels and the vertical subordination of councils” (Tarasenko T., 2019: 258–266). However, not only these facts weaken local self-government in the republic.

For example, the Constitution contains Chapter Five, entitled “Local government and self-government”. Local government is a term used to refer to state bodies at the local level. It is not without reason that the title of the chapter places local government before self-government: it demonstrates the priority of the distribution of power at the local level.

Article 119 of the Constitution of Belarus stipulates that the heads of local executive and administrative bodies are appointed and dismissed by the President of the Republic of Belarus or in accordance with the procedure established by him and are approved in office by the relevant local councils of deputies. The functions of local executive and administrative bodies in Belarus are performed by executive committees and local administrations of districts in cities. Committees and administrations are headed by chairmen, but in the case of committees the term “chairman” is used. Heads of executive committees are heads of local executive authorities. Heads of executive committees of the respective level operate on the territory of regions, the city of Minsk, cities of regional subordination, districts, village councils, towns, and cities of district subordination. While in Ukraine the state executive power is represented at the local level only at the regional and district levels, in Belarus it is represented at the lowest level.

This is due to the fact that Belarus, unlike Ukraine, does not have the position of head of a local council. According to Ukrainian legislation, powers at the local level are distributed between the respective council and the council chairman, who are directly elected by the population, as well as between local state administrations. In Belarus, however, the vast majority of powers, compared to local councils, are vested in the heads of executive committees (local administrations), which operate at all levels of local government.

According to Article 119 of the Constitution of Belarus, the heads of executive committees are usually appointed by the president, which greatly expands the powers of the sole authority on the ground. A positive aspect of the procedure is the need for approval of the

chairman by the relevant local council. However, this is only an illusion of mandatory consent on the part of the council, because, as will be shown below, the local council can easily be deprived of its powers if it proves to be “inconvenient” for state bodies.

Moreover, according to the Law of the Republic of Belarus “On local government and self-government in the Republic of Belarus”, the local council does not have significant powers to control the activities of the head of the executive committee. The third paragraph of part three of Article 38 is limited to the wording that “executive committees are accountable to the respective councils on issues within the competence of these councils”, but the representative body does not have categorical levers of influence over the chairman of the executive committee (for example, making a decision on dismissal or at least initiating such a procedure). The only significant controlling power of the councils is established by part three of Article 122 of the Constitution: decisions of local executive and administrative bodies that do not comply with the law are canceled by the respective councils of deputies.

Article 120 of the Basic Law of Belarus, among other things, stipulates that local councils of deputies, executive and administrative bodies shall execute decisions of higher state bodies. While in relation to executive committees, the thesis that they are directly subordinate to the decisions of state bodies is in line with the principles of building public power, in relation to representative bodies, this provision is excessive. Of course, local self-government bodies should implement decisions of state authorities on issues that do not fall within the competence of local self-government. However, this does not mean that local elected bodies are directly subordinated to the state authorities. Article 120 of the Constitution of Belarus contradicts this principle of local self-government.

Part four of Article 122 of the Basic Law stipulates that decisions of local councils of deputies that restrict or violate the rights, freedoms and legitimate interests of citizens, as well as *as in other cases provided for by law*, may be appealed in court. If the list of grounds for appealing against decisions of local self-government bodies is regulated not by specific acts, but by the entire legislation of the country, this will lead to excessive restrictions on the activities of the bodies. Moreover, the concept of legislation may be interpreted differently and include not only the Constitution and laws, but also acts of the head of state, government, departments and other authorities. The Constitution of Ukraine contains somewhat poorer but more precise provisions. For example, part two of Article 144 states that “decisions of local self-government bodies on the grounds of their non-compliance with the Constitution or laws of Ukraine shall be suspended in accordance with the procedure established by law with simultaneous appeal to the court” (*Konstytutsiia Ukrainy vid 28.06.1996 r.*). That is, it only refers to violations of the Constitution and laws, not the entire legislation.

Although the Ukrainian version is relatively correct, it can be improved. Namely, it should specify that the only grounds for canceling a decision of local self-government bodies is a violation of the Constitution. In order for the violation to be recognized in court, it is necessary to apply to a constitutional jurisdiction body.

Given that the procedure for adopting a law is more lenient compared to amending the Constitution, it is the proposed provision that will protect local self-government from the influence of the state authorities the most.

The most striking article of the Constitution of the Republic of Belarus in terms of limiting the autonomy of local self-government is Article 123. It stipulates that in case of systematic or gross violation of the requirements of the law by a local council of deputies, it may be dissolved by the Council of the Republic. Moreover, other grounds for early termination of powers of local councils of deputies are also provided for by law. In fact, obtaining a majority of seats

in the chambers of parliament allows not only to adopt any laws, including those that facilitate the usurpation of power by the President of the Republic, but also to fully control local self-government bodies. Obviously, Article 123 should be completely removed from the Constitution of Belarus in the course of democratization of public authorities. This concludes the analysis of the constitutional regulation of local self-government in Russia and Belarus.

4. Federal legislation on local self-government in Russia

Returning to the study of the status of local self-government in Russia, it is worth turning to the Federal Law of the Russian Federation “On the general principles of organization of local self-government in the Russian Federation”. Noteworthy is part two of Article 34 of the law, which “guarantees” the presence in the structure of local self-government bodies of a representative body of a municipality, the head of a municipality and a local administration (executive and administrative body of a municipality). This provision of the law is not absolute, as it allows for cases where representative bodies are not formed at all. Therefore, part two of Article 34 undermines the fundamental principles of local self-government in Russia. And not just by weakening local self-government bodies, but by calling into question their existence in principle.

The procedure for electing the head of a municipality is particularly noteworthy. Whereas in established and transitional democracies that have already implemented local government reform, the head of an administrative unit is elected directly by the local population, in Russia this is only one of the ways to elect a head. Thus, the first paragraph of the second part of Article 36 establishes that the head of a municipal entity may be elected in accordance with the law of a subject of the Russian Federation and the charter of the municipal entity:

- 1) at municipal elections
- 2) by the representative body of the municipality from among its members
- 3) by the representative body of the municipality from among the candidates nominated by the competition commission based on the results of the competition.

The latter option deserves special attention, as it gives the President of Russia the power to indirectly (but effectively) influence the process of electing the head of a local unit.

Thus, in this case, a competition commission must be formed to select candidates to be admitted to the competition at the level of the representative body of the municipality. As a general rule, the competition commission, in accordance with paragraph 4 of part 2.1 of Article 36, is formed by the representative body and the highest official of the subject of the Russian Federation — 50% of the commission, respectively.

This procedure poses at least two specific threats to the democratic system in the country. Firstly, the procedure for electing heads of municipalities involves the heads (governors) of the subjects of Russia, who, according to part one of Article 20 of the Federal Law “On general principles of organization of public power in the subjects of the Russian Federation”, “exercise control over the executive branch in the subject of the Russian Federation and determine the structure of the executive bodies of the subject of the Russian Federation”. The executive branch cannot influence the formation of representative bodies of local self-government. Secondly, the procedure for electing the heads of the subjects themselves provides for a significant role of the President of the Russian Federation, which increases his influence on local self-government.

For example, the top official of a subject of the Russian Federation is elected by citizens or members of the subject's legislative body for a five-year term. In the second case, the procedure is as follows:

1) candidates **are submitted** to the legislative body of a subject of the Russian Federation **by the President** on the proposals of political parties whose lists of candidates were admitted to the distribution of deputy mandates in the legislative body of the subject of the Russian Federation **or** on the proposals of those political parties between which mandates in the State Duma were distributed (part two of Article 23);

2) each party proposes no more than three candidates (part three Article 23);

3) the president selects three candidates from all the proposed ones and submits them (part seven of Article 23).

As in the case of Belarus, the president has enormous influence on local governments if his party wins the parliamentary elections. By the way, in the last elections of the heads of the subjects of the Russian Federation on September 8, 2024, four heads were elected according to the procedure described above, in particular in the Republic of Crimea.

Summarizing the above, the scheme of the Russian president's influence on local self-government is as follows: in Russia, the president can nominate three candidates for the post of head of a subject of the Russian Federation proposed by a pro-presidential party (which at least ideologically coincides with the president's position, but in fact is subordinate to him). The elected head of the subject forms 50% of the commission that nominates candidates for the position of head of the local entity. It turns out that the representative body of the municipal entity elects a head who is approved by the head of the subject of the Russian Federation, who is, accordingly, approved by the president.

5. Conclusions

Thus, local self-government in Russia and Belarus is severely limited in its independence and is not protected by the Basic Law. Presidents and other state bodies have enormous powers at the local level, which should be changed in the course of democratization of the state system of the countries.

First and foremost, it is necessary to vest local governments with real powers, to clearly enshrine them in the Constitution, to guarantee non-interference by the state authorities, and to introduce democratic mechanisms for the formation of representative and executive bodies at the local level. Without this, local self-government will remain only a formal construct. In today's environment, the development of strong and independent local self-government is a key factor in countering the usurpation of power and ensuring real citizen participation in local decision-making.

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THE RIGHT OF THE CHILD TO EDUCATION DURING ARMED CONFLICT

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Summary

Education is one of the most important components of every child's life. Ongoing armed conflicts complicate the process of obtaining education, if not stop it altogether. In this case, the state, represented by authorized public administration entities, should assume the function of creating possible mechanisms to ensure children's right to education during armed conflict. The purpose of the article is to analyze the mechanisms established to ensure children's right to education during the armed conflict in Ukraine. The author of the article examines the legal basis for education in Ukraine both in peacetime and wartime. The problems faced by Ukrainian children in the field of education in connection with the armed conflict are highlighted. The article considers the mechanisms introduced by authorized public administration entities to continue education during the armed conflict.

Key words: child, education, armed conflict, public administration entities.

DOI <https://doi.org/10.23856/7017>

1. Introduction

Education is one of the most important components of every child's life. The period of education and the place where it is obtained is the period of life when every child learns and receives the amount of knowledge that is necessary for the rest of his or her life, the ability to communicate with both peers and older people. Education is one of the pillars that ensures the level and quality of a child's future adult life. A continuous and uninterrupted educational process is the key to a healthy and educated future for the state.

Ongoing armed conflicts complicate the process of education, if not stop it altogether. In this case, the state, represented by authorized public administration entities, should assume the function of creating possible mechanisms to ensure children's right to education during armed conflict.

The purpose of the article is to analyze the mechanisms introduced to ensure children's right to education during the armed conflict in Ukraine.

2. Education System in Ukraine

A child is a person under the age of 18 (majority), unless, according to the law applicable to him or her, he or she acquires the rights of an adult earlier (Article 1 of the Convention on the Rights of the Child (*Convention on the Rights of the Child, 1989*), Article 1 of the Law of Ukraine "On Protection of Childhood" (*About the protection of childhood, 2001*)).

The international community, with the adoption of the Convention on the Rights of the Child in 1989, provided for the right of every child to education among the fundamental rights of the child (Article 28).

This right is also enshrined in national legislation. The Basic Law (*Constitution of Ukraine, 1996*) stipulates that everyone has the right to education. Moreover, obtaining a complete general secondary education in Ukraine is not just a right, but also an obligation for every child aged 6-7 (Article 53).

Education in Ukraine is available in the following sequence (Article 10¹ of the Law of Ukraine “On Education” (*About education process, 2017*)):

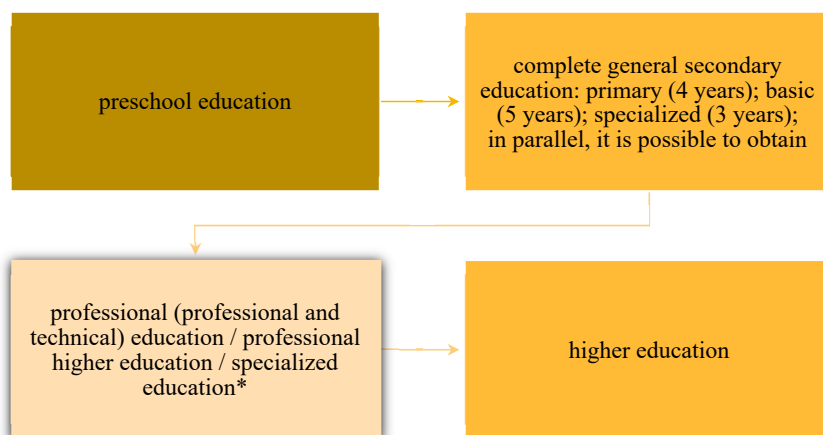


Fig. 1. Levels of education in Ukraine

The state ensures accessibility and free of charge of pre-school, complete general secondary, professional and technical, and higher education in state and municipal educational institutions; development of pre-school, complete general secondary, out-of-school, professional and technical, higher and postgraduate education, and various forms of education; provision of state scholarships and benefits to pupils and students.

The general rule enshrined in the Law of Ukraine “On Education”, which is valid both in peacetime and wartime, is to create and ensure a secure educational environment². The central

¹ Preschool education is the process and result of comprehensive development, upbringing, education, training, socialization of children and the formation of their necessary life skills and competencies before they start primary education.

Primary education is usually obtained from the age of six. Children who are seven years old at the beginning of the school year must start primary education in the same school year.

Out-of-school education can be obtained simultaneously with pre-school, complete general secondary, vocational (vocational-technical) and professional higher education.

Specialized education is education in the arts, sports, military or science.

The levels of professional (professional and technical) education are: the first (initial) level of professional (professional and technical) education; the second (basic) level of professional (professional and technical) education; the third (higher) level of professional (professional and technical) education.

Professional higher education is obtained on the basis of complete or basic secondary education.

Higher education is obtained on the basis of complete general secondary education.

² Secure educational environment – a set of conditions in an educational institution that make it impossible to cause physical, property and/or moral harm to participants in the educational process, in particular as a result of non-compliance with sanitary, fire and/or building codes, legislation on cybersecurity, personal data

executive authority in the field of education and science provides regulatory and legal support for the functioning of the education and science system and issues orders on the creation of a secure educational environment, organization of education, the educational process and other issues in the field of education and science not regulated by law in conditions of martial law, emergency or state of emergency (special period). Such orders may not exceed the duration of the special period.

Ukraine has a system of state bodies responsible for the functioning of the educational system and the formation of a secure educational environment, including: The Cabinet of Ministers of Ukraine, the Ministry of Education and Science of Ukraine, the structural unit of education in each state administration, etc. In addition, Ukraine has introduced the institution of an educational ombudsman (Article 73 of the Law of Ukraine "On Education"). The Educational Ombudsman is an official entrusted by the Cabinet of Ministers of Ukraine with the task of protecting rights in the field of education. The Education Ombudsman is appointed and dismissed by the Cabinet of Ministers of Ukraine upon the proposal of the Minister of Education and Science for a term of five years without the right to be reappointed (*Resolution of the Cabinet of Ministers of Ukraine, 2018*).

The adoption of forecast³ and program⁴ documents (concepts, strategies, etc.) are typical for Ukrainian public policy. The education sector is no exception.

Forecast documents in the field of education:

Concept for the Implementation of the State Policy in the Field of General Secondary Education Reform "New Ukrainian School" for the period up to 2029 (*Order of the Cabinet of Ministers of Ukraine, 2016*);

Concept for the Development of Mental Health Care in Ukraine for the period up to 2030 (*Order of the Cabinet of Ministers of Ukraine, 2017*), etc.

Program documents in the field of education:

On the Sustainable Development Goals of Ukraine for the period up to 2030 (one of the goals is to ensure inclusive and equitable quality education and to promote lifelong learning opportunities for all) (*Decree of the President of Ukraine, 2019*);

On urgent measures to improve children's health (*Decree of the President of Ukraine, 2019*);

On the National Strategy for Building a Secure and Healthy Educational Environment in the New Ukrainian School (*Decree of the President of Ukraine, 2020*).

protection, food safety and quality and/or the provision of poor quality food services, through physical and/or psychological violence, exploitation, discrimination on any grounds, humiliation of honor, dignity, business reputation (in particular through bullying, dissemination of false information, etc.), propaganda and/or agitation, including through the use of cyberspace, and also make it impossible to use alcoholic beverages, tobacco products, narcotic drugs, psychotropic substances on the territory and premises of the educational institution.

*The mentioned level of education is not mandatory. Transition to higher education is possible without this level.

³ Forecast documents of public policy are developed to determine the prospective legal regulation of social relations, improve the efficiency of planning lawmaking activities, unify and systematize the legislation of Ukraine.

⁴ Programmatic documents of public policy are documents of a programmatic and targeted nature that reflect the priority directions of public policy development, define and justify the strategic goals of public policy.

3. Ukrainian mechanisms for realizing children's right to education during armed conflict

The period of armed conflict complicates the realization of children's right to education and requires the introduction of special mechanisms by public administration entities for its continuous and safe provision.

The international community has developed the Safe Schools Declaration (*An inter-governmental political commitment, 2015*), recognizing that ensuring the right to education for children is a problem in most armed conflicts. The Declaration emphasizes that during armed conflicts, school buildings are attacked, and children are the first to suffer. The declaration also states that during armed conflicts, school infrastructure is used by combatants for military purposes. This and other factors make it impossible for children to realize their right to education.

In Ukraine, the creation of a secure educational environment, the organization of education, and the educational process in conditions of martial law, emergency or state of emergency (special period) within their competence are carried out by:

executive authorities, military command bodies, military, civil-military administrations and local self-government bodies, their representatives, officials (heads, chairmen, chiefs), management bodies (structural units) in the field of education;

educational institutions, educational institutions, research institutions, their founders;

public associations, charitable organizations and individuals engaged in charitable (volunteer) activities.

Ukrainian case studies have shown the following problematic issues.

Starting on February 24, 2022, a significant number of Ukrainians, including children, went abroad. According to UN data, the number of Ukrainian citizens abroad is 6.33 million. In the European Union, there are 4.24 million citizens who have been granted temporary protection in EU countries, 33.4% of whom are children, so that means that there are at least 1.4 million children abroad in European countries. But please note that these figures are only for families and children who have been granted temporary protection in the EU. But not all Ukrainians receive it. And this statistic does not include data from the UK, the US, Canada, Turkey, Switzerland, Norway, and many other countries to which Ukrainian families have also traveled (*Analytical report of the Ukrainian Parliament Commissioner for Human Rights, 2025*).

According to the EU report, in March 2024, 4.2 million people from Ukraine have been granted temporary protection in the Member States of the European Union, 1.3 million of whom are minors (*On minimum standards for giving temporary protection in the event of a mass influx of displaced persons and on measures promoting a balance of efforts between Member States in receiving such persons and bearing the consequences thereof, Council Directive, 2001*).

In this regard, the question arose: how can Ukrainian children who have left abroad due to the armed conflict continue their education?

In 2023, the Ministry of Education and Science of Ukraine adopted recommendations for children of Ukrainian citizens who are forced to stay abroad on options for obtaining education in the context of martial law (*Order of the Ministry of Education and Science of Ukraine, 2023*):

1) study only in the educational institution of the student's country of residence on a full-time basis;

2) to combine full-time education in the educational institution of the country of residence and in a general secondary education institution of Ukraine, in particular the State

Lyceum “International Ukrainian School”⁵, in one of the forms of education provided for by law (distance, family (home), external);

3) study at institutions/classes organized in the host countries on the initiative of Ukrainian public organizations with the assistance of the educational authorities of these countries and local authorities and providing educational services in cooperation with the International Ukrainian School State Lyceum in accordance with the concluded agreement;

4) if it does not contradict the legislation of the host country, study only in an educational institution of Ukraine in one of the forms of education provided for by law (distance, family (home), external).

The armed conflict has also forced a large number of Ukrainian children to change their place of residence within Ukraine and obtain the status of internally displaced persons⁶. According to the data as of 13.06.2025, 940,489 children are registered and accounted for as internally displaced persons (*Information and Computing Center of the Ministry of Social Policy of Ukraine, 2025*).

This situation also raises the question of what options are available to continue their education.

Children who have been granted the status of internally displaced persons and registered have the right to continue their education in other regions of Ukraine at the expense of the state budget or other sources of funding (Article 7, part 9 of the Law of Ukraine “On Ensuring the Rights and Freedoms of Internally Displaced Persons” (*About Internally Displaced Persons, 2014*)).

In addition, in March 2022, the Ministry of Education and Science of Ukraine, due to the armed conflict, granted permission to enroll general secondary education students who were forced to change their place of study and/or residence (stay) and reside (stay) in Ukraine or abroad, to educational institutions upon application (its scanned copy or photocopy) submitted to the educational institution by one of the parents, guardian, other legal representative, relative of the applicant or an adult applicant in person, by fax, e-mail, other means of communication or in any other way (at the applicant's option).

In particular, the Ministry of Education and Science of Ukraine has granted permission for students to receive general secondary education in any form that can be provided by the educational institution and is the safest for them (*Order of the Ministry of Education and Science of Ukraine, 2022*).

Modern armed conflicts are characterized not only by the direct line of contact between the parties to the conflict, but also by the enemy's ability to strike anywhere in the country at any time of the day with modern military equipment and weapons.

In view of the ongoing armed conflict, in 2024, the Ministry of Education and Science of Ukraine approved the Procedure and Conditions for Obtaining General Secondary Education in Municipal General Secondary Education Institutions in the Conditions of Martial Law in Ukraine

⁵ The International Ukrainian School was created to provide educational services to Ukrainian citizens temporarily or permanently residing abroad, according to an individual curriculum, in order to create conditions for the realization of the right to complete general secondary education of Ukrainian citizens.

⁶ An internally displaced person is a citizen of Ukraine, a foreigner or a stateless person who is legally on the territory of Ukraine and has the right to permanent residence in Ukraine, who was forced to leave or abandon his or her place of residence as a result of or in order to avoid the negative consequences of armed conflict, temporary occupation, widespread violence, human rights violations and natural or man-made emergencies.

(*Order of the Ministry of Education and Science of Ukraine, 2024*), which provides for “blended learning” – a way of organizing the education of students, which involves organizing the education of students by combining full-time (full-time) and distance learning in a certain order (week after week, day after day, etc.), determined by the schedule of classes in the institution.

In addition, the Ministry of Education and Science of Ukraine defines one of the main requirements for an educational institution to function is the presence of a protected civil defense structure in the educational institution or at a distance of no more than 500 meters from it, which is suitable for sheltering participants in the educational process and to which they have unimpeded access.

In the territory of Dnipro, Donetsk, Zaporizhzhia, Luhansk, Mykolaiv, Odesa, Sumy, Kharkiv, Kherson, Chernihiv regions (except for the temporarily occupied territories of these regions), general secondary education in full-time (daytime) form, including mixed learning, is organized on the basis of: 1) a decision of the regional defense council and/or an order of the head of the relevant regional military administration on the implementation of educational activities by educational institutions in full-time (daytime) form, including the use of mixed learning; 2) a decision of the pedagogical council of an educational institution on the implementation of educational activities in full-time (daytime) form, including the use of mixed learning, put into effect by the order of the head of such an institution.

By the way, the requirement to have shelters is also defined for preschool education institutions. The creation of a safe educational environment in state (municipal) preschool education institutions is provided for in Article 57-1 of the Law of Ukraine “On Education” (*About education process, 2017*) and the Regulation on Preschool Education Institutions (*Resolution of the Cabinet of Ministers of Ukraine, 2003*). Access to shelters in state (municipal) preschool education institutions during educational activities is provided exclusively for participants in the educational process.

The issue of shelters in educational institutions is also highlighted in the Action Plan for the Implementation of the National Strategy for the Development of a Safe and Healthy Educational Environment in the New Ukrainian School for 2024 (*Order of the Cabinet of Ministers of Ukraine, 2024*), where one of the measures to ensure the safety, accessibility and inclusiveness of the educational environment is the arrangement of protective civil defense structures (shelters) in general secondary education institutions in accordance with the State Building Norms B.2.2-5:2023 “Protective Civil Defense Structures”.

If educational institutions do not have an appropriate object of the civil defense fund, the organization of general secondary education is carried out in the distance form in accordance with the Regulation on the distance form of obtaining full general secondary education (*Resolution of the Cabinet of Ministers of Ukraine, 2020*).

The organization of distance education is carried out exclusively at the request of students and their parents. Parents shall create appropriate and safe conditions for the education, upbringing and development of a child who receives education by distance learning.

The same procedure applies to pupils residing in the temporarily occupied territory of Ukraine or in one of the individual forms of general secondary education (including distance learning technologies) (*Order of the Ministry of Education and Science of Ukraine, 2016*).

4. Conclusions

Summarizing the above, it can be stated that during the armed conflict, the process of obtaining education is significantly complicated. The state, represented by authorized bodies,

creates additional mechanisms for the realization of the right to education. The Ukrainian case study has shown that as a result of the armed conflict, a significant number of children are forced to change their place of residence: traveling abroad or internal displacement. Ukrainian public administration entities have proposed mechanisms for obtaining education in various forms: distance, family (home), and external education.

In addition, the creation of a secure educational environment and ensuring a continuous educational process is carried out through the formation of a fund of protective civil defense structures.

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REFORM OF THE SIMPLIFIED TAXATION SYSTEM AS A KEY AND HIGHLY DEBATED ASPECT OF TAX REFORM IN UKRAINE

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Summary

The article considers the current challenges of ensuring the economic and tax security of Ukraine in the conditions of martial law, which has been in effect since February 24, 2022. The author emphasizes that the economic security of the state is inextricably linked to tax security, because taxes and fees, in particular from small and medium-sized businesses, are key sources of financing the security needs of the state. It is noted that the current regulatory and legal framework in the field of economic security is mainly declarative in nature and does not contain clear mechanisms for implementing tax security. Particular attention is paid to the simplified taxation system, which in modern conditions, in the author's opinion, poses a threat to tax security, as it contributes to incomplete tax revenue to the budget. The work justifies the need to revise the principles of functioning of this system, and its complete removal from tax legislation. The author emphasizes the importance of a comprehensive approach to improving tax policy both in wartime and during the period of post-war reconstruction of the country. The focus of the study is on finding ways to achieve a balance between supporting entrepreneurship and ensuring stable revenues to budgets of all levels as the basis of national security in a broad sense.

Key words: taxation system, taxes and fees, tax security of the state, economic security of the state, national security, budget system of Ukraine, small and medium-sized enterprises.

DOI <https://doi.org/10.23856/7018>

1. Introduction

In connection with the military aggression of the Russian Federation against Ukraine, on February 24, 2022, by the Law of Ukraine No. 2102-IX, the Verkhovna Rada of Ukraine, in accordance with paragraph 31 of part one of Article 85 of the Constitution of Ukraine and Article 5 of the Law of Ukraine "On the Legal Regime of Martial Law", approved the Decree of the President of Ukraine dated February 24, 2022 No. 64/2022 "On the Introduction of Martial Law in Ukraine". So, from this moment on, Ukraine's life in a state of war and new realities of economic security began, the provision of which is one of the most important functions of the state and the business of the entire Ukrainian people. But economic security is based on tax security, which is its integral component. Taxes and fees, which are paid in particular by small and medium-sized enterprises, are the main sources of financing of any security component of the state, including in conditions of martial law in order to increase its defense capability. At the same time, it is worth noting that most regulatory and legal acts in the field of economic security are declarative in nature, since they do not have a specific algorithm (formula) and tools for legal regulation of social relations regarding the implementation of tax security. And some

regulatory acts, which, in particular, introduced a simplified taxation system, generally provoke non-payment of taxes and fees in full.

Considering the existing achievements in the field of tax law, it is worth noting that the issues of a simplified taxation system in the current conditions of war realities and the subsequent post-war reconstruction of Ukraine are important. The relevance and importance of these problems, the need to solve them determined the choice of the topic of this study and outlined the range of issues that are considered in it, especially in the context of the current state of the problem of ensuring security at the global level.

2. Tax security as a component of Ukraine's economic security

According to Article 4 of the Law of Ukraine “On Innovation Activity”, new knowledge is the object of innovation activity (*Pro innovatsiinu diialnist, 2002*). And Article 2 of the Law of Ukraine “On Priority Areas of Innovation Activity in Ukraine” specifies that the priority areas of innovation activity in Ukraine, among others, are scientifically and economically justified areas of innovation activity aimed at ensuring national security and defense and economic security of the state, in particular (*Pro priorytetni napriamy innovatsiinoi diialnosti v Ukraini, 2011*). A component of Ukraine’s economic security is tax security, the main task of which is to ensure tax revenues in full in order to fill budgets of all levels. Last but not least, the state of tax revenues depends on taxpayers who have chosen the simplified taxation system, which since its inception has become a legal opportunity for tax evasion. And this, in turn, poses a threat to tax security.

Article 17 of the Constitution of Ukraine emphasizes that ensuring the economic security of Ukraine is one of the most important functions of the state, the business of the entire Ukrainian people. The norm-principle “ensuring the economic security of Ukraine is the business of the entire Ukrainian people” is specified by the provision of Article 67 of Section II “Rights, Freedoms and Duties of Man and Citizen” of the Fundamental Law, according to which everyone is obliged to pay taxes and fees in the manner and amounts established by law (*Konstytutsiia Ukrainy, 1996*). Therefore, the business of the entire Ukrainian people in the field of ensuring the economic security of Ukraine and tax security in particular should be the fulfillment by each of their constitutional obligations to pay taxes and fees in the manner and amounts established by law. However, “it did not happen as planned”.

Specific means and ways of ensuring national security, both of Ukraine and of any state in the world, are determined by the priority of national interests, and national interests and their priority are determined by the specific situation in the country and abroad. But none of the priorities in the field of national security can be implemented without appropriate financial support, and, for example, the budget of the state of Ukraine, like that of any other state, is filled primarily with taxes. In particular, the level of the share of tax revenues in the total amount of revenues of the State Budget of Ukraine, in general, is more than 80%. Taxpayers in Ukraine – small and medium-sized enterprises (SMEs) that have not chosen the simplified taxation system (STS), pay the relevant taxes and fees stipulated by the Tax Code of Ukraine and thereby fully fulfill their constitutional duty and contribute to filling the budget and tax security of the state. On the other hand, it would be appropriate to cite the position set out in the analytical note of the National Institute for Strategic Studies, which states that the reform of the simplified taxation system is one of the most debatable and at the same time important areas of tax reform. During its existence, this system has become overgrown with numerous problems that have reduced its effectiveness and distorted the goals and objectives of its

implementation (*Shchodo reformuvannia sproshchenoi systemy opodatkuvannia, obliku ta zvitnosti*, 2010).

Today, the simplified taxation system in Ukraine, as an alternative to the taxation system, is a threat to tax security, because the main role and main task of tax security is to ensure the protection of timely and full tax payments to the revenue side of budgets of all levels. That is, public relations in the field of the simplified taxation system need to be reviewed from the point of view of the compliance of this system with the requirements of tax security, and possibly with the complete removal of this system from the norms of the tax legislation of Ukraine.

The study of the Ukrainian phenomenon of the simplified taxation system is based on the scientific works of the following scientists: Calinescu T.V. (*Calinescu*, 2020); Ivanyshyna O. & Demidenko L. (*Ivanyshyna & Demidenko*, 2020); Ponomareva, T., & Hrynevich, K. (*Ponomareva & Hrynevich*, 2020); Riadinska V., Protsenko T., Kuznietsova O. (*Riadinska, Protsenko & Kuznietsova*, 2021); Soldatenko O. & Brunko V. (*Soldatenko & Brunko*, 2022); Synchak V.P. (*Synchak*, 2020); Tkachenko A., Dubyna O. & Machak T. (*Tkachenko, Dubyna & Machak*, 2023); Treshchov M. (*Treshchov*, 2024); Trush Y. & Kudrenko N. (*Trush & Kudrenko*, 2021); Tuchak T. (*Tuchak*, 2024); Zakrevska O. (*Zakrevska*, 2022).

3. Issues of the simplified taxation system in Ukraine

Small and medium-sized enterprises are the foundation of the Ukrainian economy, providing two-thirds of added value and more than 80 percent of jobs. The development of small and medium-sized enterprises stimulates competition in the market and the corresponding growth of the competitiveness and innovative potential of the economy, contributes to the strengthening of the middle class in society (*Pro skhvalennia Stratehii vidnovlennia*, 2024). However, there is a need to strengthen control over the activities of individual entrepreneurs and counteract the abuse of the simplified taxation system, because, as is known, the practice of large businesses and retail chains carrying out their activities under the guise of individual entrepreneurs (IEPs) is widespread. This requires increased analytical work to identify cases of deliberate “fragmentation” of the activities of enterprises and networks and the expansion of requirements for the use of fiscal registrars of settlement transactions by individual entrepreneurs (*Oleksii Liubchenko*, 2021). Ukraine needs to level the tax landscape and create equal conditions for paying taxes. This is primarily about the taxation of those structures for which preferential conditions for doing business have been created during the 30 years of the state's existence. Thus, in particular, more than 52 business entities with billions in income, which are engaged in plant and animal husbandry, work on the IV group of the simplified taxation system. At the same time, they pay a fixed agricultural tax and pay ten times less in value added tax. The simplified system is, first of all, support for small and medium-sized businesses. It is precisely billionaires in this classification who pay the least taxes. They have learned to evade taxation through various mechanisms, starting from the withdrawal of funds, preferential regimes, understatement of income tax, etc. At the same time, small businesses pay 10 times more, being on the same simplified system. This is the distortion of the tax landscape. This situation must be changed and, in particular, the disclosure of personal data is important. Businesses will pay taxes better when there is a clear and understandable position on the efficiency of spending budget funds. This is a kind of motivational element and a very important one (*Vyrishalnym ye ne stavky podatkov, a yikh administruvannia*, 2021).

By the way, Yu.I. Anistratenko, having studied the legal regulation of taxation of small and medium-sized businesses in Ukraine, claims that: “The content of taxation of small and

medium-sized businesses in Ukraine, its features and place in the tax system of Ukraine are revealed through the possibility of using two taxation systems (general and simplified), which are determined depending on the category of the payer, his legal status and occupation of a certain type of business. The effectiveness of using each taxation system is realized due to the ability of the payer to determine for himself the advantages of each of them when choosing a business occupation. The right of choice for small and medium-sized business entities to switch from a general to a simplified taxation system is to determine priority advantages regarding the amount of tax payments, the volume of which will not exceed, and in some cases will be less, which will allow developing small and medium-sized businesses, establishing economic ties and reducing relevant costs" (Anistratenko, 2017: 383–385).

Continuing the above, we note that the tax system of Ukraine is too discretionary and leads to the shadow economy. As for the size of tax rates in Ukraine, they are generally in the same range as in European countries. However, tax administration remains an important problem (*Pro zatverdzhennia Natsionalnoi ekonomichnoi stratehii na period do 2030 roku*, 2021). In this case, the National Revenue Strategy until 2030 (hereinafter referred to as the NSDU) deserves special attention, as a vision of the future reform of the simplified taxation system by narrowing the scope of its application by excluding legal entities, as well as introducing safeguards to reduce abuse, raising the threshold for registering VAT payers and increasing effective tax rates to the level of the general regime (*Natsionalna stratehiia dokhodiv do 2030 roku*, 2023).

From a business taxation perspective, the simplified system regime jeopardizes tax revenues and influences business decisions. The optional nature of the system means that taxpayers with the highest profits have the greatest incentive to choose this system, which de facto reduces their tax liabilities. The possibilities for understating tax liabilities, combined with the practical absence of accounting for the movement of goods, the high level of cash settlements in the absence of the registrar of settlement operations (RSO) and the non-requirement of documentary evidence of the origin of goods sold under the simplified taxation system, are strong incentives for various types of taxpayers to hide turnover or certain types of activities under the contours of this system in order to sell illegally imported or manufactured goods, as well as the real volumes of cash settlements with end consumers of such goods (*Natsionalna stratehiia dokhodiv do 2030 roku*, 2023: 58).

The simplified taxation system is the biggest challenge. Many legal entities and individuals choose to use the status of self-employed person under the simplified taxation system instead of registering a standard employment relationship.

The reform of the simplified taxation system should return such a system to the scope of application of micro and small businesses (startups) and minimize the possibilities of using the advantages and features of the simplified taxation system by medium and large businesses in order to minimize tax payments and/or hide from taxation the volumes of sales of goods and services, including goods illegally imported or produced, and make it economically inexpedient to use the simplified taxation system to replace labor relations with civil law ones. That is, the reform of the simplified taxation system should support the development of micro and small businesses in Ukraine and eliminate the possibilities of distorting the competitive environment by large companies due to abuse of the advantages of the simplified taxation system (*Natsionalna stratehiia dokhodiv do 2030 roku*, 2023: 59).

The urgent need to reform the simplified taxation system is also emphasized in the Letter of Intent and Memorandum on Economic and Financial Policies of 11 December 2024 (*Lyst pro namiry ta Memorandum pro ekonomichnu i finansovu polityku*, 2024: 13–14); (*Memorandum of*

Economic and Financial Policies, 2024: 90–91). This document emphasizes that over the next few years, important tax policy reforms will be implemented in Ukraine, guided by the NSDU, to meet post-war needs. In addition to streamlining tax benefits, revenue mobilization will be strengthened by, in particular, limiting the scope of application and opportunities for abuse of the simplified taxation system. No later than the beginning of 2027, it is planned to implement measures that will limit the possibility of business entities returning to the simplified taxation system after the transition to the general taxation system, review approaches to determining and indexing thresholds for applying the simplified taxation system, and narrow the right to apply the simplified taxation system by excluding certain types of activities. However, as stated in the NSDU, the reforms of the personal income tax and the simplified taxation system require administrative reforms, including protecting the confidentiality of tax data in the systems of the State Tax Service and providing tax authorities with access to data on the amounts of funds in taxpayers' bank accounts.

4. Conclusions

Amendments to the legislation are currently being developed to introduce reporting requirements for digital platform operators and international data exchange in accordance with the EU Council Directive DAC 7 / OECD Model Reporting Rules, which will allow the State Tax Service to receive from digital platform operators and international bodies data on the income of individuals who receive income without registering as a private entrepreneur or using a simplified taxation system. This will become an effective tool for controlling the timeliness, accuracy and completeness of the declaration of such income and will contribute to a significant expansion of the tax base by including individuals whose income is currently not taxed. This measure will contribute to revenue mobilization and harmonization of Ukrainian tax legislation with EU legislation and OECD standards, and will also be the first step towards reforming the taxation system through the introduction of new digital control tools by the State Tax Service.

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CONCEPTUAL CHARACTERISTICS OF THE SYSTEMIC APPROACH AS A METHODOLOGY FOR ENSURING ADMINISTRATIVE AND LEGAL REGULATION OF SOCIAL SECURITY RELATIONS IN UKRAINE

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Summary

In this article the author develops a conceptual and theoretical characteristic of the systemic approach as a methodological approach in ensuring administrative and legal regulation of social security relations in view of the fact that the main driving force of progress and social transformation of society is a person and the human and social capital of the state reproduced by him (the ability of its citizens to recreate political and social conditions of life in order to achieve a common goal that does not contradict the values, moral and ethical norms of society and the laws of the state) on the basis of a civilizational code that defines cultural determinants, as well as informal and formal values and norms shared by members of society. The political community and civil society of Ukraine supported the geopolitical vector of development towards the standards of the Euro-Atlantic civilizational community. The author believes that the «social mobilization» of broad segments of the population for the post-war reconstruction of Ukraine will transform the system of governance towards its meritocracy, which, in turn, will expand opportunities for developing a public-private partnership model using the principles of a «social quality of life» policy, in which socio-economic security, social cohesion and social inclusion are components of ensuring stability and development.

Key words: civilizational subjectivity, governance, institutional capacity, market, paternalism, post-war reconstruction, welfare state.

DOI <https://doi.org/10.23856/7019>

1. Introduction

Multi-aspect social progress as a system-forming consequence determined by the fundamental concept of globalization of social existence, determines the increasing priority of the need to transform the established approach to the organization and practical implementation of the system of state-power relations at all levels of its functioning. Building the institutional capacity of the state was one of the main points of the National Recovery Program of Ukraine, which was presented on July 4–5, 2022 at the conference on the recovery of Ukraine in Lugano (Switzerland). When it comes to the institutional capacity of the state, G. I. Zelenko notes, what is meant is the functions performed by state authorities and the result that the performance of these functions ensures (*Zelenko 2022, p. 38*). Social security and its administrative and legal regulation is a «social» pillar of the institutional capacity of the state and should be based on a systemic methodology adequate to modern challenges, given that in the process of cyclical and nonlinear social dynamics, each subsequent cycle of development of the social system should be characterized by social progress – an increase in the level of social organization of society, reflected in indicators of human and social capital. This is exactly how civilizational subjectivity emerges – such a quality of a country's social existence, when it becomes not an

object of influence of the «mighty ones of this world», but through the efforts of its scientific, artistic, religious and political elite constructs its own civilizational future, way of life, realizes its own (not externally imposed) values and formulates true national interests. In this case, four main principles should be taken into account that determine the social concept of the country's development, its social policy and the corresponding action programs: 1) the optimal combination of the requirements of liberalism and social guarantees; 2) optimization of the interaction of central and regional authorities in the implementation of social policy on the basis of determining their mutual responsibility; 3) optimization in time and space of measures within the framework of social policy; 4) increasing labor motivation (*Bandura 2016, p. 143–144*). Neoliberal trends are transforming the welfare state model, reconsidering the degree of responsibility of society, the market, and the state for social security. Therefore, for example, market mechanisms and social innovations of public organizations are becoming increasingly in demand in conditions of budget savings and orientation towards effective, high-quality management, including in the social sphere.

2. Materials and methods

The experience of legal development of democratic states in the second half of the 20th century demonstrates that under the conditions of the formation of liberal civilizations in modern civil society, a fundamental readjustment of legal systems is taking place, because civil society under the conditions of liberal civilization needs a legal system centered not on ideological chimeras, but on a human-centric ideology articulated at the level of fundamental scientific research. Some problematic aspects of this study were the subject of scientific research of many Ukrainian scientists, such as I. Bandura, S. Kachula, M. Kelman, N. Khamitov, M. Kostytskyi, T. Pavlyuk, S. Pyrozhkov and others. The controversy surrounding the welfare state crisis has stimulated the emergence of a number of empirical studies that prove a positive relationship between the level of state social spending and economic growth (*Belletini & Ceroni 2000*). Scientists prove that the state should not shy away from fulfilling its social functions, but at the same time it should pursue a policy of social development, in particular social security, which, while focusing on poverty reduction, will not be financially burdensome for the state. We are talking about optimizing the social security system (*Kachula 2019, p. 61*).

At the same time, chaotization of institutional space, weakening of social control, formation of new enclaves of social order, emergence of unusual adaptive practices of individual and group self-defense, emergence of innovative forms of social interaction expand the problem field of research and cause interest in modern innovative interdisciplinary scientific research in the field of synergetics, the theory of bifurcations and catastrophes, the theory of fractals, the general theory of dissipative systems, Nonlinear science, etc.

Modern legal science is at the stage of rethinking conceptual and methodological paths and paradigms for understanding dynamic social reality. We rely on the application of a system of principles and approaches built on universal (worldview-philosophical), general and special scientific (legal and non-legal) methods, first of all, the logical-semantic method, the method of general scientific analysis, system-structural method, content analysis method in order to obtain the most reliable scientific results in the study.

The purpose of this article is to reveal the heuristic potential of the systemic approach as a methodological approach in ensuring administrative and legal regulation of social security relations in Ukraine through its conceptual and theoretical characterization.

3. Systemic methodological approach in ensuring administrative and legal regulation of social security relations

The basis for the emergence of social statehood (and not undemocratic authoritarian regimes disguised as social statehood, when the distinction between the concepts of a «social» and a «paternalistic» state is leveled) and a developed system of social legislation is only a market (or mixed market) economy, which allows ensuring the proper level of well-being of citizens and, through appropriate state economic policy, guaranteeing the distribution of material and financial resources in order to constantly increase the level of social security of citizens (*Skrypnyk 2002, p. 505–510; Skrypnyuk 2005, p. 73*). At the same time, the market mechanism is socially unviable for numerous members of society who are limited (or completely unable) to guarantee their existence in the form of employment and therefore do not participate in the process of production and distribution of income (for example, children, the elderly, people with disabilities); in other words, the market, as a competitive mechanism for the efficient distribution of limited resources, does not include these categories of people in the orbit of its action on the grounds that they do not participate in market competition. Accordingly, the social function of the market is deliberately limited, which requires its expansion and supplementation at the macro-level – by the social activities of the state, at the micro-level – by the social activities of other economic entities (firms, enterprises, organizations), as well as various non-state non-profit organizations of the «third sector» (trade unions, foundations, public, religious, charitable organizations, etc.) (*Shportyuk 2023, p. 94*). From this follows the need to ensure administrative and legal regulation of social security relations and the systematic methodological approach to this process that is the guarantee of both its theoretical validity and practical effectiveness. The main goal of social security is the rational organization of socio-economic relations that contribute to the humane self-development and self-sufficiency of the individual (*Pavlyuk 2019, p. 278*). M. M. Ruzhensky reveals the political economy content of the category «social security» from the standpoint of the institutional paradigm as relations between society and socially vulnerable segments of society regarding their receipt of economic benefits (social benefits, compensations, privileges, tax deductions and credits) to ensure the social standards existing in the country through the activities of relevant institutions. In the process of radical reforming the Ukrainian social security model, the scientist notes, it is advisable to implement in socio-economic relations those approaches and mechanisms that provide high efficiency and have been tested in world post-industrial countries (*Ruzhenskyi 2016, pp. 10, 160*).

Methodology arose and developed as an aspect of philosophical understanding of the world, aimed at critical understanding of philosophical and scientific methods of cognition, encompassing mainly a set of ideas about the philosophical foundations of scientific and cognitive activity; later, the concept of «methodology» began to correspond to an internally differentiated and specialized field of knowledge (*Shevchuk 2016, p. 35–36*). The twentieth century expanded the semantic and instrumental content of the methodology of scientific knowledge, which in fact constitutes a theory of scientific knowledge that explores cognitive processes, and its subject is a person who has mastered historically developed forms of cognitive activity (*Kelman 2019, p. 40*). Methodology integrates categories, principles, norms, values, paradigms, theories and methods into a certain holistic system that has differentiation by types of activity and unites them into integrity. M. V. Kostytskyi defines methodology as a holistic doctrine, a worldview theory that reflects reality or a significant fragment of it, with a developed conceptual and categorical apparatus that, when applied according to the rules of formal or dialectical logic, contributes to the growth of knowledge about a specific object of knowledge;

a certain worldview based on a scientific theory or concept, through the prism of which the existence of the world, natural and social phenomena are understood. (*Kostytskyi 2012, p. 17; Kostytskyi 2016, p. 18*).

In modern practice of social management, systemicity has several aspects of application, among which the most important are: 1) systemic understanding of the object of social management; 2) systemic understanding of the subject of social management; 3) systemic understanding of management as a social phenomenon; 4) use of the systemic method in managing society and its numerous subsystems (*Tulenkov 2023, p. 46–47*). The determining (integral) role in the hierarchy of socially responsible subjects of social security at the macro-level belongs to the state with its inherent set of functions and responsibilities (represented by its legislative and executive bodies) on the institutionalization of relations in the social security sphere and compliance with social rights, guarantees and standards, the creation of transparent and socially fair legal norms and an effective control system to ensure a socially acceptable level of social security. The absence of both regulatory influence of the state on the market component of socio-economic relations and active participation in ensuring the functioning and development of the social security system in a market economy can lead to the implementation of hypertrophied principles of social Darwinism. Ukraine is constitutionally positioned as a social state with socially oriented development, the main essence of which is that market mechanisms provide income to citizens as a result of economic activity, while the state provides assistance to those segments of the population that are deprived of such an opportunity.

The concept of «system», used to denote the world order (structure), appears already in the Hellenistic era in the philosophy of Stoicism; after Descartes laid the foundations of a mechanistic vision of the world, Kant, Schelling and Hegel developed a vision of systematicity (the problematic field of which arose in the bosom of theoretical and methodological reflection on social processes) as a universal property of the existence of objects, phenomena, and processes of objective reality (*Ustych 2013, pp. 187, 190*). A system (if it is not modeled as completely closed) is an ordered set of elements that maintains its integrity due to the superiority (expected or confirmed) of internal connections over external ones (*Radzyvill 2010, p. 98*).

Historically, systemic and methodological knowledge represents various ideas of the whole as an indissoluble unity of parts, characterized by varying degrees of theoretical maturity and conceptual formality, and systemic ideas about society, as a rule, coexisted in a syncretic form with systemic views on nature and human thinking (*Ustych 2013, p. 187*). In the multi-level structure of methodological knowledge, one of the most significant methodological approaches is the systemic one, the essence of which is that it directs the researcher to a systemic vision of reality, to an understanding of the world from the position of a systemic structure and assumes that any object of reality can be represented as a relatively independent system that has a certain structure and its own laws of functioning and development.

Actually, overcoming the crisis in scientific knowledge at the end of the 19th and beginning of the 20th centuries is associated, in particular, with the formation of a systemic approach as one of the methodological directions of modern science, the theoretical basis of which was formed as a result of the combination of the general theory of systems and the foundations of cybernetics (determining the structural composition of the system and the nature of its functioning due to the special nature of the system's relationship with the external environment, as well as general management principles). A systemic approach is a set of theoretical and logical-epistemological tools intended for the study of complexly organized systems, their design, creation and management, which can be implemented under the condition of a detailed study of connections at the subsystem and elemental levels (*Potravka 2021, pp. 82, 84*). The systemic approach requires

a conditional «state of equilibrium» (static, dynamic, or evolutionary) between the object and subject of research, primarily to determine the constants (invariants) of the phenomenon under study (*Radzyvyll 2010, p. 98*). The system approach involves compliance with the basic laws of the system, namely: 1) composition, i.e. coordination of a common and separate goal; 2) proportionality – internal proportionality must be combined with external proportionality, i.e. the appropriate level of development of elements of the external environment; 3) consideration of the «bottleneck», where special attention is paid to the weakest element of the system; 4) ontogenesis; 5) integration – directing the system to a high level of organization and obtaining a synergistic effect; 6) awareness; 7) stability, which imposes requirements on the construction of the system (static state) and its functioning (dynamic state) (*Holod 2010, p. 48*).

Structurally, the methodology of scientific knowledge contains two substantively distinct elements: ontological, which constitutes a system of means of finding and systematizing new knowledge; epistemological, that is, the doctrine of this system (*Shevchuk 2016, p. 37*). The epistemological aspect of the philosophy of the systemic approach combines the problems of forming the principles of constructing and interpreting the conceptual and categorical apparatus of system research. Considering the specifics of the systemic approach, which depends on a certain field of science or practice, its algorithm remains unchanged and involves the following sequence of actions: 1) a certain phenomenon under study is isolated from the environment and analyzed as a holistic system; 2) the constituent elements of its structure and the connections between them are determined; 3) the connection of this system with the supersystem and with adjacent systems is analyzed; 4) the purpose and functions of this system are clarified, as well as the possibilities of its further development. It helps researchers not only to identify various social objects at the macro- and micro-social levels in the context of the object-subject continuum that form a complex system of social relationships, but also to study the degree to which these systems satisfy various needs, interests, and value preferences of individuals and social groups (*Tulenkov 2023, pp. 43, 387, 459*).

The basis of each systemic approach as the main principle of system research are three sources of social information regarding the patterns and trends of future behavior of systemic entities: firstly, it is an analysis and assessment of the future state of a certain system object based on the study of previous experience through the analogy of already known or similar objects; secondly, it is a conditional continuation in the future of the recorded patterns or trends in the development of a system object based on the extrapolation method; thirdly, it is a modeling of the future state of a system object based on the expected change in the relevant conditions or scientifically substantiated prospects for its development (*Beh 2021, p. 82–83*).

Y. M. Bazhal emphasizes the importance of shaping the socio-economic policy of post-war transformation as a renewable process based on three holistic laws: 1) Academician Vernadsky's concepts regarding the objective development of the noosphere (noospheric development of scientific and technological activity (as a form of absorption of external energy flows) occurs objectively and irreversibly, like a geological process); 2) neo-Schumpeterian concept of objective change in socio-technological paradigms; 3) interdisciplinary conclusions of catastrophe theory as a science about the complexity and role of self-organization processes in overcoming economic crises (*Mokiy 2023, p. 77*).

The author of this article is convinced that the use of a systemic approach as a methodological approach in ensuring administrative and legal regulation of social security relations will contribute to the establishment of two civilizational principles of the development of the subjectivity of Ukraine: the first is the principle of an open innovative society (Ukraine is developing a market society, geared towards the free creative self-realization of citizens in

the economy, politics, science and art, which is limited only by laws and serves as the basis for the development of the country as a whole); the second is the principle of the welfare state (means guaranteeing every citizen a decent minimum means of subsistence (basic income), if he temporarily did not fit into the market innovation process, provision of decent medical care, quality education, proper living conditions and the action of «social elevators» for any citizen of Ukraine), which largely reflect liberal and paternalistic approaches to the organization of society and its development (Pyrozhev & Khamitov 2020, p. 11–12).

4. Conclusions

Centralization, unification of approaches and paternalism inherited from the Soviet system do not contribute to meeting the diverse social needs of Ukrainian citizens. Ukraine's European integration aspirations mean the need for an active social policy aimed at achieving European standards, after all, under modern EU conditions, on the one hand, the member state guarantees the development of human competencies for the needs of the economy, and on the other hand, the existing developed civil society institutions support the social policy of state institutions on the ground. Currently, a model of regular state influence on the sphere of socio-economic relations, which is inadequate for a socially oriented economy, has been formed in Ukraine, which is characterized by fragmentation, imbalance, and the presence of elements of spontaneity. One of the key ideologists of the Scandinavian model of the «welfare state» G. Myrdal (Myrdal, 1960), criticizing the consequences of an uncontrolled free market, introduces the concept of «circular cumulative causality», when the convergence of economic and social factors can reinforce negative trends and a «poverty trap» is formed: poverty can lead to a decrease in the level of education, which further narrows employment opportunities and, as a result, hereditary poverty arises (Krysovati 2025, p. 22). Under the conditions of globalization, which is sometimes seen as a process of «erasing borders» and «disappearance of the state» (or its replacement by other actors), the role of the state in the economy is not decreasing, but, on the contrary, increasing due to the modernization and internationalization of its functions, and the state and the market do not oppose each other, but interact, strengthening their potentials. The social recovery of Ukraine involves the digitalization of the system of providing social services, ensuring barrier-free access to services for all social groups, strengthening the targeting and verification of recipients of social assistance, developing a second level of pension insurance, systematizing various types of social payments, developing effective mechanisms for compensation for all categories of the population affected by the war, and creating opportunities for the reintegration of veterans into peaceful life. In the context of the European integration of Ukraine, it should be stated that the existing historical Europe should serve not so much as a social ideal and a normative factor but a regulatory socio-cultural idea of liberal democracy.

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SPECIFIC FEATURES OF THE USE OF ARTIFICIAL INTELLIGENCE (ELECTRONIC PERSONHOOD) IN THE SPHERE OF EMPLOYMENT

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Summary

This article examines the increasing integration of modern technologies into contemporary employment relationships. It argues that artificial intelligence can be interpreted as a form of digital personhood (avatar). The concept of avatar is analyzed through three main dimensions: automation, which consists of symbols and actions that allow for full or partial imitation of the avatar's activity; enhanced identification, such as user accounts, email addresses, or profiles in corporate governance systems; and anonymity, which facilitates the representation of corporate brands. The study highlights both positive and negative consequences of digital personhood in the workplace. On the positive side, it highlights the expansion of employment opportunities, the automation of routine tasks, and increased productivity. However, the article also identifies new challenges, including changes in employment structures, the need for retraining, risks of digital inequality, cybersecurity issues, and the use of neurotechnology in the workplace.

Key words: digital technologies, account, employment relations, avatar, employee, employer, neurotechnology.

DOI <https://doi.org/10.23856/7020>

1. Introduction

Today, the use of digital technologies directly impacts the field of labour and leads to the transformation of employment relations. Given the growing role of artificial intelligence in everyday activities, a series of challenges are emerging in the area of labour law. This transformation necessitates legal assessment both from the perspective of current legislation and in terms of achieving an optimal legal framework that aligns with the interests of employees, employers, and the state. In this rapidly evolving environment, new legal issues are emerging, including: the impact of artificial intelligence on the sphere of labour; the admissibility of delegating HR decision-making to artificial intelligence; discrimination risks associated with AI bias or lack of objectivity; the transparency of AI use in the workplace; the limits of digital surveillance over employees' behaviour; and the protection of their privacy against unlawful employer interference. The use of digital technologies is thus transforming the traditional relationship between employer and employee.

Virtual avatars, which serve as digital representations of employees, open up new opportunities for organizing remote work, communication, and interaction within the metaverse (*Dionisio, Burns & Gilbert, 2013*). They allow for the creation of personalized images that integrate both physical and social characteristics, fostering deeper and more effective engagement in virtual work environments (*Bailenson, 2018*). However, these innovations raise a number of complex legal and ethical issues, such as the protection of personal data, the legal status of digital identities, and the risks of discrimination and manipulation (*Kshetri, 2021*). Since

legislation has not yet sufficiently adapted to these developments, analyzing global practices in the use of avatars in labor relations is essential for shaping appropriate regulatory mechanisms and ensuring a balance between innovation and workers' rights (*De Stefano, 2016*).

The aim of this article is to define the role of artificial intelligence in the sphere of labour, to examine its application through the lens of digital personality (avatar), to propose an original definition of the avatar in the context of labour relations, and to analyse key issues related to the regulation of digital personalities in the field of employment. The paper also explores new approaches to legal regulation regarding the use of avatars in labour relations.

The methodological foundation of the study is based on materialist dialectics as the principal method of cognition. The research employs both general scientific methods (logical, systemic, functional, etc.) and special legal methods (formal-legal, statistical, modelling, forecasting, etc.) aimed at achieving the outlined goal and solving the stated research tasks. The logical and systemic methods were used to formulate the author's definition of the avatar in labour relations and to examine current legal literature approaches to this concept. The systemic approach provided the basis for identifying two dimensions underlying the concept and usage of avatars in labour and their relationship with employment relations. The functional approach made it possible to identify the key areas of influence that avatars, as digital personalities, have on labour relations. The comparative legal method was applied to analyse international trends and compare the approaches of foreign countries to the creation of avatars in digital space. The sociological method helped assess the factors influencing the development of avatars in the labour sphere.

2. Analysis of Current Research

The automation of production, the expansion of remote employment, and the optimisation of AI use in work processes have raised the need for deeper academic inquiry into these labour law aspects. Valuable contributions to the scientific understanding of the impact of digital technologies on labour and employment law in the context of virtual reality can be found in the works and practical studies of prominent scholars such as O.Ye. Avramova, O.A. Baranov, T.H. Katkova, M.V. Karchevskiy, K.O. Khernes, O.Ye. Radutnyi, Yu.M. Sydorchuk, A. Sulin, Ye.O. Kharitonov, O.I. Kharitonova, among others. Significant influence on the modern conceptualisation of the formation and development of digital personality has also been made by foreign researchers such as J.-F. Bélisle, S. D. Benford, M. E. Diamantis, J., Cascio, W. F., Hjorth, I., Kruschwitz, N., Kshetri, N., Garforth, D., Graham, M., M. Greenhalgh, R. J. Ingram, I. Knox, R. Lanier, Lehdonvirta, V., F. Lucivero, Montealegre, R., T. T. Ochoa, H. Prakken, J. Suler, Snowdon, C., De Stefano, V., H. Onur Bodur, J. Hirsch, B. Schafer, Wood, A. J., Fitzgerald, M.

However, many issues regarding the influence of artificial intelligence on the labour sphere and the representation of the employee through the figure of the avatar in labour relations—especially within the metaverse—remain insufficiently addressed. It is worth noting that no unified legal position regarding the definition of an avatar has yet been established in legal scholarship. This situation is quite natural, as the avatar is a new object in relation to which legal relationships are only beginning to take shape—hence the emergence of early scholarly discourse. In virtual environments, avatars are graphical representations of users online—images, icons, or illustrations that users prefer to present in place of themselves (*Benford et al., 1995; Lanier, 1996; Suler, 1999*).

A further refinement of the avatar's characteristics in this sphere is offered by O.Y. Avramova, who introduces the concept of *homo virtualis*—a virtual personality that

expresses identity in the digital environment and serves as a conditional participant in social relations (Avramova, 2022). A notable and bold proposition comes from international researcher T.T. Ochoa, who argues that each avatar should be regarded as a joint creation of both the game provider and the user. It is also considered a contribution to a collective work (the game as a whole), which offers an optimal balance between the interests of game providers and players (Ochoa, 2012). An avatar can be understood across several key dimensions: its visual appearance, which may be distinctive and highly individualised; movement dynamics; manner and sequence of actions that set it apart from others; and speech patterns and communication styles.

The concept of “electronic personhood,” as proposed by the European Parliament, is intended to apply in cases where intelligent systems interact with third parties autonomously. According to an EU Parliament report, “smart” robots granted electronic personhood status should be capable of acquiring new knowledge, adapting their behaviour to changing circumstances, and exchanging data with their environment (Stefano, 2019).

It is important to highlight the example of Accenture, a company that uses avatars in training processes through VR platforms that simulate real workplace scenarios to enhance employee skills (Accenture, 2022). Interactive avatars help create personalized training scenarios tailored to specific professional roles and increase employee engagement in the learning process. This approach not only optimizes training costs but also promotes professional development by addressing individual needs. Retail giant Walmart also implements avatars to support remote learning and foster corporate culture across its widespread workforce. Avatars serve as tools for interaction and motivation, helping to build unity and shared values within the virtual work environment (Walmart, 2024).

Thus, avatars in labor relations represent not only an innovative tool for the digital transformation of workplaces but also a source of new legal and ethical challenges. Understanding the experience of leading global companies enables the development of recommendations for the implementation of avatars that balance management efficiency with the protection of workers’ rights in the digital environment.

3. Main part

A brief overview of the domains and issues associated with the use of avatars highlights the urgent need to define the concept of “avatar” and to formally establish its position within the sphere of labour. Theoretical discussions about the nature of the avatar are still ongoing. Therefore, this article proposes the following interpretation of an avatar in labour relations: a digital representation of an employee, based on a graphic image and personalised means of interacting with the virtual world, controlled by the employer in the metaverse, and serving as a reflection of the employee’s professional reputation in accordance with the terms of the employment contract.

Two conceptual approaches to defining the avatar in the labour sphere may be conditionally distinguished. In a narrow sense, the employee-avatar is a virtual identity within the metaverse, including elements such as name (login or nickname), description, and appearance. Particular attention should be paid to the broad interpretation, in which the avatar is referred to as an account—the very tool through which the user interacts with the metaverse, used for information and data exchange. The account can be analysed through three key aspects: a collection of data about the user (employee) within an information system; the authentication of the employee; the provision of access to personal information and system characteristics of that employee.

The functional division between the employer and the employee lies in the exclusive right of the employer, as the rights holder, developer, or publisher of the virtual world, to the accounts. Nevertheless, the employee retains certain rights to their account, which must be clearly defined in the employment contract. The employee's interaction with the virtual world is mediated through their login to the account. Using an account is the primary way to access and utilise the metaverse, and rights to that account are governed by the employment agreement, which establishes the mutual rights and obligations of the employer and employee. Once the avatar is controlled by the employer, it becomes a representation of the employer's professional image in the metaverse. The contractual nature of the relationship regarding the use of the avatar and the employee's account explains the employer's ability to block the account if the employee violates the terms of the employment agreement or the metaverse's internal rules. Moreover, the employee's account may be reassigned or transferred to other employees during periods of absence (such as leave or temporary incapacity).

Today, high-tech companies increasingly encourage their employees to use avatars and interact within virtual environments. Virtual avatars serve as representations of individual users, allowing multiple users to simultaneously engage within a shared digital space. An avatar, as a manifestation of artificial intelligence, acts as a means of implementing the principles of a social state and depends on the effective realization of social rights and freedoms guaranteed by the constitution. At the same time, numerous issues arise, such as the handling of employees' personal data, which are directly connected to the transformation of constitutional foundations—primarily in the area of protecting human and civil rights and freedoms. Furthermore, there remains a lack of clear understanding whether a distinct citizen's right to a digital persona can emerge within the context of human rights concepts.

One of the priorities when creating avatars is data privacy protection. Employers must not collect or transmit employees' personal information without their consent. When data collection is necessary, it must be explicitly specified and the employee's consent obtained. Moreover, employers should ensure that employee avatars are not used in ways that discredit or demean the individuals they represent. Such behaviour may result in legal liability and negatively affect the company's reputation. These challenges are clearly outlined in the regulatory frameworks of the European Union, particularly in the General Data Protection Regulation (GDPR), which highlights the need to protect employees' digital identities, given that avatars may contain sensitive information (*European Parliament, 2016*). Transparency in the collection, processing, and use of avatar data is crucial, as are safeguards against discrimination or unlawful surveillance.

Among the key trends in employment relations involving avatars is the possibility for employers to offer employees the opportunity to create their own avatars. There are already real-world examples where avatars are actively used to enhance interaction between employers and employees, as well as to represent companies in the digital environment. For instance, in May 2025, Zoom CEO Eric Yuan used his own avatar—created with Zoom Clips and AI Companion technologies—to present the company's quarterly financial report. This case demonstrates that top global executives are beginning to adopt avatars as an innovative means of communication with investors and the public (*AI Frontiers, 2025*). Similarly, Klarna CEO Sebastian Siemiatkowski also utilized his AI-powered avatar to deliver the company's financial results, further confirming the growing acceptance of this technology in the business world (*AI Frontiers, 2025*).

As remote work becomes more common, digital avatars help employers and employees create a closer personal connection with each other. This allows companies to strengthen their brand image and increase customer loyalty. Typically, an employee can choose what their avatar will look like. An employee can create their avatar using creative activities, as opposed to using

software. The ability to customize every detail, from hairstyle to clothing style, from facial features to accessories, allows the employee to express themselves more freely. The employee has the opportunity to re-arrange the avatar in a way that is unique, leading to the ability to associate the avatar with a specific person, which is always unique in the digital environment. These avatars are more than just a profile picture, they become dynamic and interactive elements that reflect the employee's personality, style, and values. Compared to traditional methods, personalized avatars have the potential to create a deeper connection and increase retention. At the same time, it is much easier with avatars, which involve the representation of employees who can be modified according to the wishes of the employer. The study of such avatars is devoted to the work on the social network "Second Life" by J.-F. Bélisle and H. Onur Bodur "Avatars as Information: Consumer Perception Based on Their Avatars in Virtual Worlds" (Bélisle J.-F., Onur Bodur H. 2010). The authors emphasize that real companies that intend to expand into virtual worlds can use employee avatars as an indicator of personality. Digital avatars allow employees to choose the way of their own virtual representation, which contributes to greater self-expression and increases involvement in work processes (Bélisle J.-F., Onur Bodur H., 2010). This is especially important in remote work environments, where avatars help maintain emotional connections between team members and create a unique digital image of the company (Benford et al., 1995; Lanier, 1996; Suler, 1999).

It has been noted that an employee avatar is the face of the company in the digital world. Therefore, their correct formation is crucial for engagement and recognition. It should be noted that the employer should determine the target audience, the use of platforms where the employee avatar will be used, as well as the design and style of the avatar. The visual elements of the avatar greatly affect the first impression. The choice of color, facial features, clothing style and accessories should reflect not only the character of the employee avatar, but also the brand identity of the company. Thus, a more professional and simple design may be better for a corporate avatar, while brighter and more attractive colors can be used for an entertainment-oriented avatar. An employee avatar should not only be visually appealing, but also compatible with various technologies. Dynamic, high-resolution avatars can provide a more realistic and immersive experience. As trends and expectations in digital transformation change, the avatar must keep up with these changes and be constantly updated. As trends and expectations change, the employee avatar for the employer must keep up with these changes.

Employees can create their digital twins to participate in virtual meetings, training sessions, and social events, enhancing the sense of presence and fostering deeper team interaction (Microsoft, 2023). This refers to Microsoft, a company actively utilizing avatars in its corporate metaverse, Mesh. The continuous improvement of the digital employee-avatar ensures they remain engaging and effective as one of the most vital representatives of the company in the digital labor sphere.

Offering the ability to control and enhance one's image when customizing an avatar in the workplace in the metaverse can help overcome employee challenges in reducing stress caused by the pressure of self-presentation. With advanced technology, employee avatars have become more than just static images, but also animated and interactive. This allows employee avatars to feel more realistic and connected to the digital world. While the use of avatars offers many benefits, there are some important points to consider. When creating and using digital personas, various factors should be considered, from ethical principles (honesty and transparency) to security measures (avoiding misleading or discriminatory behavior). Otherwise, serious problems can arise for both individual employee avatars and the company. Especially if avatars

are used for misleading purposes, there can be negative consequences from the perspective of legal liability and the company's reputation.

It is important to emphasize that an employee's avatar is endowed with the freedom of visual representation and may be created in any manner the employee chooses, without reference to gender, race, or other attributes. Moreover, the choice of a specific type of avatar should not be discriminatory. It is worth noting that the ILO Convention No. 111 "Discrimination (Employment and Occupation)" includes in the definition of discrimination any distinction, exclusion, or preference made on the basis of race, color, sex, religion, political opinion, national extraction, or social origin (*ILO, 1958*). At the same time, this situation creates a risk that the employee might become the subject of humiliating comments in the form of insults or jokes. We are convinced that the implementation of such an arrangement is possible only with the involvement of the employer. It is important to provide employees with recommendations in the form of characteristics that an employee's avatar may possess, and to take care in developing requirements regarding the avatar's appearance that would not become the basis for claims of discrimination or harassment. Employers and employees design and create their work environment with the aim of optimization, not confrontation with digital technologies. The main position of the strategy is to avoid restrictions that may cause claims of religious discrimination, such as bans on religious symbols, or age discrimination, such as requiring avatars to appear younger than their real-life counterparts. Generally, it is advisable to avoid behaviors and appearances that could negatively affect the company's image.

It should be emphasized that the avatar of the employee is endowed with the freedom of visual representation and in any way he chooses without gender, race or other attributes. And that this choice of a specific type of avatar is not discriminatory. It is worth noting that the ILO Convention "On Discrimination in Employment and Occupation" No. 111 includes in the concept of discrimination any distinction, exclusion or preference made on the basis of race, color, sex, religion, political opinion, national origin or social origin (*ILO, 1958*). At the same time, this is where the employee risks becoming the subject of derogatory comments in the form of insults or jokes. We are convinced that this approach can only be implemented with the help of the employer. It is important to consider recommendations to the employee in the form of characteristics that an employee's avatar may possess, and to take care of developing requirements for the avatar's appearance, which could not become the basis for a claim of discrimination and harassment. The employer and employees create and design their work to optimize, not oppose, digital technologies. The main position of the strategy is to avoid restrictions that may give rise to claims of religious discrimination, in particular, bans on religious symbols or age discrimination, to require that avatars reflect a younger image than their real counterparts. In general, to avoid behavior and appearance that may negatively affect the company's image.

However, it is worth noting that avatar harassment as a form of discrimination can occur while working in a digital environment. The issue of prohibiting violence and harassment in the workplace is set out in the ILO Convention "On the Elimination of Violence and Harassment in the Workplace" (*ILO, 2019*). Finding ways in the workplace to quickly resolve these issues is the responsibility of the employer, in particular, to accept and conduct consultations with employees in the context of digital transformation, which lie in the plane of clarifying the specific characteristics and differences between them.

Another problem arises when an employee creates their own avatar based on pre-programmed digital figures that are then modeled on the employee's physical form; this can be regarded as "intellectual work." Consequently, the employee may later assert intellectual property rights. Thus, there is a new "work" that can be considered a creation expressed in a certain

form and original in the sense that it bears the personal imprint of the author. It is difficult to assert that a work-related avatar would constitute the employee's intellectual property. It should be noted that when an employee creates a work during the performance of their employment contract that is used by the employer, copyright protection applies solely for the purpose of creating and using products and services. Moreover, if it is a personal work-related avatar created by the employee, the employer should obtain the employee's consent before using the avatar. To foster cooperation, it is advisable to clearly stipulate this in the employment contract, despite the fact that the employee may not be able to claim intellectual property rights to the work avatar. It becomes evident that the uniqueness of each avatar—created through creative activity and manifested in a digital objective form—can be afforded legal protection depending on the nature of the developer's work. Today, technological changes prompt employers to establish clear rules and guidelines regarding the use of avatars in the workplace, covering appropriate behavior and any restrictions on avatar usage. It should be noted that employers may require employees to use professional avatars that do not disclose personal information and clarify who has the right to use employees' avatars, for example, for internal purposes or when providing services.

An avatar linked to an employee becomes a form of personal data. The main directions that should be considered include: processing of registries; adaptation of privacy policies; the necessity of a legal basis for processing; avatars must not process more data than necessary for a specific purpose; ensuring security and rights of access; correction, deletion, and restriction of processing. Accordingly, questions may arise as to whether an employee has the right to take their avatar with them or delete it after termination of the employment contract.

When considering avatars as providers of digital services, issues may arise regarding the consequences related to the application of legal remedies for non-provision, as well as remedies for failure to provide diligent services. Generally, a user of the metaverse may seek legal remedies from the seller's avatar. However, there are cases when services provided by an avatar violate the rights of third parties in a series of transactions, which may involve acts or omissions by persons in preceding steps of that chain, leading to non-provision or inadequacy of the digital service. In such cases, the seller avatar has the right to claim compensation and to apply legal remedies against the person responsible for the chain of operations. An employee avatar that uses authorized technology which does not create an increased risk of harm to others must fulfill duties regarding proper selection, operation, monitoring, and maintenance of the technology used; otherwise, they must bear responsibility for breaches of the corresponding duties. The employer is obligated to ensure that the avatar has the right to legal remedies in cases of non-compliance, up to termination of the employment contract with the employee represented by that avatar for improper provision of digital services. It should also be noted that the employee avatar cannot transfer their duties under job descriptions and employment contracts to other employee avatars. This aspect may be part of the dynamics of a particular digital world, and the parties involved in the employment contract are generally free to negotiate these conditions.

The further development of artificial intelligence has led to the active application of neurotechnologies in the labor sphere. At the same time, the issue arises of experimental testing of neurotechnology use and its subsequent implementation in work processes. Directions in labor legislation grant the employer the right to prefer employees with higher performance results. This view is supported by Allan McKay, who argues that employers try to gain an advantage over competitors by using neurotechnologies to enhance the productivity of their workplaces (*Horizon Report for The Law Society, 2022*). In this aspect, neurotechnology acts as an effective

tool for employers not only to increase labor productivity but also to predict employee behavior and commercialize the obtained data. Employers performing actions unavailable to employees without neuro-implants gain several advantages: increased memory capacity; faster reaction speed; infrared vision; the ability to sense very hot and cold objects; direct connection to computers, robotics, and other devices at the workplace; copying information and storing it on a USB drive embedded in the body, among others. Employers may also involve employees directly. By leveraging neurotechnology achievements to enhance human natural capabilities, employees gain an advantage over others. Consequently, this allows for better results from employees equipped with such devices. Neurotechnologies in the labor sphere carry risks for employees, including potential dismissal or disciplinary action for refusing to participate in experiments related to the use of neurotechnologies. Participation of employees with complex neuro-implants raises a number of problems and questions about special regulation of labor relations. Furthermore, the collection and analysis of neurodata may create new opportunities for violations of privacy and data security.

Subsequent clarifications to the characteristics of avatars introduced innovative features, whereby artificial intelligence will enable impressive scales of employee monitoring. Not only will work pace, breaks, and drowsiness levels be measured (*Hirsch, 2019*), but also the suitability of a specific employee for particular tasks will be assessed (*Stefano, 2019*). Thus, artificial intelligence technologies may influence personnel optimization, while collected data may expose employees to risks of surveillance or manipulation, as questions of morality, ethics, and security remain open.

4. Conclusions

Particular importance is given to “pervasive” digital technologies — neurotechnologies, artificial intelligence technologies, robotics, quantum technologies, wireless communication technologies, virtual and augmented reality. For these reasons, the presence of artificial intelligence in the labor sphere is increasing, since virtual reality is a space where AI systems have even more possibilities than in the physical world. The development of platform labor in the metaverse will become more complex in combination with other digital technologies and their expansion in the labor sphere. The approach to the workplace is changing, becoming virtual, as well as the possible options for new quality management and full application in practical activity. A general trend is the emergence of a growing share of virtual workplaces, where consideration of the specific features of each employee includes the protection of workers’ rights in digital environments. Within this framework, the fundamental principles of labor relations remain valid regardless of the platform. It is worth noting that knowledge and understanding of the listed demands on the digital identity (avatar) in labor relations raise critical questions regarding the application of labor law when using them on digital platforms within the metaverse. The legal issues related to the digital identity (avatar) in labor law include, in particular, questions concerning the definition of the legal status of avatars, the protection of personal data, regulation of digital monitoring, and prevention of discrimination in the digital space (*Wood et al., 2020*); the impact of digital identity on the labor sphere and the employee’s work function; the permissibility of delegation in making personnel decisions; and encompass technological, organizational, and legal measures that ensure fairness, transparency, and security (*Fitzgerald, Kruschwitz, 2013*); the limits of digital monitoring of employee behavior and protection of their privacy from unlawful interference by the employer. The application of avatars in labor relations can significantly increase productivity, adaptability, and employee engagement,

thereby promoting the development of digital corporate culture (Cascio, Montealegre, 2016). To achieve positive resolution of these issues, a thoughtful and coordinated approach is needed for the study and development of appropriate legal mechanisms to ensure fair and safe labor relations in the digital space. This rapid development of social needs and technologies will help facilitate the establishment and implementation of legal provisions to address specific problems or anticipated risks related to avatar use in the near future, thus enhancing regulatory effectiveness and the responsiveness of legal frameworks in the evolving digital landscape.

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THE JUDICIAL SYSTEM AND FORMATION OF THE JUDICIARY UNDER CONDITIONS OF WAR

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Summary

The aim of this article is to analyze the legislative initiatives of the Ukrainian Parliament concerning the establishment of military courts and to forecast the feasibility of their implementation. The forecasting encompasses the current state of the judicial system, the staffing levels of courts with judges, and the progress of judicial selection procedures under the current functioning of the Higher Qualification Commission of Judges of Ukraine (HQCJ). The article examines the historical background and reasons behind the dissolution of military courts in Ukraine, as well as the potential for their restoration during wartime. It also evaluates the prospects for forming a corps of judges, taking into account the ongoing competitive selection and appointment procedures. A crucial aspect considered in the study is that any decision made by public authorities must be assessed in terms of its enforceability, short- and long-term consequences, and the financial resources required for implementation. With limited exceptions, any governmental decision entails amendments to budgetary allocations. The methods applied in the study include: the historical method (for analyzing the dissolution of military courts in Ukraine); systems analysis (for examining the judiciary and assessing the feasibility of establishing a separate branch of courts within its structure); legal analysis (for assessing draft normative acts, their impact on the judiciary, and the prospects for implementation); and general scientific methods.

Key words: military criminal offenses, criminal proceedings, pre-trial investigation, serviceman, trial, criminal liability, draft law, military court.

DOI <https://doi.org/10.23856/7021>

1. Introduction

In every decision made by public authorities, it is essential to consider not only the question “why?”, but also “how?”, “when?”, “for what purpose?”, “is it feasible?”, and others.

Currently, several draft laws have been submitted that propose the restoration of military courts in Ukraine. However, given the time that has passed since their dissolution, it is more accurate to speak of their establishment rather than restoration.

Without challenging the very idea of restoring (establishing) military courts, it is necessary to raise several reservations that the drafters of such legislation appear to overlook.

An illustrative reference may be made to a quote from a well-known television series – Criminal Minds: one of the most harmful public campaigns targeted at children was “don’t go with strangers,” which was promoted nationwide through public service announcements.

However, criminological and forensic research provides the following empirical insights.

When developing a criminologically relevant typology of kidnapping victims, it is crucial to account for the nature of their relationship with the offender. According to this criterion, four groups can be distinguished: Group one – individuals whose interaction with the perpetrator occurs at the moment of the crime (35%). Group two – individuals whose interaction with the perpetrator developed through a casual acquaintance (23%). **Group three – individuals whose relationship with the offender was based on a prior personal acquaintance (40%).** Group four – individuals who were in marital, familial, or other close relations with the offender (2%) (*Olyshevskyi, 2004*).

Approximately 50% of rape victims were previously acquainted with the perpetrator; 20% were intoxicated, and 11% were in a helpless state. Notably, 53% of victims were assaulted in their own apartments, often after having spent leisure time with the offender (*Holina V.V., Holovkin B.M., 2014*).

Data on the relationship between child sexual abuse victims and the offenders indicate: previously unknown – 25%, **acquainted – 45%, close relatives – 30%** (*Romantsova S., 2018*).

Clearly, “strangers” pose significant threats to children, but as the data demonstrates, abuse by acquaintances is also a serious and non-negligible danger.

Accordingly, prior to taking legislative steps, it is imperative to assess both the immediate and long-term consequences of any decision.

In the context of reestablishing military courts, this includes: the creation process itself, geographical placement, the timeline for operational readiness, security considerations, the speed and sources for forming a judicial corps, the nature of offenses currently committed by military personnel, among others.

The objective of this article is to draw conclusions regarding the necessity and feasibility of establishing military courts, based on an analysis of relevant draft laws, historical circumstances surrounding the dissolution of military courts, and statistical data on offenses committed by military personnel. The article does not aim to analyze the general necessity of forming military courts – a subject comprehensively addressed, for instance, in the monograph by Yu. Bobrov titled “Problems of Formation and Development of the Military Court System in Ukraine” (*Bobrov Yu., 2025*), whose abstract notably states: “The necessity of establishing military courts within the judiciary of modern Ukraine is substantiated in order to ensure the proper protection of the rights, freedoms, and legitimate interests of servicemen, and to provide legal support for national defense.”

2. Dissolution of Military Courts: Stages and Rationale

It is important to recall how the dissolution of military courts took place and what the underlying reasons were, in order to determine whether those reasons remain relevant today.

The process of dissolving military courts began in 2004 with the issuance of Presidential Decree No. 1262/2004 dated 19 October 2004, titled “On the Dissolution of Certain Military Local Courts and Amendments to the Network and Number of Judges of Military Appellate and Military Local Courts.” This decree eliminated several military courts and reduced the number of military judges from 157 to 132.

On 14 September 2010, the President of Ukraine issued a Decree “On the Dissolution of Military Appellate and Military Local Courts,” pursuant to paragraph 23 of part one of Article 106 of the Constitution of Ukraine, Article 19 and paragraph 4 of Section XIII “Transitional Provisions” of the Law of Ukraine “On the Judiciary and the Status of Judges.” Through this decree, all military courts were formally dissolved.

The official rationale for the dissolution of military courts was based on several factors:

1. Economic inefficiency: The downsizing of the Armed Forces of Ukraine led to a significant decrease in the number of cases to be adjudicated by military courts, rendering their continued operation financially unjustified.

2. Aspiration toward European standards: The existence of military courts was viewed as a potential violation of the principle of judicial independence, as judges might be subject to influence from military command structures.

3. Judicial reform: The dissolution of military courts was part of a broader judicial reform initiative aimed at establishing higher courts, including the High Specialized Court of Ukraine for Civil and Criminal Cases and reforms of the Supreme Court.

Any future efforts to reestablish military courts should be evaluated with these factors in mind.

3. Draft Laws on the Restoration of Military Courts

One of the actively debated issues in the legal domain today is the restoration of military courts. The answer to the question “why?” is often simplified: because there is a war. However, the legislator seems to have left the other questions – “how?”, “when?”, “for what purpose?”, and “is it feasible?” – largely unanswered, both for society and possibly even for themselves.

Currently, there are two alternative draft laws proposing the restoration (establishment) of military courts:

Draft Law No. 13048 of 27 February 2025, “On Amendments to the Law of Ukraine ‘On the Judiciary and the Status of Judges’ Regarding the Functioning of Military Courts,” authored by S. Vlasenko (5, Draft Law No. 13048);

Draft Law No. 13048-1 of 11 March 2025, “On Amendments to the Law of Ukraine ‘On the Judiciary and the Status of Judges’ Regarding the Establishment and Organization of Military Courts,” authored by M. Dyrdin (6, Draft Law No. 13048-1).

Efforts to restore military courts had also been made earlier, particularly in 2015 in connection with the start of the Anti-Terrorist Operation (ATO).

It is important to analyze specific provisions of the draft laws, particularly in light of the factors that previously led to the dissolution of military courts.

Have the draft laws taken into account the reasons for which military courts were abolished, particularly the concern about potential influence on judicial independence?

Draft Law No. 13048:

“Article 56-2. Procedure for Conferring Military Ranks upon Judges of Garrison Military Courts, Military Appellate Courts, and the Supreme Court

...2. Judges of garrison military courts, military appellate courts, as well as judges of the chamber for military cases within the Criminal Cassation Court, shall be conferred officer military ranks, starting from Junior Lieutenant of Justice. The procedure for conferring and promoting military ranks shall be defined by a regulation approved by the Ministry of Defense of Ukraine in coordination with the High Council of Justice.

The procedure for conferring higher military ranks shall be determined by the President of Ukraine.” (5, Draft Law No. 13048).

Draft Law No. 13048-1:

“13) To supplement Article 52 with a third part reading as follows:

3. Judges of local military courts, the Military Appellate Court, and the Military Judicial Chamber of the Supreme Court shall perform military service in accordance with the law and the Regulation on Military Service in Military Courts, which shall be approved by the President of Ukraine upon the submission of the High Council of Justice.” (6, Draft Law No. 13048-1).

As can be seen, the issue of potential influence on judicial independence remains unresolved.

Do the legislators account for the financial implications – or rather, the lack thereof – for creating a system of military courts?

Draft Law No. 13048:

“5. Financial and Economic Justification

The adoption of this particular law does not require additional expenditures from the State Budget of Ukraine. Financial and economic calculations will be provided within the draft laws on the establishment of garrison military courts and military appellate courts.” (5, Draft Law No. 13048).

Draft Law No. 13048-1:

“5. Financial and Economic Justification

The implementation of this draft law will not require additional expenditures but rather a reallocation of existing ones, since the proposed legislative amendments are intended to be carried out using current judges, court staff, and the already existing material and technical base of the judicial system.” (6, Draft Law No. 13048-1)

It appears that the authors of these draft laws operate in a parallel reality – one where government decisions do not entail the need for financial resources for their implementation.

4. Feasibility and Necessity of Restoring Military Courts at Present

Is it possible to carry out the selection of judges at this time? According to data from the HQCJ (<https://vkksu.gov.ua/oblik>), 4,457 judges are currently serving. The total number of judicial positions that must be filled is 6,582. Accordingly, 2,125 positions remain vacant. (The published list of judges includes 4,919 individuals – greater than the number of active judges – likely due to some judges lacking authority at present.)

Naturally, the situation varies depending on the court instance, region, individual court and judge workload, and so forth. Statistical data indicate that 32% of judicial positions are vacant overall. The situation is most critical in appellate courts, where more than 56% of judicial positions remain unfilled.

Competitions for positions in local and appellate courts are ongoing, and a competition has been announced for the High Anti-Corruption Court. This raises the question: can the HQCJ (whose current composition remains in office until 2027) realistically conduct an additional competition? This appears unlikely.

Nevertheless, the draft laws propose extremely tight deadlines for such procedures. For example:

Draft Law No. 13048 states: “II. Final and Transitional Provisions. Part 2, item 6: The Higher Qualification Commission of Judges of Ukraine shall conduct a qualification examination by means of anonymous testing in the specialization of military law and practical assignments *within two months* following the deadline for submitting application documents.”

Draft Law No. 13048-1 provides: “3. The selection of candidates for the position of judge in a military court shall be conducted with the particularities defined by this Law and the Regulation on Military Service in Military Courts, within a period not exceeding *two months* from the date of the competition announcement.”

As of now, the competition for appellate court judges, announced in November 2023, is still ongoing.

Can judges of general jurisdiction courts adjudicate criminal proceedings involving servicemen, taking into account the nature of the offenses they commit?

Table 1

Registered in 2023 (Five Sections with the Highest Number of Offenses Committed by Servicemen) (Karchevskiy, 2025):

№	Section	Total (registered according to OGPI*)	Servicemen (registered according to OGPII*)	Note
1.	XIX Criminal offenses against the established procedure of military service (military criminal offenses)	28,666	3,210	Art. 407 AWOL** (1792), Art. 408 (99)
2.	XIII Criminal offenses in the sphere of trafficking in narcotic drugs, psychotropic substances, their analogues or precursors, and other offenses against public health	39,124	1,740	Art. 309 (without intent to distribute) (1691)
3.	XV Criminal offenses against the authority of public authorities, local self-government bodies, public associations, and criminal offenses against journalists	25,697	752	Art. 358 (665) (Forgery of documents, use of forged documents)
4.	II Criminal offenses against life and health of an individual	63,766	715	Art. 115 (130), Art. 121 (99)
5.	VI Criminal offenses against property	178,902	584	Art. 185 (416)

Statistical data on registered criminal offenses committed by servicemen indicate that judges of local courts are capable of handling such proceedings, the majority of which do not require specialized military knowledge.

Moreover, Draft Law No. 13048 includes the following provision: “...3. In the adjudication of cases related to military service, judges of military courts have the right to involve military experts for consultations, clarifications, or to provide opinions on military matters. The list of accredited experts shall be approved by the General Staff of the Armed Forces of Ukraine.”(5, Draft Law No. 13048) This provision suggests that even the establishment of military courts staffed with specialized judges will not eliminate the necessity of involving subject-matter experts in specific areas of military practice – an option equally available to judges of general jurisdiction courts.

What measures can be taken to ensure the adequate protection of the rights and freedoms of servicemen in judicial proceedings?

Certain steps have already been taken in this direction. In 2024, the National School of Judges of Ukraine, funded by the State Budget and international organizations, conducted 205 educational

Table 2

Registered in 2024 (Five Sections with the Highest Number of Offenses Committed by Servicemen) (Karchevskiy, 2025):

№	Section	Total (registered according to OGPI*)	Servicemen (registered according to OGPII*)	Note
1.	XIX Criminal offenses against the established procedure of military service (military criminal offenses)	93,900	6,841	Art. 407 AWOL** (5405), Art. 408 (323)
2.	XIII Criminal offenses in the sphere of trafficking in narcotic drugs, psychotropic substances, their analogues or precursors, and other offenses against public health	48,233	2,368	Art. 309 (without intent to distribute) (2313)
3.	II Criminal offenses against life and health of an individual	80,054	1,418	Art. 121 (151), Art. 126-1 (150), Art. 115 (140)
4.	VI Criminal offenses against property	132,910	1,302	Art. 185 (980)
5.	IX Criminal offenses against public safety	8,789	897	Art. 263 (Unlawful handling of weapons) (879)

*OGP – The Office of the Prosecutor General

** AWOL – Unauthorized absence from a military unit

events for the training and ongoing professional development of judges. These activities reached a total of 9,904 judges through various formats of instruction (Information and Analytical Report: <https://nsj.gov.ua/files/1737634627%D0%92%D0%98%D0%A2%D0%AF%D0%93%D0%B7%D0%86%D0%90%D0%97%D0%9D%D0%A8%D0%A1%D0%A3%D0%B7%D0%B0%202024%D0%91%D0%80%D0%96%D0%BA-new.pdf>).

According to the report, in cooperation with and supported by international technical assistance projects, international and non-governmental organizations, and civil society organizations, a range of relevant training events were conducted for judges (highlighting those related to servicemen):

- Trainings such as “Training on International Humanitarian Law and Attacks on Infrastructure Objects,” “Mediation as a Means of Settling Family Conflicts (Disputes),” “Training on the Use of Open-Source Intelligence (OSINT) in the Investigation of War Crimes,” “Basic Course on International Crimes,” “Adjudication of International Crime Cases in Ukraine and Drafting Judicial Decisions,” “Conflict-Related Sexual Violence,” and “Compensation for Damages Caused by the Armed Aggression of the Russian Federation to Citizens and Legal Entities in Ukraine”;
- Webinars such as “War Crimes and Related Issues in the Context of Armed Conflict in Ukraine,” “Military Administrative Offenses: Qualification Challenges,” and “Webinar on the Investigation of Child Abduction Crimes in Wartime Conditions”;
- Roundtables on “Problematic Aspects of Investigating and Adjudicating War Crime Cases” and “Challenges in the Investigation and Judicial Review of Cases During Martial Law: Interrogation and Jurisdiction”;

– Conference on “Promoting Judicial Well-Being During Conflict and Gender Sensitivity in Ukraine’s Judicial System.”

5. Conclusions

The findings of this study allow for the following conclusions:

The draft laws proposing the restoration of military courts fail to address key aspects of such a process: they do not eliminate the risk of influence by other branches of government on the judiciary; they disregard the financial implications of establishing a separate branch of the judiciary; and they do not realistically account for the time required to complete judicial selection procedures.

Statistical data on registered offenses committed by servicemen (for the years 2023–2024) reveal other urgent issues requiring immediate attention – such as substance abuse, the need for psychological support, and adequate financial provision for servicemen – which must also be addressed at the legislative level.

A feasible interim solution for ensuring the proper protection of the rights and freedoms of servicemen in judicial proceedings is the continued work of the National School of Judges to enhance the qualifications of sitting judges.

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PUBLIC-PRIVATE PARTNERSHIP AS A STRATEGY FOR PREVENTING CORRUPTION IN UKRAINE'S PUBLIC HEALTH SECTOR MANAGEMENT

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Summary

The article explores the potential of public-private partnership (PPP) as an effective anti-corruption tool in the healthcare sector of Ukraine. Given the traditionally high level of corruption risks in this area – especially in procurement, infrastructure development, and public resource management – the study emphasizes the transformative role of PPP in promoting transparency, accountability, and integrity. The paper analyzes the legal framework, including the Law of Ukraine "On Public-Private Partnership" and related legislation, and highlights the importance of long-term contractual obligations, open competition, independent audits, and the use of digital monitoring tools. Particular attention is paid to existing institutional and legal barriers, such as insufficient regulatory detail, limited professional capacity among civil servants, and the lack of standardized procedures for risk assessment. The article also underlines the importance of public control, the role of national anti-corruption bodies, and the need for independent oversight mechanisms. The experience of EU countries is referenced as a model for reform. The authors conclude that PPP can serve as both a mechanism for attracting investment and a strategic instrument for corruption prevention – provided that it is supported by strong legal safeguards, political will, and inclusive governance. Recommendations are made for improving regulatory standards, digital infrastructure, and civic participation in PPP implementation.

Key words: healthcare, corruption prevention, medical services, integrity, transparency, public resource management, public policy, partnership relations.

DOI <https://doi.org/10.23856/7022>

1. Introduction

Problem statement. Public-private partnership (PPP) is increasingly being considered as an effective tool for modernizing the healthcare sector, while it is gaining particular importance in the context of the systemic fight against corruption. In Ukrainian realities, the issues of increasing transparency and accountability in the use of budget funds, effective property management, and the provision of medical services without abuse remain among the most pressing challenges. The presence of corruption risks in the healthcare sector, especially in the procurement, construction, and operation of infrastructure facilities, necessitates the search for new approaches that can ensure both increased resource efficiency and reduced abuse.

Public-private partnership can become such a tool, as it provides for a clear division of responsibilities, long-term commitments, the implementation of corporate governance standards, and increased attention to open tender procedures, monitoring, and audit. At the same time, insufficient regulatory detail, uneven practice of PPP application in the medical sector, lack of permanent anti-corruption safeguards in PPP projects create risks for the effective

implementation of this mechanism. There is a need for scientific understanding of the potential of public-private partnership as a tool for overcoming corruption in the healthcare system, as well as substantiation of directions for its development taking into account modern challenges and strategic objectives of the state.

2. The Anti-Corruption Potential of Public-Private Partnership in Healthcare

Public-private partnership in the healthcare sector of Ukraine appears as a tool not only for modernizing infrastructure and attracting investments, but also an important factor in forming an anti-corruption paradigm. In the context of the long-term reform of the industry, accompanied by attempts to increase the efficiency of public administration and provide quality medical services, PPP allows for the introduction of new approaches to resource and project management based on the principles of integrity, responsibility and openness. The participation of the private sector in the implementation of projects implies greater discipline in the use of funds, stricter reporting requirements, as well as an independent audit of the fulfillment of obligations, which reduces the likelihood of corruption abuses.

One of the key advantages of PPP in the context of combating corruption is the ability to optimize procurement procedures, construction, operation of medical facilities and provision of services. Due to the competitive selection of partners, contractual regulation with fixing of responsibility for violation of the terms of the contract, as well as the availability of control instruments from both the state and the public, the commission of illegal actions is significantly complicated. Moreover, private investors interested in long-term cooperation and protection of their own reputation usually adhere to higher standards of transparency, which has a positive effect on the overall level of management culture. In 2010, the Law of Ukraine “On Public-Private Partnership” was adopted, which created the basis for the legal registration of the interaction of the state and business, enshrined the principles of transparency, equality of parties, risk sharing and accountability, which are extremely important in the context of overcoming corruption practices in the healthcare sector (*Law of Ukraine ‘On Public-Private Partnership’, 2010*). This regulatory act establishes requirements for the competitive selection of a private partner, control over the implementation of contracts and conditions for attracting state resources, which makes it impossible to conclude agreements in the interests of individuals.

3. Legal and Institutional Challenges in the Implementation of PPP Projects

At the same time, the practice of implementing public-private partnerships in the medical sector of Ukraine faces a number of barriers that limit its anti-corruption potential. In particular, the lack of clear and detailed project selection procedures, the opacity of some decisions, a formal approach to risk assessment, as well as the weak institutional capacity of individual public authorities reduce the effectiveness of this mechanism. Also, proper public participation in the process of planning and monitoring the implementation of projects is not always ensured, which leaves opportunities for informal influence and decision-making in the interests of individuals or groups.

The anti-corruption effect of PPPs largely depends on the application of the principles of openness of public finances. In particular, the Budget Code of Ukraine provides for mandatory open reporting on the use of budget funds used within the framework of PPP projects (*Budget Code of Ukraine, 2010*). This creates an additional tool for controlling the targeted use of funds within the framework of the implementation of medical initiatives with the participation of private capital.

Another problematic aspect is the insufficient level of training of officials responsible for initiating, implementing and monitoring PPP projects. Lack of professional knowledge in the field of risk management, contract law and project management leads to the conclusion of poor-quality contracts that do not provide adequate protection of state interests and can become a tool for covering up abuses. Under these conditions, there is a need not only to improve the regulatory framework, but also to form a holistic system of training, methodological support and monitoring of the implementation of partnership projects. An additional guarantor of transparency in the implementation of PPP projects is the Prozorro system, which provides open access to information on all stages of public procurement. The Law of Ukraine “On Public Procurement” requires the publication of the terms and results of procurement, including those taking place within the PPP (*Law of Ukraine ‘On Public Procurement’, 2015*). This minimizes the risks of collusion, overestimation of the cost of services or goods and allows the public to monitor.

4. Digital Tools, Public Control, and the Role of Key Institutions

It is also worth noting that the anti-corruption effect of PPP largely depends on the political will for change, as well as on the systematic interaction between all participants in the process – state bodies, private partners, the public, and regulatory authorities. Creating an effective PPP mechanism as an anti-corruption tool requires the introduction of a mandatory assessment of corruption risks at all stages of the project, unification of transparency standards, mandatory public reporting, and the use of digital control tools. In this context, it is especially important to introduce reference models of PPP projects in the healthcare sector that have already proven their effectiveness and have become an example for other regions to follow. The successful use of public-private partnerships as an anti-corruption tool requires not only proper legal regulation, but also the formation of trust between all participants in the process. This involves ensuring transparency at the initiation stage, thorough justification of the feasibility of the project, conducting independent expertise, and regular public control. Involving independent observers, specialized anti-corruption organizations and representatives of patient associations in decision-making processes significantly increases the level of trust and prevents manipulations related to the choice of a private partner, investment volumes or sources of financing. It is especially important to ensure public access to all documents related to the implementation of PPP projects in the healthcare sector. In countries with developed institutional traditions and established public management practices, PPP plays a significant role in reducing the level of corruption in the healthcare sector. In particular, the experience of some European countries shows that transparent mechanisms for selecting contractors, open databases on costs, digitalization of processes and a system of independent assessment of the results of the implementation of partnership agreements contribute to the formation of an effective and honest healthcare system. Successful implementation of such approaches in Ukrainian conditions is possible only under the condition of a comprehensive reform of the institutional capacity of the state, a change in management culture and the consistent implementation of the principles of good governance.

One of the important elements of ensuring the anti-corruption effectiveness of PPP is the creation of specialized information platforms that allow tracking the progress of medical projects, monitoring the use of budget funds, recording the stages of work and reporting by the private partner. Such tools should be open to citizens and control bodies, which will ensure constant public supervision and minimize the likelihood of misuse of resources. Of particular importance is the implementation of electronic document management and automated systems for verifying the integrity of participants participating in tenders for PPP contracts.

An important factor remains the role of state financial control bodies, anti-corruption institutions and law enforcement agencies in supporting PPP projects. Their activities should not be repressive, but preventive, focused on preventing risks and ensuring a timely response to identified violations. Instead of formal intervention, it is necessary to participate in the creation of recommendations, the analysis of the most typical schemes of abuse, as well as the development of standard contracts with built-in anti-corruption safeguards. This approach will create an environment of mutual responsibility in which risks will be predictable and their prevention will be systemic. In addition, significant attention should be paid to the issues of long-term economic efficiency of partnership projects in medicine. Corruption often occurs where there is no clear methodology for assessing effectiveness or when the expected social effects of the project do not correspond to real costs. Public-private partnership should be not only an anti-corruption tool, but also a mechanism of social responsibility, based on transparent rules, patient interests and a focus on results. The introduction of a system of strategic analysis and post-audit of the results of the PPP implementation allows not only to detect abuse, but also to improve the quality of decisions in the future.

Another key aspect of the effective use of public-private partnerships as an anti-corruption tool in the healthcare sector is the formation of legal certainty in the relationship between the parties to the partnership. Clear regulation of rights, obligations, responsibilities and interaction procedures within the framework of the contract allows avoiding double interpretation of provisions and manipulations. At the same time, it is necessary to ensure the uniformity of the terms of such contracts at the national level, since their excessive variability creates the basis for abuse and hidden corruption interests. It is important that each contract in the PPP sector not only meets the requirements of the legislation, but also contains special anti-corruption provisions, provides for mechanisms to prevent conflicts of interest, as well as sanctions for violations of integrity standards.

The role of the National Agency for the Prevention of Corruption (NAPC) in the PPP sector consists, in particular, in the development of anti-corruption programs for government bodies and in the analysis of corruption risks in projects financed by the state. In its analytical report for 2023, the agency emphasizes the importance of taking into account the specifics of the medical sector when developing anti-corruption measures in the PPP (*National Agency on Corruption Prevention, 2023*).

Decree of the President of Ukraine No. 722/2019 “On the Decision of the National Security and Defense Council of Ukraine of October 18, 2019 “On Measures to Ensure State Anti-Corruption Policy”” emphasizes the need to involve non-state actors in the implementation of health policy, including PPP mechanisms (*Decree of the President of Ukraine ‘On the Sustainable Development Goals of Ukraine until 2030’, 2019*). Thus, it has been determined at the highest level that cooperation with business should take place taking into account the principles of transparency and integrity.

Given that PPP projects in the healthcare sector are long-term in nature, there is a need to ensure their stability, predictability and protection from political influence. Corruption often uses a change in political course as a tool for pressure or redistribution of influence. In order to protect partnership projects from such risks, it is advisable to create independent PPP support institutions that will be devoid of political bias and will be guided exclusively by professional and legal criteria. Such an institutional approach allows for the establishment of stable mechanisms for risk management, process standardization, and the accumulation of knowledge and experience, which makes situational and corrupt influence on decision-making impossible.

The State Audit Service of Ukraine plays an important role in ensuring proper control over the implementation of PPPs in the healthcare sector. The report on the results of the monitoring of procurement in 2022–2023 indicates that the main violations remain the opaque determination of the expected cost, circumvention of procedures through fragmentation of procurement and insufficient justification of technical conditions (*State Audit Service of Ukraine, 2023*). These risks should be taken into account when developing contractual documentation for PPP projects. At the regulatory level, the implementation of anti-corruption tools in PPP is supported by the Law of Ukraine “On Prevention of Corruption”, Article 19 of which directly provides for the mandatory anti-corruption examination of draft decisions of government bodies that have signs of public-private interaction (*Law of Ukraine ‘On Prevention of Corruption’, 2014*). This norm allows for the introduction of preventive measures even before the implementation of initiatives in the medical sector begins.

In the conditions of martial law and post-war reconstruction of Ukraine, the anti-corruption potential of public-private partnerships in the healthcare sector is becoming particularly relevant. Against the background of limited financial resources, the need to quickly restore the destroyed medical infrastructure and the need for modern technologies, PPP can become a tool for effective mobilization of private capital and management decisions. At the same time, in emergency situations, the risk of weakening control increases, which, in turn, creates a favorable environment for corruption. Therefore, it is extremely important to ensure a balance between the efficiency of project implementation and compliance with transparency and accountability standards.

The issue of fair distribution of benefits from the implementation of partnership projects requires special attention. Society should see the real effect of PPP in the form of more accessible and high-quality medical services, and not just the formal implementation of infrastructure tasks. Violation of this principle creates risks of social tension, distrust in the PPP mechanism itself and, as a result, discrediting the idea of anti-corruption partnership. Analysis of judicial practice shows that corruption violations in the healthcare sector are often associated with manipulations in the conclusion of contracts for the construction and reconstruction of medical facilities. According to the Unified State Register of Court Decisions, a number of cases have been identified where the terms of contracts were changed after they were concluded in the interests of the private partner (*Unified State Register of Court Decisions, n.d.*). This emphasizes the need for legislative restrictions on such changes in PPP contracts. That is why it is advisable to introduce a mandatory assessment of the social impact of PPP projects with the involvement of independent experts, patient organizations and the professional community.

Mechanisms of public control, in particular the participation of public councils and patient organizations, are provided for by the Resolution of the Cabinet of Ministers of Ukraine No. 996 of November 3, 2010 “On Ensuring Public Participation in the Formation and Implementation of State Policy” (*Resolution of the Cabinet of Ministers of Ukraine No. 996 ‘On Ensuring Public Participation in the Formation and Implementation of State Policy’, 2010*). The implementation of this resolution in PPP projects creates conditions for the real involvement of stakeholders in supervising compliance with the principles of integrity. Issues of transparency and assessing the effectiveness of PPP projects are also considered in the Concept of the Development of Electronic Governance in Ukraine until 2025, approved by the Resolution of the Cabinet of Ministers of Ukraine No. 225-p of March 17, 2021 (*Directive of the Cabinet of Ministers of Ukraine No. 649-p ‘On the Approval of the Concept for the Development of E-Government in Ukraine’, 2017*). The document defines digital transformation as one of the key tools for preventing corruption through data openness, process automation, and the elimination of human intervention.

5. Conclusion

Summarizing the results of the study, it should be noted that public-private partnerships in the healthcare sector of Ukraine have significant anti-corruption potential, which, if properly implemented, can become one of the key elements of the formation of an effective, transparent and accountable public administration system. Involving the private sector in the implementation of socially significant medical projects contributes not only to the investment attractiveness of the industry, but also to the formation of a fundamentally new management culture based on integrity, responsibility and control over the result. The effectiveness of PPP as an anti-corruption tool requires the presence of systemic safeguards: clear legal mechanisms, transparent tender procedures, independent supervision, public participation, as well as a mandatory assessment of both the financial and social feasibility of projects. Insufficient regulations, low legal awareness of participants, political instability and the absence of effective public oversight mechanisms leave the risks of corruption manifestations that can offset the potential benefits of such a partnership.

In this context, the improvement of the regulatory framework for PPPs with an emphasis on the medical sector, the formation of standard contracts with built-in anti-corruption provisions, the development of digital control tools and ensuring stable support of projects by independent experts are of paramount importance. It should be emphasized separately the need to form professional human resources among representatives of public authorities, capable of professionally and responsibly implementing PPPs, adhering to the principles of integrity and openness.

Thus, public-private partnerships can not only ensure the material and technical modernization of the healthcare system, but also act as an effective mechanism for reducing corruption risks. But this is possible only under the condition of a comprehensive and balanced approach, which involves mutual trust, transparency of processes and control by society. Future research should be aimed at assessing specific practices of PPP implementation in the medical sector, identifying typical corruption risks and developing methods for their neutralization through the tools of modern public administration.

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INFRACTIONS PÉNALES CONTRE LA SÉCURITÉ BIOLOGIQUE DE L'UKRAINE

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Résumé

L'article examine la question, nouvelle pour la doctrine pénale ukrainienne, de la protection pénale de la sécurité biologique de l'Ukraine. Il propose un concept d'auteur visant à regrouper les infractions qui portent atteinte à la sécurité biologique de l'Ukraine en un système unifié. Le contenu des notions de "sécurité biologique" et de "menaces d'origine biologique (biomenaces)" est défini. Il est proposé de classer les biomenaces en fonction de leur orientation en menaces directes et indirectes. La définition des infractions pénales contre la sécurité biologique est formulée. Un critère unique – la menace d'origine biologique créée par l'acte illégal pour l'objet de la protection pénale – a été élaboré, sur la base duquel des infractions pénales spécifiques pouvant être considérées comme des atteintes à la sécurité biologique de l'Ukraine ont été identifiées dans la partie spéciale du Code pénal de l'Ukraine. Conformément à l'orientation des biomenaces, les atteintes à la sécurité biologique de l'Ukraine sont regroupées en infractions pénales créant des biomenaces directes (art. 113, 130, 131, 133, 142, 247, 251, 325, 326, 439, 441 du Code pénal de l'Ukraine) et indirectes (art. 236, 237, 239, 241, 242, 243, 253, 261, partie 2 de l'art. 268, 440 du Code pénal de l'Ukraine). Il est conclu que le Code pénal de l'Ukraine n'assure pas pleinement la protection pénale des relations sociales dans le domaine de la garantie de la sécurité biologique de l'Ukraine. Des orientations spécifiques sont proposées pour la criminalisation des manipulations génétiques dangereuses qui créent des menaces biologiques.

Mots-clés: biosécurité, biomenace, agent pathogène biologique, armes biologiques, violation des règles, infection, pollution, biote.

DOI <https://doi.org/10.23856/7023>

1. Introduction

L'impact mondial de la pandémie de COVID-19, causée par le micro-organisme SARS-CoV-2, sur la vie des États individuels et de l'humanité dans son ensemble, a démontré qu'aux côtés des problèmes de sécurité énergétique, alimentaire et environnementale, la question de la garantie de la sécurité biologique revêt aujourd'hui une importance primordiale. Entre autres, l'actualisation des menaces de nature biologique est due au développement rapide de la biotechnologie et de la microbiologie, dont les réalisations les plus récentes peuvent être utilisées pour créer et appliquer délibérément des armes biologiques, ainsi que provoquer une catastrophe biologique en raison de la propagation incontrôlée des produits de ces technologies.

Comprenant le caractère transfrontalier de ces menaces biologiques, la communauté mondiale, dans le cadre des traités internationaux pertinents, met activement en œuvre des mécanismes de contrôle de la manipulation des agents biopathogènes et de la circulation des organismes vivants modifiés (transgéniques). L'un de ces mécanismes consiste pour les États parties à prendre les mesures nécessaires pour garantir le respect des exigences établies par la Convention sur l'interdiction de la mise au point, de la fabrication et du stockage des armes bactériologiques (biologiques) ou à toxines et sur leur destruction (1972), ainsi que par la Convention sur la diversité biologique (1992), notamment par l'introduction de normes correspondantes dans les lois pénales nationales.

Le problème réside dans le fait que la sécurité biologique en tant qu'objet de protection pénale n'a pas été examinée jusqu'à présent, et par conséquent, toute approche doctrinale de la caractérisation juridique des crimes portant atteinte à la biosécurité de l'Ukraine est absente. Les normes pénales en vigueur contiennent principalement des signes fragmentaires d'atteintes à la sécurité biologique ; elles sont dispersées dans différentes sections de la Partie spéciale du Code pénal de l'Ukraine (2001), ce qui réduit considérablement le niveau de protection pénale des relations sociales dans ce domaine.

2. Formulation des objectifs

L'objectif de l'article est de définir le système des infractions pénales dont la commission porte préjudice aux relations sociales dans le domaine de la garantie de la sécurité biologique de l'Ukraine. Pour atteindre cet objectif, l'auteur a formulé les tâches suivantes : clarifier l'essence des menaces d'origine biologique, qui servent de critère principal pour classer les atteintes illégales aux infractions pénales contre la sécurité biologique de l'Ukraine ; identifier dans la Partie spéciale du Code pénal de l'Ukraine les infractions pénales qui répondent au critère susmentionné, et les regrouper en fonction des particularités des biomenaces et de la nature des atteintes.

3. Analyse des recherches et publications récentes

Dans la doctrine pénale, il existe des tentatives isolées de regrouper en systèmes unifiés les infractions pénales qui portent atteinte à la sécurité humaine ou environnementale. Ainsi, E. V. Fesenko (2004) a étudié en profondeur le système *des crimes contre la santé publique*, prévus par la section XIII de la Partie spéciale du Code pénal de l'Ukraine. Le scientifique a proposé d'inclure également dans ce système de crimes les actes qui contribuent à la propagation parmi la population de maladies épidémiques et autres maladies contagieuses (art. 130, 131, 133 du Code pénal de l'Ukraine), ainsi que la violation des règles de production, de stockage et de vente de denrées alimentaires et de médicaments de mauvaise qualité.

O. P. Lytvyn (2008) a défendu l'idée de regrouper un certain nombre d'infractions pénales contre la sécurité écologique et publique, la sécurité de la production et la santé publique, prévues par les sections VIII, IX, X et XIII de la Partie spéciale du Code pénal de l'Ukraine (art. 236-244, 251-253, 255-270, 274, 275, 305-327), en une seule section du Code pénal sur *les crimes contre la sécurité générale* et, par conséquent, avec un objet générique commun. Le scientifique a souligné comme particularité de ces crimes la présence dans leurs éléments constitutifs d'un signe objectif obligatoire – des sources de danger accru ou des objets généralement dangereux (armes, matières nucléaires et radioactives, leurs déchets, substances explosives, puissantes, toxiques, narcotiques, psychotropes, biologiques, etc.).

V. K. Matviychuk (2011), en étudiant le système de protection pénale de l'environnement naturel, a proposé de changer le nom de la section VIII de la Partie spéciale du Code pénal de l'Ukraine en "*Crimes contre l'environnement naturel*" et d'y transférer les éléments constitutifs des crimes prévus aux articles 268 et 326, car ils concernent respectivement la pollution de l'environnement naturel et de la substance naturelle.

À son tour, Yu. A. Turlova (2018), en définissant le système *des crimes écologiques*, y a inclus, outre les infractions pénales contre l'environnement, également les crimes de nature internationale portant atteinte à la sécurité écologique de l'humanité (art. 441), les crimes dans le domaine de la sûreté nucléaire et radiologique (art. 265, 265-1, 267-1, 274), les crimes dans le domaine de la gestion des déchets (art. 268), les crimes dans le domaine de la sécurité biologique (art. 326 du Code pénal de l'Ukraine). Cependant, outre l'architecture proposée du système des crimes écologiques, la chercheuse ne présente ni sa propre approche de la compréhension de la sécurité biologique, ni la caractérisation pénale des crimes correspondants.

Comme nous le voyons, les recherches des scientifiques mentionnés sont orientées dans des directions quelque peu différentes, se basent sur d'autres critères pour regrouper les infractions pénales, ne tiennent pas compte des menaces biologiques modernes et des dernières avancées de la biotechnologie, qui influencent et continueront d'influencer de manière significative le développement des relations sociales.

4. Sécurité biologique et biomenaces

Tout d'abord, il convient de noter que la "sécurité biologique" est une notion relativement nouvelle pour le champ juridique de l'Ukraine et totalement inconnue pour la loi pénale nationale. Cependant, cette situation exige des changements, car les menaces de nature biologique, liées à la propagation délibérée ou par négligence de maladies infectieuses dangereuses, à l'utilisation illégale d'agents pathogènes biologiques et aux réalisations de la biotechnologie moderne, y compris les armes biologiques, ne présentent pas moins de danger social que les menaces liées au trafic ou à la manipulation illicites d'armes conventionnelles, de substances explosives, radioactives, toxiques, narcotiques, psychotropes, ou d'autres substances puissantes. Récemment, toute l'humanité a pu constater que les maladies infectieuses constituent une menace réelle pour la société moderne : elles sont capables d'affecter directement et indirectement la qualité et la durée de vie de toute l'humanité.

Il est évident que les actes qui comportent un tel danger social doivent être couverts par des normes pénales appropriées. Selon l'auteur, les relations sociales dans le domaine de la garantie de la sécurité biologique doivent constituer un objet distinct de la protection pénale. C'est-à-dire qu'il est tout à fait logique de regrouper les atteintes à la sécurité biologique de l'Ukraine sous un objet commun d'infraction pénale, notamment générique.

Avant d'aborder les atteintes spécifiques à la sécurité biologique de l'Ukraine, il convient tout d'abord de clarifier le contenu de cette notion systémique. Sur la base de l'analyse des définitions de la sécurité biologique existantes dans la littérature scientifique et la législation ukrainienne en vigueur, l'auteur constate une unité des approches doctrinales concernant l'inclusion de la sécurité biologique parmi les composantes de la sécurité écologique, qui à son tour fait partie de la sécurité nationale. Dans ces conditions, il est proposé d'entendre par *sécurité biologique* l'ensemble des conditions environnementales acceptables pour la vie de la biote (organismes vivants de la biosphère), tout d'abord le fonctionnement et le développement à part entière de l'homme en tant qu'organisme biologique, qui sont contrôlées par lui au moyen d'un ensemble de mesures (normatives-juridiques, organisationnelles, techniques-d'ingénierie,

médico-biologiques, économiques, de contrôle, d'information-éducation et autres), visant à prévenir, neutraliser ou minimiser les menaces d'origine biologique (Shamsutdinov, 2022).

En étudiant le contenu de la notion de sécurité biologique, il est évidemment nécessaire de s'attarder sur l'essence des menaces d'origine biologique ou biomenaces. Ainsi, dans la décision du Conseil national de sécurité et de défense de l'Ukraine "Sur la stratégie de biosécurité et de protection biologique" (2021), le contenu de la biosécurité est directement lié aux menaces d'origine biologique, conditionnées par les conséquences négatives probables du développement des biotechnologies modernes et de la biologie synthétique ; la propagation d'espèces exotiques envahissantes qui affectent négativement la biodiversité ; l'intensification du processus épidémique et la propagation mondiale de formes nosologiques nouvelles, anciennes et réémergentes de maladies infectieuses et parasitaires ; les mouvements transfrontaliers incontrôlés d'animaux et de matières premières et produits d'élevage infectés ; les manifestations de bioterrorisme et toute autre utilisation illégale d'agents biologiques dangereux et de produits de la biologie synthétique ; l'absence de règles claires lors du travail avec des agents biologiques dangereux, etc.

Ainsi, les *biomenaces* peuvent être définies comme des possibilités réelles ou potentielles d'impact négatif de micro- ou macro-organismes pathogènes, d'autres agents biologiques sur la biote. Le facteur actif des biomenaces est alors constitué d'agents biologiques naturels ou modifiés, capables de provoquer des maladies, des troubles fonctionnels, des mutations chromosomiques ou géniques, d'autres altérations du génome ou la mort de la biote.

En conséquence des atteintes illégales à la sécurité biologique, il existe un risque élevé d'impact négatif des agents pathogènes biologiques, notamment de causer des dommages à la matière vivante de la biosphère (vie et santé de l'homme, ses générations futures ; biote : plantes, animaux, y compris agricoles). Les atteintes à la sécurité biologique réduisent d'une manière ou d'une autre son niveau et, en fonction de leur nature et de leur orientation, créent des biomenaces réelles ou potentielles.

Notons que, selon leur orientation, les biomenaces peuvent être de deux types : 1) directes pour la matière vivante de la biosphère et 2) indirectes pour la vie et la santé des personnes, des animaux agricoles et sauvages, des plantes, transmises par des objets environnementaux. Cela permet de distinguer les biomenaces de premier et de second ordre. Les biomenaces *de premier ordre* se caractérisent par un état dans lequel il existe une possibilité d'impact négatif de facteurs biotiques dangereux sur les objets vivants, conditionné par des phénomènes et processus naturels ou par une activité humaine dangereuse. Les biomenaces *de second ordre* se caractérisent par un état dans lequel il existe une possibilité probable d'impact négatif d'un environnement contaminé sur les objets vivants y compris l'homme, sa vie et sa santé.

5. Système d'infractions pénales contre la sécurité biologique

Dans le contexte de notre recherche, il convient de délimiter les types d'activités humaines qui sont biologiquement dangereuses. Les chercheurs du domaine concerné y classent : les activités dans le domaine des recherches microbiologiques en laboratoire, la production de produits microbiologiques ; les activités dans le domaine des biotechnologies (activités d'ingénierie génétique, mise en circulation d'organismes génétiquement modifiés et de produits fabriqués à partir de ceux-ci) ; les activités dans le domaine de la gestion des déchets d'origine biologique ; certains types d'activités dans le secteur agro-industriel (sélection végétale ; manipulation d'agents biologiques de protection des plantes ; élevage, aviculture, pisciculture ; introduction d'espèces exotiques de faune et de flore, etc.) ; l'industrie alimentaire ; la médecine et l'industrie

médicale (développement et application de préparations microbiologiques et biotechnologiques ; utilisation de micro-organismes ; manipulation d'agents pathogènes biologiques ; conservation de banques de micro-organismes ; transfusion sanguine et de ses dérivés ; recherches biomédicales sur le clonage humain, etc.) ; les activités relatives au développement et à l'application d'armes biologiques (Velychko, Radchenko, 2016: 478 ; Kravchuk, 2019: 273–275).

Il est évident qu'il ne s'agit pas d'une liste exhaustive des types d'activités humaines biologiquement dangereuses. Mais c'est dans ces domaines que les atteintes à la sécurité biologique sont les plus susceptibles d'être commises.

Compte tenu de ce qui précède, *les infractions pénales contre la sécurité biologique* doivent être considérées comme des actes coupables socialement dangereux prévus par la loi pénale, commis par les auteurs de ces infractions pénales, qui portent atteinte aux relations sociales dans le domaine de la garantie de conditions environnementales acceptables pour la vie de la biote, notamment en créant des biomenaces et en causant ou pouvant causer un préjudice important à ces relations.

Dans ces conditions, le critère principal pour classer les infractions pénales parmi celles qui portent atteinte à la sécurité biologique doit être considéré comme *la menace d'origine biologique* créée par l'acte illégal pour l'objet de la protection pénale.

Selon ce critère, l'auteur a identifié dans la Partie spéciale du Code pénal de l'Ukraine (2001) les infractions pénales suivantes qui créent des biomenaces directes : "sabotage" (art. 113), "infection par le virus de l'immunodéficience humaine ou d'une autre maladie infectieuse incurable" (art. 130), "exécution inappropriée des obligations professionnelles ayant entraîné l'infection d'une personne par le virus de l'immunodéficience humaine ou d'une autre maladie infectieuse incurable" (art. 131), "infection par une maladie vénérienne" (art. 133), "conduite illégale d'expériences sur l'homme" (art. 142), "violation de la législation sur la protection des plantes" (art. 247), "violation des règles vétérinaires" (art. 251), "violation des règles et normes sanitaires relatives à la prévention des maladies infectieuses et des empoisonnements de masse" (art. 325), "violation des règles de manipulation des agents microbiologiques ou autres agents biologiques ou toxines" (art. 326), "emploi d'armes de destruction massive" (art. 439), "écocide" (art. 441).

L'auteur a classé parmi les infractions pénales qui créent des biomenaces indirectes les suivantes : "violation des règles de sécurité écologique" (art. 236), "non-prise de mesures pour éliminer les conséquences de la pollution écologique" (art. 237), "pollution ou détérioration des terres" (art. 239), "pollution de l'air atmosphérique" (art. 241), "violation des règles de protection des eaux" (art. 242), "pollution de la mer" (art. 243), "conception ou exploitation d'ouvrages sans systèmes de protection de l'environnement" (art. 253), "attaque contre des objets contenant des éléments présentant un danger accru pour l'environnement" (art. 261), "introduction illégale sur le territoire de l'Ukraine de déchets et de matières premières secondaires" (partie 2 de l'art. 268), "développement, production, acquisition, stockage, vente, transport d'armes de destruction massive" (art. 440).

Ces actes socialement dangereux sont répartis dans six sections de la Partie spéciale du Code pénal de l'Ukraine. La plus grande partie se trouvant dans la section VIII "Infractions pénales contre l'environnement", ce qui est tout à fait compréhensible, car la sécurité biologique, comme mentionné ci-dessus, fait partie de la sécurité écologique. Malgré une telle dispersion des normes pénales correspondantes dans la loi pénale nationale, elles peuvent être considérées dans une certaine unité systémique, compte tenu de l'orientation des atteintes qu'elles prévoient.

Il convient de tenir compte du fait que les menaces créées par la majorité des atteintes mentionnées sont non seulement de nature biotique, mais aussi d'une autre nature. C'est-à-dire

que le législateur national a regroupé dans les dispositions des normes pénales correspondantes la création illégale de possibilités d'influence dangereuse sur la biote tant par des agents pathogènes biologiques que par des substances radioactives, chimiques, explosives et autres. Par exemple, l'article 440 du Code pénal de l'Ukraine prévoit l'interdiction pénale du développement, de la production, de l'acquisition, du stockage, de la vente, du transport non seulement d'armes biologiques, mais aussi chimiques et nucléaires. Dans ces conditions, lors de l'analyse des éléments constitutifs des infractions qui entrent dans le système des atteintes illégales à la sécurité biologique de l'Ukraine, l'auteur se concentrera sur leurs caractéristiques constructives uniquement dans la partie qui concerne les menaces d'origine biologique.

Le premier groupe d'infractions pénales contre la sécurité biologique, qui créent des biomenaces directes, peut être divisé conditionnellement, en fonction de la nature de l'atteinte, en trois sous-groupes suivants :

1) l'utilisation d'armes biologiques (agents pathogènes biologiques) dans le but de causer des dommages massifs aux personnes ou à d'autres représentants de la biote (art. 113, 439, 441 du Code pénal de l'Ukraine). Ce sont des crimes particulièrement graves ; du côté objectif, ils se caractérisent par des actions actives ; du côté subjectif – par une forme intentionnelle de culpabilité ; l'auteur de ces crimes est général ;

2) l'infection délibérée d'une personne par l'agent causal d'une maladie infectieuse, d'autres agents pathogènes biologiques (art. 130, 133, 142 du Code pénal de l'Ukraine). Leurs éléments constitutifs simples sont des crimes non graves ; un élément objectif constitutif est la victime (toute personne physique) ; du côté subjectif, ils se caractérisent par une culpabilité sous forme d'intention directe (partie 4 de l'art. 130, art. 142) et d'intention éventuelle ou d'imprudence criminelle (parties 1-3 de l'art. 130, art. 133) ; l'auteur de ces crimes est spécial ;

3) la violation de règles, normes ou obligations professionnelles ayant entraîné l'infection par des agents pathogènes biologiques de personnes ou d'autres représentants de la biote (art. 131, 247, 251, 325, 326 du Code pénal de l'Ukraine). Les dispositions de ces normes pénales sont générales (elles exigent de se référer à des actes normatifs spécifiques qui établissent les obligations correspondantes) ; les éléments constitutifs des crimes (simples) sont matériels ; du côté subjectif, ils se caractérisent par la négligence ou une forme complexe de culpabilité (violation intentionnelle des obligations et attitude négligente envers les conséquences) (*Shamsutdinov, 2021: 126*) ; l'auteur peut être spécial ou général (art. 247).

Le deuxième groupe d'infractions pénales dans le domaine de la sécurité biologique, qui créent des biomenaces indirectes, peut également être divisé en trois sous-groupes :

1) la violation des règles de sécurité écologique, qui a créé des menaces biologiques générales (art. 236, 237, 253 du Code pénal de l'Ukraine). Ces infractions sont similaires par leur nature, mais hétérogènes quant à leur degré de dangerosité sociale : il s'agit d'un crime grave (art. 236) et d'un crime non grave (art. 237) ainsi que d'un délit (art. 253) ; leurs dispositions sont générales ; un élément objectif obligatoire est la conséquence sous forme de mort de personnes, de pollution biologique de vastes territoires, de création d'un danger de catastrophe biologique, de mort ou de maladie de masse de la population, d'autres conséquences graves ; du côté subjectif, l'intention directe concernant les conséquences est exclue ; l'auteur est spécial : fonctionnaires et autres personnes auxquelles sont confiées les obligations (pouvoirs) correspondantes ;

2) la pollution par des agents pathogènes biologiques de certaines composantes de la biosphère à la suite de la violation de règles spéciales (art. 239, 241, 242, 243 du Code pénal de l'Ukraine). Les éléments constitutifs simples de ces atteintes illégales sont des délits de création de danger ; l'objet de ces atteintes – les parties abiotiques (non vivantes) de l'environnement ;

du côté objectif, ils se manifestent par la pollution d'un certain composant de l'environnement ; du côté subjectif, ils se caractérisent par une forme complexe de culpabilité ; l'auteur est général (*Fedchun, 2017: 231 ; Ishchenko, 2018: 102*) ;

3) la manipulation (activité) illégale d'objets contenant des agents pathogènes biologiques (partie 2 de l'art. 268, art. 261, 440 du Code pénal de l'Ukraine). Ces crimes ont aussi l'objet et sont, par la structure de leurs éléments constitutifs, formels ; ils sont commis avec une intention directe ; l'auteur est général. Ces crimes créent en fait les conditions préalables à la commission d'autres atteintes à la sécurité biologique de l'Ukraine : propagation de maladies infectieuses, pollution de l'environnement, utilisation d'armes biologiques, etc.

6. Lacunes dans la protection pénal de la sécurité biologique de l'Ukraine

Après avoir systématisé les infractions pénales portant atteinte à la sécurité biologique de l'Ukraine, l'auteur est contraint de constater que le Code pénal ukrainien n'assure pas pleinement la protection pénale des relations correspondantes : la loi pénale nationale ne contient pas de normes spéciales criminalisant les manipulations génétiques socialement dangereuses. Ainsi, la législation ukrainienne en vigueur ne prévoit pas de responsabilité pénale pour les actes visant à modifier le code génétique humain. De telles manipulations, par exemple, avec l'utilisation d'organismes génétiquement modifiés (sous couvert de vaccins, d'autres médicaments, de produits alimentaires ou cosmétiques, etc.), peuvent ne pas affecter de quelque manière que ce soit la vie et la santé d'une personne au sens traditionnel et établi, mais avoir un impact critique sur la vie des générations futures, sur l'existence de l'homme en tant qu'espèce biologique à l'avenir. C'est-à-dire que la loi ne tient pas compte d'une conséquence aussi importante des atteintes socialement dangereuses à la sécurité biologique de l'Ukraine que la menace réelle pour le patrimoine génétique de l'humanité en général et de la nation ukrainienne en particulier.

Les succès dans le domaine de la génétique médicale, notamment le déchiffrement du génome humain, permettent d'appliquer la thérapie génique – créer et introduire dans l'organisme humain des constructions génétiques dans le but de traiter des maladies héréditaires et chroniques, des états pathologiques. Parallèlement, ces technologies rendent également possible une intervention non autorisée dans le génome du patient. Par conséquent, toute intervention dans le génome humain non liée au traitement nécessite une criminalisation.

L'une des réalisations assez ambiguës de la génétique a été le clonage d'êtres vivants, notamment de mammifères. Des tentatives de clonage d'organes individuels ont également eu lieu. En Ukraine, la loi "Sur l'interdiction du clonage reproductif humain" (2004) est en vigueur. Elle interdit le clonage humain, ainsi que l'importation sur le territoire de l'Ukraine et l'exportation d'embryons humains clonés. La loi prévoit une responsabilité pénale pour violation de l'interdiction du clonage reproductif, cependant, la norme correspondante est absente du Code pénal de l'Ukraine, ce qui constitue, de l'avis de l'auteur et d'autres représentants de la doctrine pénale, une lacune évidente dans la législation en vigueur (*Dudorov, 2014: 447*).

En outre, les dernières avancées dans le domaine de la biotechnologie, de la génétique médicale, etc., permettent de créer des "hybrides" ("chimères") à l'aide de gènes humains et animaux. Selon l'auteur, de telles expériences violent non seulement l'éthique scientifique, mais créent également une menace réelle pour le patrimoine génétique de l'humanité. Il semble donc opportun d'établir une interdiction pénale de telles manipulations génétiques et d'autres manipulations similaires.

7. Conclusions

Suite à la recherche menée, un critère (la menace d'origine biologique créée par l'acte illégal) a été défini, sur la base duquel un système d'infractions pénales portant atteinte à la sécurité biologique de l'Ukraine, a été formé. Conformément à l'orientation des biomenaces, l'auteur a divisé conditionnellement ce système en atteintes créant des biomenaces directes (art. 113, 130, 131, 133, 142, 247, 251, 325, 326, 439, 441 du Code pénal de l'Ukraine) et indirectes (art. 236, 237, 239, 241, 242, 243, 253, 261, 440 ; partie 2 de l'art. 268 du Code pénal de l'Ukraine). Pour la plupart des éléments constitutifs des atteintes à la sécurité biologique de l'Ukraine, un élément objectif obligatoire est l'objet ou la victime. Du côté objectif, la plupart d'entre eux se caractérisent par un acte constituant une violation de certaines règles de biosécurité, et par une conséquence socialement dangereuse sous forme de préjudice causé à la biote à la suite de l'impact négatif d'agents pathogènes biologiques ou de la création d'un danger de survenance d'une telle conséquence. Les dispositions de la grande majorité des normes pénales examinées sont générales.

Dans le même temps, parmi toutes les infractions pénales identifiées par l'auteur, seules quelques-unes (art. 130, 131, 133, 247, 251, 325, 326 du Code pénal de l'Ukraine) peuvent certainement être considérées comme des atteintes à la sécurité biologique de l'Ukraine, car dans les autres cas, le législateur national a combiné l'impact socialement dangereux sur l'homme ou l'environnement à l'aide de facteurs tant biologiques qu'autres.

Compte tenu de l'élaboration du projet de nouveau Code pénal de l'Ukraine, qui est actuellement activement menée par un groupe de travail au sein de la Commission sur la réforme juridique, ainsi que de l'inadéquation des normes pénales en vigueur aux relations modernes dans le domaine de la sécurité biologique, notamment aux dernières avancées de la science biologique et aux menaces d'origine biologique qu'elles engendrent, il semble opportun de poursuivre les recherches scientifiques en vue d'élaborer des propositions législatives complexes visant à former une section distincte consacrée aux infractions pénales contre la sécurité biologique de l'Ukraine, qui sera incluse dans la Partie spéciale de la législation pénale future.

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PORT INNOVATIONS AND CUSTOMS SAFETY

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Summary

The article describes the main technological innovations used in Ukrainian seaports to ensure customs safety. The relevance of this topic stems from the general processes of globalization and reform within customs safety, as well as the challenging operating conditions of Ukrainian seaports during the war.

The purpose of this article is to assess the current level of customs safety in seaports through the prism of the introduction of new technologies. The object of the study is to ensure customs security using innovative methods.

To disclose the purpose of the work, general scientific (analysis and synthesis, induction and deduction) methods of theoretical knowledge are used. Using special methods, the essence of technologies is described such as: the introduction of the electronic platform "Single Window", the introduction of electronic customs declarations, the use of GPS tracking and RFID tags of electronic sensors; the creation of guidance centers; the use of container scanners, specialized X-rays and blockchain technology to control supply chains; video surveillance systems with artificial intelligence that integrate with other security systems, such as GPS tracking, RFID tags.

Conclusions are formulated regarding the impact of technologies on the work of customs authorities in the seaports of Ukraine and ensuring safety standards, combating smuggling, and reducing the risks of corruption, and further research paths are outlined.

Key words: technological innovations, seaports, customs, prevention, security, safety, risks, corruption.

DOI <https://doi.org/10.23856/7024>

1. Introduction

Ukraine actively cooperates with international organizations and neighboring countries to improve customs security and combat cross-border crime. The customs service plays a key role in ensuring two important functions of the state: tax revenue to the budget of Ukraine and preventing threats to national safety by stopping attempts to illegally move goods, weapons, and drugs across the border.

Customs control in seaports of Ukraine is one of the important ones, since the largest number of goods in peacetime is moved across the border by the cheapest sea transport (during military operations, the emphasis has shifted to land transport). However, even in wartime, the effective organization of customs control in seaports affects the economic safety of Ukraine, support for defense capabilities, and international trade following international standards.

To reveal the purpose of the work, general scientific methods of theoretical knowledge, analysis, and synthesis were used. For example, knowledge of customs clearance technology gives an idea of the specifics of the work of customs authorities: before the vessel arrives at the port, customs authorities receive preliminary information about the goods being transported.

This helps to prepare for the inspection and identify possible risks. Documents for goods must correspond to the declared data. Based on this data, customs authorities check which goods were declared and whether all necessary taxes and fees have been paid. After the vessel arrives, customs authorities inspect the vessel, containers, holds, and cargo compartments. And in case of suspicions or risks, special technical means, such as scanners, are used to check the contents inside the container.

Using the comparative method, connections were identified in the use of innovations and new technologies, for example, the implementation of the Single Window electronic platform, the introduction of electronic customs declarations, the use of GPS tracking, the creation of control centers, and blockchain technologies for controlling supply chains.

So, let's move on to the characteristics of the innovations that have been introduced in Ukrainian seaports over the past decades. All of them are aimed at increasing customs security, simplifying customs procedures, and ensuring transparency. These technologies help reduce the risks of smuggling, increase the efficiency of customs authorities, and reduce corruption risks.

Analysis of recent research and publications. The issue of ensuring customs safety using the latest technologies was studied in the works of domestic scientists Professors A.I. Krysovaty, P.V. Pashko, V.V. Ivanov, and others. Among the foreign scientists who wrote about port innovations in customs security are Dr. Rodney Wood and Dr. Ransford M. Acheampong. These researchers have made a significant contribution to the field of port security and customs security through their research and publications. But given that the situation in this area is constantly changing, since progress does not stand still, it is constantly being studied to regularly strengthen security measures in ports around the world.

The purpose of the study is to assess the current level of customs safety in seaports through the prism of the introduction of new technologies. The object of the study is to ensure customs security using innovative methods. For example, the use of a well-known risk management system allows customs officers to determine which cargo or vessels may be potentially dangerous. Therefore, depending on the level of risk identified, different types of checks can be applied: from standard documentary to full physical inspection. If all checks are passed successfully, the customs authorities clear the cargo. This includes the calculation and payment of customs duties, taxes, excise duties, and other payments.

In seaports of Ukraine, customs authorities usually cooperate with other supervisory authorities: sanitary service, veterinary, environmental, etc. These authorities check the compliance of cargo with safety standards, environmental requirements and other regulatory acts. But in wartime, cooperation with the border guard service, which must escort the ship to the port, came to the fore.

The main innovations that contribute to the customs security of Ukrainian ports:

2. Implementation of the Single Window electronic platform, which unites all customs and other regulatory authorities. It allows participants in foreign economic activity to submit the necessary documents for customs clearance in digital format through a single interface. This significantly speeds up the process of information exchange between different services, reduces bureaucracy, and also reduces the possibility of errors and abuses. In addition, the system allows you to track the progress of cargo clearance in real time. There are possible areas of co-operation between countries regarding the supply of advance (pre-departure and pre-arrival) information in respect of import and export cargo. Such information sharing is vital for securing national borders, as well as for speeding up the flow of freight. Such information sharing is vital for securing national borders, as well as for speeding up the flow of freight (*Understanding the Single Window Environment*, p. 12).

3. Introduction of electronic customs declarations, which are submitted through specialized online systems, such as the Single Window. This allows entrepreneurs to submit documents for the import or export of goods in electronic format. All documents required for declaring goods are submitted electronically, which reduces the need for paper documents and the physical presence of individuals at customs.

Electronic declarations are checked using automated risk management systems (ARMS), which analyze the data provided, identify risks and signal customs officers that additional checks are necessary. This allows customs services to focus their efforts on goods that potentially pose a higher risk; allows access to the history of cargo clearance at any time; reduces the possibility of corruption, as the human factor and contact between declarants and customs officers are minimized. Electronic declarations significantly speed up the customs clearance process, as there is no need to wait for the physical movement of documents between different departments and institutions. Data is transmitted instantly, which saves time and reduces delays in international trade, digital submission of declarations is possible 24/7, which provides greater flexibility for business. Data submitted electronically can be automatically compared with information from other sources, such as GPS tracking, RFID tags or risk databases.

Electronic declarations also allow for rapid verification of large volumes of goods and exchange of information with other countries, which helps to combat international criminal groups involved in smuggling or illegal trade.

Electronic declarations reduce the possibility of human error, as data is entered automatically, checked and recorded in a digital system. Solutions such as MIC's Customs Software (MIC-CUST®) offer easy answers to the sending and receiving of electronic data, both when filing with customs authorities and exchanging information with third parties like a customs broker or freight forwarder (*Understanding electronic customs filing*). This helps to avoid inaccuracies in documents, which also contributes to increased customs security. The use of electronic systems reduces the cost of paper documents, reduces the time spent on clearance, and makes the customs clearance process transparent. By automating checks and using risk management technologies, customs authorities can better control the movement of goods and minimize the possibility of violations and smuggling, thereby improving the conditions for legal business.

4. Use of GPS tracking, RFID tags, electronic sensors

GPS tracking is the installation of GPS devices on vehicles (trucks, ships, railway cars) or containers. These devices constantly transmit geographic location data to servers where they can be viewed by logistics companies, customs services or goods owners. GPS tracking allows customs authorities and companies to see exactly where the cargo is at any time and in the event of a change in route or suspicious activity, measures can be taken quickly to verify the situation; planning and adjusting routes to avoid delays and unnecessary costs.

RFID tags (Radio Frequency Identification) are a technology that uses radio waves to automatically identify and track objects. RFID tags can be attached to containers or cargo to identify them during transportation. The RFID tag contains a unique code that is read using a special reader and when the cargo passes through a checkpoint, the system automatically identifies it and records the data.

RFID tags allow for quick and accurate identification of cargo without the need for physical inspection or manual data entry. Such systems with RFID tags simplify the processes of tracking, security, reduce the risks of loss or theft of goods and contribute to a more rapid

response to emergencies. Since each cargo can be identified automatically, this reduces the likelihood of errors and fraud during the transportation and accounting of goods. Cargo data becomes available to all participants in the process – customs, logistics companies, customers, which increases the level of transparency and trust between the parties.

Customs authorities can track the movement of goods across the border in real time, which helps prevent violations or smuggling.

Sensors are devices that measure certain parameters (temperature, humidity, pressure, movement, container opening, etc.) and can be installed on containers or vehicles. Sensors constantly monitor the specified indicators and send signals in case of any changes or deviations from the norm. If the container is opened without authorization or another non-standard situation occurs (for example, an increase in temperature or damage to the cargo), customs and the owners of the goods receive an instant notification. The use of sensors in law enforcement activities helps to track the legality of actions with goods during their transportation (*RFID GPS Trackers: Two Technologies, One Solution*).

5. Creation of Targeting Centers – these are specialized analytics centers used in the customs control system to analyze, monitor and identify potential risks during the movement of goods across the border. They use aggregated data from various sources: electronic customs declarations, cargo databases, information from international customs services, as well as data from GPS tracking systems, RFID tags, video surveillance, and other sources. The goal is to collect information about goods, vehicles, routes, and participants in foreign economic activity to identify potential risks.

The basis of the work of targeting centers are risk management systems (automated risk management – SARM). SARM is software that analyzes a large amount of data about goods, routes, vessels, and other factors to identify possible risks. It analyzes data about goods moving through customs based on historical data, behavior patterns, and possible risks. After this analysis, the system automatically indicates those goods or vessels that require more thorough inspection. For example, the system may detect a suspicious increase in the volume of a certain product, which may indicate potential smuggling, or a suspicious cargo transportation route. Automatically identify goods, vehicles or companies that are suspicious due to any deviations from the norm or the presence of previous risks.

Targeting centers cooperate with international customs authorities, exchanging information about potentially dangerous goods or smugglers (if cargo from a certain country is often associated with smuggling, the system automatically marks such shipments for more thorough inspection). Targeting centers also closely cooperate with state structures, such as border guards, security agencies and international customs agencies. This ensures the prompt exchange of information about potential threats in real time and allows customs officers to respond promptly to potential threats in the behavior of transport or cargo. Thanks to automated data analysis, targeting centers quickly identify potentially dangerous cargo, which significantly increases the effectiveness of the fight against smuggling, illegal drug trafficking, weapons, and cross-border crime in general. In Ukraine, analytical risk centers operate on the basis of the State Customs Service. They significantly increase the efficiency of customs control by helping to identify risks and focus resources on potentially dangerous cargo. This increases the level of customs security and reduces opportunities for smuggling.

6. Use of container scanners – **specialized X-ray** or other types of scanning devices that allow customs authorities to inspect the contents of containers without physically opening them. Scanners allow customs authorities to quickly detect violations, minimize inspection time and ensure inspection accuracy without physical intervention. This reduces the likelihood

of damage to cargo during physical inspection. They are actively used to detect weapons, drugs, smuggled goods or other dangerous items.

Modern scanners for container inspection are installed in: Odessa Commercial Sea Port, Pivdennyi Commercial Sea Port, Chornomorsk Commercial Sea Port, Mykolaiv Commercial Sea Port, Berdyansk Commercial Sea Port, Izmail Commercial Sea Port.

7. Blockchain for supply chain control

Some ports are considering the possibility of using blockchain technologies to track cargo in the supply chain. This ensures transparency and immutability of information about goods, their origin, customs operations and transactions with them. Let's imagine that the goods arrived at a seaport in Ukraine. Information about its shipment, transportation, customs inspections and final delivery is stored in the blockchain. This means that customs authorities can at any time view the full history of the goods: who sent it and when, through which ports it went, who was the carrier and how it was checked at customs. If someone tries to change the information or enter it falsely, this will be visible to all participants, making fraud impossible (*Blockchain in Supply Chain Management*).

The blockchain works on the basis of a distributed network of computers (nodes) that verify and confirm each transaction. Since each block in the chain is encrypted, and the system works using complex cryptographic algorithms, the data in the blockchain is reliably protected from unauthorized access. No single participant controls the entire system, which reduces the risk of fraud or data forgery. Once information enters the blockchain, it cannot be changed or deleted without a trace, which ensures data integrity. Participants in the supply chain, including customs, shippers, carriers and buyers, can have access to the entire history of cargo movement. This allows all parties to see exactly where the cargo is and confirm the legality of each transaction.

Blockchain allows you to ensure that information about the cargo has not been changed or forged. This is important for preventing fraud and forged documents that can facilitate illegal trade. The implementation of blockchain in customs processes requires significant technical resources and skills, in particular for integration with existing international systems in the global supply chain.

At the moment, the blockchain system in the Odessa Sea Port is in the implementation stage. In the future, this will significantly increase the competitiveness of the port and improve cooperation with international partners, but requires additional investments and training of personnel.

8. Video surveillance systems with artificial intelligence (AI)

Modern video surveillance systems with artificial intelligence functions are able to automatically analyze the behavior of transport and people in ports. AI can detect suspicious activity and promptly warn customs authorities and security. For example, if transport moves outside the permitted area, lingers too long in a certain place or violates established routes, or unauthorized access to prohibited areas, excessive number of people in the area or unusual movement routes, attempted theft, acts of vandalism or penetration into a high-security area.

Cameras can also track the movement of containers and other cargo, checking whether they are transported according to plan and regulations or not. Many AI systems are integrated with facial recognition and license plate recognition. This allows people and vehicles entering

or leaving the port to be automatically identified and checked against databases. For example, if a wanted person or vehicle appears in the port, the system immediately alerts the relevant services. In addition, AI can detect potentially dangerous situations such as fires, accidents, collisions or suspicious objects left unattended. In such cases, the system automatically sends notifications to security services or customs for a prompt response. Video surveillance with AI is often integrated with other security systems such as **GPS tracking, RFID tags** and access systems, which allows you to create a single system of control over all processes in the port. For example, if a vehicle with a certain license plate is detected in a restricted area, the AI system can check whether there is a corresponding permit to enter this area and, if necessary, block access.

Thus, AI minimizes the impact of human error, allows for constant monitoring without loss of attention or bias and quickly responds to potential threats, effectively controls large areas and warns security services in real time.

Based on the analysis of previous data, AI systems can predict possible risks and take preventive measures to prevent incidents.

Therefore, the implementation of video surveillance with AI functions in Ukrainian seaports is an important element for improving security and control over cargo and people. This reduces the likelihood of illegal operations in ports and contributes to a quick response to possible threats.

9. Conclusions

Thus, over the past decades, several innovations have been introduced in Ukrainian seaports aimed at increasing customs safety, simplifying customs procedures. These technologies help increase the efficiency of customs authorities and reduce corruption risks and the risks of smuggling. The main innovations, which are partially used for customs safety in Ukrainian ports, are: implementation of the Single Window electronic platform, introduction of electronic customs declarations; use of GPS tracking, RFID tags, and electronic sensors; creation of targeting centers; use of container scanners, specialized X-ray, and blockchain technology for supply chain control; and a video surveillance system with artificial intelligence that is often integrated with other security systems, such as GPS tracking, RFID tags, and access systems, which allows for a unified control system over all processes in the port.

But the situation at customs in Ukrainian seaports remains complex. Today, in addition to the war, blockade of ports, and reduction of cargo transshipment by sea, there are other problems in ports related to corruption in this area, the level of which has not decreased despite the use of technology. We have a wait in line at the border, when law enforcements force customs not to carry out customs clearance. And this applies to both import and export. Until there is no bribe, there is no clearance. We have already seen pressure on business and corruption schemes in the past, when authoritative positions in the Ministry of Infrastructure were held by people from the security forces. This is what Shota Khajishvili, co-owner of Risoil, said in an interview with the Center for Transport Strategies (*Koordynatsiina rada z nevyznachenymy koordynatamy. Chomu portovyi biznes "ne nadykhnusia" novoiu derzhavnoiu strukturoiu. 4 kvitnia 2025*). Phenomena such as the illegal reduction of customs payments and bribes for expedited cargo clearance, the illegal export of undeclared agricultural goods, especially grain, the export and import of tobacco products, fuel, and the declaration of dual-use goods as civilian equipment, etc., have not decreased. All this results in insufficient funding for the state budget of Ukraine and also poses risks to the country's security during wartime

conditions. Limited state funding complicates the modernization of customs infrastructure and the introduction of new technologies to combat smuggling and corruption. Although modern container scanning systems and other technologies have been installed for customs officers in some ports of Ukraine, a significant part of the infrastructure remains outdated. Manual inspection procedures are still used in many ports, which significantly slows down the customs control process and leads to low efficiency in detecting smuggling. The lack of highly qualified human resources also complicates the customs clearance process. This increases the risks to national safety, especially in cases involving the movement of prohibited goods, weapons, dangerous goods, etc.

However, even in wartime conditions, the introduction of such technologies as electronic declarations and automated risk management systems (ARMS) everywhere at ports will greatly increase the efficiency of customs work and ensure the protection of economic and public security.

The problems of technical backwardness can be solved through reforms and technical modernization of the customs system.

These issues can be the subject of further scientific assessments and analysis to improve security legal relations in the customs sector.

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HEALTH, ENVIRONMENT, DEVELOPMENT

ASSESSMENT OF STUDENTS' MOTIVATION FOR PHYSICAL CULTURE CLASSES DURING REMOTE LEARNING

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Summary

Motivation for physical activity is a special state of the individual, aimed at achieving the optimal level of physical fitness and working capacity. In the new circumstances, the main goal of the discipline "Physical Education" during distance learning in wartime is to form a healthy, harmoniously developed personality.

The purpose of the study is to assess the structure of students' motivations for physical education classes during distance learning.

Using a specially designed questionnaire in Google.forms, students' attitudes towards physical activity, movement preferences, and motives for engaging in physical education and sports were determined. The survey was conducted among 80 students aged 17–19 at a higher education institution in Sumy

After the full-scale russian invasion of Ukraine, students began to engage in physical education and sports less (66.25%). Only 33.75% of students indicate that they began to engage in physical education and sports more compared to 2022.

The distribution of the structure of physical education and sports classes indicates that students prefer choreography (22.5%), sports games (21.25%), fitness (8.75%), athletics (8.75%), martial arts (7.5%), artistic gymnastics (2.5%) and other sports, including swimming, tennis, etc. (11.25%).

The structure of students' motives: the leading ones are health promotion, positive emotions, and the opportunity to move; significant motives are the desire to increase strength abilities to express oneself, the development of will, games and entertainment during classes; potential motives are the opportunity to demonstrate leadership qualities, an assessment of the academic discipline, and the example of a teacher.

Key words: motivation, movement preferences, physical education, students.

DOI <https://doi.org/10.23856/7025>

1. Introduction

Due to the russian military aggression against our country in 2022, the entire educational process was transferred to distance learning in the eastern and northern parts of Ukraine. Students of higher education institutions are forced to engage in a form of distance learning, which

has affected the structure of the lesson, teaching style, and lifestyle in general. This is accompanied by great emotional stress, disruption of work and rest schedules, and minimal physical activity. The factor that forces a person to engage in physical culture, especially during online learning, to implement physical activity, is called motivation. Motivation for physical activity is a special state of the individual, aimed at achieving the optimal level of physical fitness and performance. In the new circumstances, to form a healthy, harmoniously developed personality is the main goal of the discipline "Physical Education" during distance learning in wartime conditions (*Rodigina V.P., 2022*).

Analysis of scientific research shows that in recent years, higher education institutions in Ukraine have been experiencing a constant increase in the number of students classified in a special medical group due to their health condition. Researchers claim that such students often have a negative attitude towards physical education classes, engage in them without due diligence, and tend to skip classes under various pretexts. Therefore, the formation of positive motivation for physical education is a complex process, the impact on which determines the relevance of research (*Moskalenko N., Kosheleva O., Afanasiev S., Reshetylova V., Samoshkin V., 2023*).

The results of previous studies of the motivational structure of motor preferences of students in the city of Sumy indicate that the leading motives are the form of physical education classes in the form of hiking trips ($78.3 \pm 4.3\%$), the creation of physical education holidays ($72.8 \pm 4.6\%$), and training in discipline and organization ($50 \pm 5.2\%$). Significant motives include increasing physical fitness ($46.7 \pm 5.2\%$), the opportunity to do physical education in a modern gym ($36.9 \pm 4.7\%$). Potential motives for physical education classes in a higher educational institution are the opportunity to play sports (athletics, basketball, football) ($32.6 \pm 4.9\%$), the opportunity to communicate with peers ($23.9 \pm 4.5\%$), and the opportunity to demonstrate leadership qualities ($17.4 \pm 3.4\%$) (*Holovchenko O., Vostotska I., Osypova I., 2014*).

The results of the research by Moskalenko N., Kosheleva O., Afanasiev S., Reshetylova V., Samoshkin V. on the motivation of students of a special medical group indicate a lack of understanding by students of the role of physical education in the system of preparation for future professional activity. As the results show, the first place in the ranking among all motivational options is occupied by the motive of improving health (88%). The second place is occupied by the motive of correcting the physique (66%). Interest in the specified type of activity (meaningful motive) occupies a rather significant third place (42%). The fourth place in the ranking of motives is occupied by the motive of recovery after mental stress (38%), which indicates that a significant number of students perceive physical education classes as an active rest from studies, an opportunity to switch to another type of activity. In fifth place is the motive of getting pleasure from classes (reflecting the hedonistic function of physical culture). And the last and penultimate places are occupied, respectively, by the motives of increasing physical fitness (22%, 7th place in the rating) and preparing for professional activity (2%, 8th place in the rating).

Physical education in higher education aims to provide education in individuals studying in higher education institutions of the need to independently master the knowledge, skills and abilities to manage human physical development through physical education and training to apply the acquired values in the lives of future specialists. Therefore, conducting research to assess the structure of motives in students depending on the conditions determines the relevance of conducting research (*Fylonenko O., 2023*).

The purpose of the study is to assess the structure of students' motivations for physical education classes during distance learning.

Using a specially designed questionnaire in Google.forms, students' attitudes towards physical activity, movement preferences, and motives for engaging in physical education and sports were determined. The survey was conducted among 80 students aged 17-19 at a higher education institution in Sumy. The data obtained were subjected to mathematical and statistical processing using the application program "Statistica 10.0".

2. Assessment of students' motor preferences in the field of physical education and sports

According to the subjective assessment, the health of students is at a good level (59.8%). At the same time, only 10.9% consider their health to be excellent, while 28.3% of students assess their own health as "satisfactory". 54.3% of students rate their own physical fitness as "good" and only 3.3% of students consider it excellent. 42.3% of students are considered to have insufficient physical fitness, which makes it possible to target these students with a whole range of physical education tools to improve the physical health of the future working population of the country.

The results of the survey, when studying the attitude towards physical education classes, showed that students have a positive attitude towards physical education classes. The specific weight of the indicator is 97.5%. 2.5% have a negative attitude towards physical education classes. At the same time, 80% of students engage in physical education and sports.

The results of the conducted research allowed us to establish the presence of basic knowledge about the need for physical education classes when acquiring professional skills, as evidenced by 75% of positive answers to the question "Do you consider the discipline "Physical Education" necessary when obtaining higher education?"

At the same time, students believe that physical education classes at higher education institutions should include both mandatory and optional options (50%). However, 29.3% of students would like to attend mandatory physical education classes, while 20.6% of students choose to attend optional physical education classes. At the same time, 83.7% believe that the level of physical activity in physical education classes is sufficient.

The health-oriented thinking of students is confirmed by their understanding of the impact of physical culture on physical development (46.7%), improving the body (36.9%), forming motor skills and abilities (10.9%), and developing sports skills (5.4%).

Among the respondents, 92.5% do not have a sports degree, while 7.5% have sports degrees. Analysis of sports activity allowed us to establish that 26.25% are engaged in sports sections and choreographic studios. 61.25% of students conduct independent studies at home without supervision from specialists. 12.5% of students do not engage in physical education and sports.

The distribution of the structure of physical education and sports classes indicates that students prefer choreography (22.5%), sports games (21.25%), fitness (8.75%), athletics (8.75%), martial arts (7.5%), artistic gymnastics (2.5%) and other sports, including swimming, tennis, etc. (11.25%).

A survey of students' motor preferences allowed us to establish a significant preference among sports – sports games (32.5%), in particular football ($p < 0.05$). Almost 2 times fewer students chose sports dancing (16.25%). Swimming is liked by 23.75% of students. The places of preference for martial arts (8.75%) and gymnastics (8.75%) were equally distributed. Athletics was liked by 10% of students. In our opinion, an interesting fact is the absence of negative answers in the survey, which indicates the students' love for sports and physical activity.

The best places for physical education classes are the gym (36.9%) and regular sports halls for physical education classes (34.8%). 20.7% of students choose specialized halls for sports games and gymnastics for physical education classes. The smallest proportion of students choose outdoor physical education classes (7.6%).

After the full-scale russian invasion of Ukraine, students began to engage in physical education and sports less (66.25%). Only 33.75% of students indicate that they began to engage in physical education and sports more compared to 2022.

3. Assessment of the structure of students' motives during distance learning

We studied the motives that determine students' interest in physical education and sports. Each motive received a ranking place and, based on the statistically significant level of differences in motive assessments, which was determined by the Student's t-test, the motives were divided into: leading, significant, and potential.

The results of the distribution of motives by ranking indicate that the leading ones are health promotion, positive emotions, and the opportunity to move. The dominant position of the motive "positive emotions" may indicate the desire of students in wartime to take advantage of physical education and sports classes to optimize their psycho-emotional state (Table 1).

The group of significant motives is formed by the desire to increase strength abilities to express oneself, to cultivate willpower, games and entertainment during classes and. They are rated by students significantly lower than the motives of the leading group ($p < 0.05$).

The group of potential motives includes the following motives: the opportunity to demonstrate leadership qualities, assessment in the academic discipline, the example of the teacher. The established hierarchy of motives makes it possible to optimize the effectiveness of physical education in the conditions of distance education (Table 1).

Table 1

Motives of adolescents for physical education and sports ($M \pm m$, %)

№	Motives	Place	Positive answer
1	Subject score	8	2,97±8,5
2	An example of a teacher	9	1,32±7,3
3	Health promotion	1	17,49±6,5
4	Nurturing the will	5	9,57±9,3
5	Increasing strength abilities	4	11,88±4,5
6	The opportunity to demonstrate leadership qualities	7	4,95±7,3
7	Positive emotions	2	14,85±6,5
8	Games and entertainment in class	6	6,6±9,5
9	Ability to express oneself	5	9,57±7,4
10	Ability to move	3	14,19±6,5
11	Attractiveness	6	6,6±8,4

Creativity is an integral part of studying any academic discipline and 78% of students note that teachers constantly create conditions for students to reveal their creative potential, namely: students directly participate in conducting warm-ups, outdoor games and drawing up individual health programs for students of the main and special medical groups.

However, 20% of students admit that teachers sometimes create conditions for creative expression in physical education classes, and 2% claim that the creative component of the class is not involved at all.

It is well known that teaching creativity is possible only with a direct example – a teacher who constantly uses a creative approach and is interested in his work. The survey results showed that 94% of teachers use a creative approach in their classes. The data indicate the need to expand the range of creative proposals in the study of physical education.

4. Conclusions

1. After the full-scale Russian invasion of Ukraine, students began to engage in physical education and sports less (66.25%). Only 33.75% of students indicate that they began to engage in physical education and sports more compared to 2022.

2. The distribution of the structure of physical education and sports classes indicates the preference of students for choreography (22.5%), sports games (21.25%), fitness (8.75%), athletics (8.75%), martial arts (7.5%), artistic gymnastics (2.5%) and other sports, including swimming, tennis, etc. (11.25%).

3. Structure of students' motives: the leading ones are health promotion, positive emotions, and the opportunity to move; significant motives are the desire to increase strength abilities to express oneself, the development of will, games and entertainment during classes; potential motives are the opportunity to demonstrate leadership qualities, assessment of academic discipline, and the example of a teacher.

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SHOULDER MECHANICS AND INJURY RISK IN AERIAL ACROBATICS: FROM LOAD PATTERNS TO RECOVERY PATHWAYS

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Summary

The shoulder joint is the most mobile, but also the most vulnerable link in the biomechanical chain of the upper extremity, which is especially evident in conditions of increased load when performing aerial acrobatics elements. The article presents a holistic anatomical and biomechanical review of the structures of the shoulder complex and characterizes the main mechanisms of injury that occur during dynamic and static elements with support on the upper extremities. The typical range of peak loads for different grip variants (true, cup, twisted) and their relationship with the shoulder position are analyzed. Particular attention is paid to preventive strategies, in particular, eccentric strengthening of the shoulder rotators, stabilization of the scapula, and training load management. The second part offers a step-by-step four-phase model of rehabilitation after functional overload, with clear criteria for transitioning between phases. The final section outlines the prospects for research on anatomical, hormonal, and gender moderators of injury, with an emphasis on the need for standardization of methodology for meta-analytic reviews.

Objective. To form an integrated resource covering the anatomy of a shoulder, functional biomechanics during training by aerial acrobatics, to develop coaching tips, and to study the epidemiology of injuries.

Research methods. Narrative synthesis (PubMed, Scopus, Web of Science 2015-2025) in combination with the expert experience of the Chief International Judge of the IPSF.

Key words: aerial acrobatics; shoulder joint; traumatism; biomechanics; prevention; rehabilitation; stabilization of the scapula; eccentric strengthening; sports medicine.

DOI <https://doi.org/10.23856/7026>

1. Introduction

The popularity of aerial disciplines has led to an increase in the incidence of shoulder injuries: 2.8-5.1 cases per 1,000 hours of training (Hansen, 2023). Effective prevention requires a thorough understanding of the anatomy, biomechanics, and technical requirements of the sport.

Aerialists are eager to showcase their latest stunts and elements on social media, which may look dangerous to an uninformed viewer. At the same time, there are almost no scientific publications that assess the frequency of injuries and accidents in recreational aerial acrobatics groups. As a result, the professional community and the media are spreading guesses and assumptions about the level of risk compared to other sports and fitness activities, but there is a lack of data for a meaningful comparison.

In general, few studies have been published in the circus arts, and those involving aerialists have mostly focused on professional performers or students in specialized training programs. A milestone was a 2009 article that analyzed five years of medical data from Cirque du

Soleil and found a rate of 9.7 injuries per 1,000 performances. The authors concluded that the overall injury rate among performers was comparable to and often lower than some other sports, including women's gymnastics. A similar ten-year study with a focus on injury prediction found 5.1 injuries/1,000 performances, with 89.4% of performers having at least one injury during the follow-up period. Both studies were based on medical records from their organizations.

This approach was later used in other studies: data from students of German circus schools, records of physiotherapists from Australian and Canadian schools, etc. Several authors have used a wider range of methods, such as qualitative interviews or prospective monitoring, which has expanded the understanding of injuries, but there is still a lack of materials about recreational aerialists.

In the context of fitness, a few studies from the 1990s already surveyed participants in various activities about injuries. Despite methodological challenges, these studies showed that direct questionnaires can provide valuable information about the risks for amateurs. A similar approach was taken by the authors of a recent survey on injuries in sport and recreational aerial sports.

The dynamic and diverse circus environment poses additional challenges to collect reliable injury data. Mixed and qualitative methods offer greater opportunities, as the way data are collected determines which injuries are recorded. Traditionally, cases that required medical attention or resulted in loss of training/work time are recorded, but the full picture is much more complex.

The issue of standardization is described in the 2020 IOC Consensus Statement and its 2022 Circus Extension, which proposes common injury categories, severity criteria, and recommendations for clinicians and participants. Although the circus extension was published after the data collection for our study was completed, it shows promise for generating more comparable future work.

A definite breakthrough in this niche occurred in 2023: McBlaine and Davies published the first study dedicated specifically to adult recreational aerial acrobatics students. The authors recorded 184 traumatic events among 367 participants over a year and characterized the types of injuries and risk factors in detail. Despite the significant contribution, these data remain isolated and need to be confirmed in larger samples.

Thus, an objective risk assessment for recreational aerialists is still difficult. Our study aims to determine the frequency of injuries among adult recreational performers, characterize their types, and identify trends that will help develop effective safety measures. The results will also allow us to compare the risks at the recreational level with professional programs and other sports, providing a more balanced assessment of the dangers.

2. Main part

Before delving into the anatomical details, it is worth emphasizing that it is the shoulder girdle that is at the epicenter of injury statistics in aerial acrobatics. In seven prospective studies published in 2019-2025, shoulder injuries accounted for 24% (Hansen *et al.*, 2023) to 55% (Chan *et al.*, 2019) of all reported injuries, while the average proportion for rhythmic gymnastics is around 18% and for swimming $\approx 22\%$. This wide range reflects not only the real variability of the loads, but also methodological differences: different authors operate with incompatible definitions of “injury” (medical care vs. time loss vs. self-report), small samples (< 600), and the dominance of the female community, which potentially distorts the risk assessment for male beginners.

If we compare aerial disciplines with “classic” overhead sports (volleyball, baseball), the key difference is the traction component: the athlete hangs on the joint, while in volleyball/baseball, a high-speed “throwing” pattern dominates. A similar type of load can be observed in installers or rock climbers, where the proportion of shoulder injuries fluctuates at a similar level ($\approx 30\text{--}45\%$). Thus, for correct comparisons, it is necessary to take into account not only the fact of working “overhead” but also the presence of axial overhang.

Critically, most existing studies are case reports or online surveys with a high risk of recall bias: injured people are more likely to answer a questionnaire than those who train painlessly. In addition, statistics rarely distinguish between an “acute episode of pain” and a “clinically confirmed injury,” which distorts the severity scales. This lacunar background emphasizes the need for systematic biomechanical validation, which we will discuss further in the following, moving on to the structure and kinematics of the shoulder girdle.

The shoulder complex operates as a single kinematic unit in which the glenohumeral (GH) and scapulothoracic (ST) segments interact synchronously. Flexion and extension, abduction and adduction, as well as internal and external rotation occur in the HG joint; at the same time, the scapula slides over the thorax, performing elevation, lowering, abduction and retraction, upper and lower rotation with a slight anterior or posterior tilt. The total “scapulohumeral” rhythm in a healthy shoulder is about 2:1 – for every two degrees of humerus movement, the scapula adjusts by one degree, relieving the subacromial space.

Anatomically, the shoulder is formed by four joints: HH, acromioclavicular, sternoclavicular, and functional LT. The labrum deepens the socket, and the capsular ligamentous apparatus, together with the negative pressure of the cavity, forms passive stability. Active retention is provided by the rotator cuff – the supraspinatus, subscapularis, psoas, and subscapularis muscles – which compress the head against the socket and, in cooperation with the serratus anterior and trapezius, contribute to the correct rotation of the scapula.

Aerial acrobatics, especially in aerial and dynamic elements, creates an excessive load on the structures of the upper extremity, particularly the shoulder girdle. After analyzing external mechanical factors, such as peak loads in different grips, it is advisable to turn to the internal biomechanical links that ensure stability and mobility in this area.

The shoulder girdle consists of several interdependent joints, both anatomical and functional. Their coordinated work is critical for maintaining the integrity of the kinematic chain “torso – scapula – the humerus – forearm – hand”, especially in the conditions of extreme dynamics of acrobatic movements.

Below are the key joints of the shoulder girdle in terms of anatomy, functional load, and role in compensating for stressful influences typical of acrobatic disciplines:

- Glenohumeral (GH) – ball and socket joint, 3° of freedom.
- Acromioclavicular (AC) – flat; axial rotation up to 15°.
- Sternoclavicular (SC) – saddle-shaped; a single bone connection with the axial skeleton.
- Scapulothoracic (ST) is a functional “joint” that is critical for raising the arm above the head.

The posterior chain (inferior/middle trapezius, rhomboids, latissimus dorsi) controls retraction and posterior tilt, while the anterior chain (pectoralis major/minor, upper trapezius) is responsible for the projection and start of clavicle elevation. An imbalance between these groups is often a prerequisite for impingement syndrome.

Aerial disciplines are characterized by combined axial loads with body weight, prolonged traction in the overhead position, and high eccentric demands on the external rotators.

To withstand a disruption or prolonged overhang, the shoulders must remain “active”: the scapula in depression and stabilization of the serratus anterior, and the humerus in controlled external rotation. This reduces compression in the subacromial space and prevents microinstability. If the external rotation is weak, the athlete “hangs” on the capsule, which increases the risk of pain and injury.

One of the basic types of grips in aerial acrobatics is the twisted or inverted grip, which is a variant of the upper limb support in which the humerus is in a combination of full internal rotation, horizontal adduction, and slight flexion, and the scapula is simultaneously in the phase of projection and upper rotation. The combination of these movements creates the most favorable mechanical moment for holding the body on the pylon, mast, and canvases, but at the same time significantly reduces the subacromial space.

According to the MRI kinematic studies by Moor et al. (2014) and Meyer et al. (2021), the combination of internal rotation and horizontal adduction does indeed reduce subacromial space by about 15-20%. However, both studies included no more than 20 shoulders and analyzed static postures, ignoring the inertial peaks inherent in dynamic descents in the pylon, mast, or canopy. The methodological difference in the segmentation of MR frames (automatic vs. manual) also affects the absolute values.

The threshold value for the external rotator force of $0.7 \text{ N} \cdot \text{m kg}^{-1}$ is taken from the tennis (Kibler et al.) and volleyball (Cools et al.) cohorts and has not yet been validated for vertical traction scenarios. Without direct measurements of aerialists, this figure is still a practical guideline rather than an evidentiary standard.

Regarding “microinstability” (+2 mm of Jobe drift): Hansen et al. (2023) have shown that cranial displacement sometimes decreases after a short specific warm-up, suggesting an elastic rather than a structural cause of the phenomenon. Thus, +2 mm does not always mean pathology.

Summarizing the above biomechanical observations, it is advisable to outline the unresolved issues and methodological limitations that may reduce the generalizability of the results, namely.

- None of the studies stratify the results by acromion morphotype (type I-III), although this can significantly alter the subacromial gap.
- Sex hormonal factors are not considered: estrogen affects collagen and probably capsular stability.
- There are no longitudinal data: whether tendon tissue adapts over time (similar to rock climbers) remains an open question.

If we draw a parallel between other sports, for example, in baseball, the “late cocking phase” is characterized by maximum external rotation but leads to a similar impingement mechanism. This suggests that the critical factor is not the direction of rotation, but the imbalance between the strength of the active stabilizers and the load.

The data strongly supports the need to develop eccentric ER force, but the exact thresholds for pilots have yet to be established. Until large-scale RCTs are available, we use $0.7 \text{ N} \cdot \text{m kg}^{-1}$ as a “yellow risk zone” rather than a hard cutoff.

In the twisted grip, the GH: ST ratio is temporarily shifted to $\approx 1.5:1$ to compensate for the limited external rotation of the shoulder. An upper scapular rotation lag $< 50^\circ$ or ER deficit $> 15^\circ$ is associated with a threefold increase in anterior shoulder pain.

All clinical safety criteria must be met before the twisted grip can be used:

- ER/IR isometric ratio ≥ 0.66 ;
- 30 seconds of active hanging without pain and “sagging”;
- upper scapular rotation $\geq 55^\circ$ during the lift.

After a detailed analysis of the twisted grip, it is advisable to consider the biomechanical characteristics of other common grip variants – true and cup – for a comprehensive risk assessment. During a typical microcycle, an athlete sequentially moves between these positions; therefore, the cumulative load on the shoulder complex is determined by their sum, not by individual isolated elements.

Each grip modifies the shoulder moment of force, the spatial orientation of the scapular plane, and the proportion of axial traction attributable to passive tissues (capsule, ligaments) compared to active stabilizers. In particular, true grip is characterized by the most neutral kinematics and relatively low peak load; cup grip increases the bending moment in the radiocarpal segment; instead, twisted grip combines internal rotation of the shoulder with horizontal adduction, which potentially reduces the subacromial space and increases the compression component.

Generalized peak load values were obtained by platform dynamics in the static axis (3 s) and, if necessary, extrapolated to dynamic conditions using an inverse dynamics model (Nicholas & Alderson, 2024).

Comparative analysis of different grip variants is key to optimizing a training program, as all three positions – true, cup, and twisted – modify the external load vector, the moment of force in the shoulder joint, and the degree of active stabilizer involvement in different ways. Within one microcycle, athletes systematically alternate between these grips; thus, the cumulative impact can only be assessed by analyzing the full range of technical options.

Assessment of the load transmitted through the upper extremities in aerial acrobatics is a key aspect in the analysis of shoulder injury risks. Most commonly, the applied forces are studied using a forearm platform or strain gauge suspension systems normalized to body weight (BW), which allows for comparison of results between performers of different anthropometries.

The following data were obtained during a 3-second static lunge with the vertical reaction of the support normalized to body weight. At the same time, some methodological limitations should be considered: first, dynamic load peaks, especially during drops or sharp descents, can significantly exceed laboratory values; second, samples in such studies are usually limited ($n \leq 30$) and often have gender disparities, which affects the generalization of data. Nevertheless, the relative differences between grip variants remain informative for clinical analysis and overload prevention (Table 1).

Table 1

Peak Shoulder Joint Load During Static Hang in Different Grip Positions (Normalized to BW)

Grip	Shoulder position	Typical tasks	Peak load (\times BW)
True	Neutral / light ER	Lifts, revs	0,9–1,2
Cup	Neutral; forearm supination	Static holds, basic inversions	1,0–1,4
Twisted	Full IR + horizontal adductio	Entrances to hand-spring, dropships	1,5–2,2

The risk classification is based on systematic reviews (Nicholas & Alderson, 2024; Hansen et al., 2023) and a Delphi survey ($n = 18$) of IPSF coaches.

1. Laboratory limitations. The static protocol does not capture inertial loads during descents; the values obtained should be considered as minimal.

2. Cup grip. Increased wrist flexion angle potentially increases the risk of carpal tunnel syndrome despite relatively neutral shoulder kinematics.

3. T wisted grip. The combination of internal rotation and horizontal adduction reduces the subacromial lumen; implementation is advisable only after achieving an ER/IR ratio of ≥ 0.66 and serratus anterior endurance (> 45 s of active hanging).

4. Gender imbalance in the sample. The majority of participants ($\approx 80\%$) were female; results should be extrapolated to men with reservations due to differences in strength profiles.

Aerial acrobatics places extremely high demands on the functional integrity of the shoulder complex, as this anatomical area is subjected to the greatest stress during the performance of holding, rotation, and hanging elements. Shoulder injuries are often the result of accumulated stress, impaired biomechanics, or insufficient muscle stabilization, which requires a structured and phased recovery strategy.

Based on the principles of progressive adaptation, neuromotor activation, and gradual return to functional activity, a four-phase rehabilitation model is proposed. It provides clearly defined goals, specific interventions for each stage, and objective criteria for moving to the next phase. This approach allows to optimize the recovery process, reduce the risk of recurrence of injury, and ensure a gradual return to full training load (Table 2).

Table 2

Rehabilitation plan for the restoration of the shoulder joint in aerial acrobatics

Phase	Objectives	Key interventions	Transition criteria
I (0–2 weeks)	↓ pain, neuromotor activation	GH and PNF blade isometrics	Pain $\leq 2/10$, ER strength 30 % counter-latency.
II (2–6 weeks)	Flexibility + stability	Resistance exercises on the wall, quadriceps displacements	ER ROM symmetrical, scapular dyskinesia eliminated
III (6–12 weeks)	Strengths	ER/IR expander, prone Y/T/W, boot up transfers	ER/IR $\geq 0,9$
IV (12–16 weeks)	Getting back to training	Partial hanging → “skin the cat”	Painless 5× “meat hook”, tolerance до полного тренування

3. Conclusions

The shoulder girdle is a critically vulnerable area in aerial acrobatics, demonstrating the highest rates of injury among all body segments. According to epidemiological estimates, it accounts for 24% to 55% of all injuries in this sport, which is significantly higher than the corresponding figures for related disciplines such as rhythmic gymnastics (about 18%) or swimming ($\approx 22\%$). This phenomenon is due to a specific load in the form of a combination of vertical traction, overhead work, and repetitive inversions. The most effective prevention strategies are programs that include eccentric strengthening of the external rotators, scapular stabilizer training, and a progressive increase in training volume ($\leq 10\%$ increase per week). It is also advisable to alternate grip techniques to minimize repetitive impact on the same anatomical structures.

From the standpoint of recovery, the proposed four-phase rehabilitation model includes the sequential restoration of range of motion, muscle strength, and functional endurance with an emphasis on the safe return to dynamic elements. The key transition criteria are achieving an ER/IR ratio of ≥ 0.9 and pain-free performance of technically demanding elements such as the meat hook.

4. Prospects for further research

At present, there are no sufficiently standardized approaches to the definition and classification of shoulder injuries in aerial acrobatics, which makes it difficult to conduct systematic reviews and meta-analyses. Future research should focus on the development and validation of clear diagnostic criteria for sports-related shoulder injuries in traction-intensive disciplines; multidisciplinary randomized clinical trials (RCTs) on the effectiveness of scapular and rotator cuff stabilization programs; and analysis of sex differences in neuromuscular adaptation and response to training stimuli, taking into account possible hormonal modulations.

An integrated approach to the study of the shoulder complex in high-performance sports will improve both clinical prevention and sports performance.

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SPIRITUAL SELF-REALISATION OF PSYCHOLOGISTS: STRONG PERSONALITY TRAITS AND DEVELOPMENTAL FEATURES

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Summary

The article explores the phenomenon of spiritual self-realization among students pursuing a degree in psychology. Spiritual self-realization is viewed as an essential aspect of their personal and professional development. The study examines the features of the formation and development of spiritual self-realization and analyzes key personal characteristics that may contribute to this process, particularly character strengths.

The article presents the results of an empirical study on the relationship between spiritual self-realization (transcendence) and the personal traits of psychology students. The methodological basis of the study included the Values in Action Inventory of Strengths (VIA-IS) by K. Peterson and M. Seligman, and the Dispositional Hope Scale by C. Snyder (ukrainian adaptation by H. Laptieva and O. Vlasova). Transcendence is interpreted as a manifestation of spiritual self-realization and includes such character strengths as appreciation of beauty and excellence, gratitude, optimism, humor, and a sense of meaning in life.

Among the majority of respondents, transcendence was formed at a medium or low level (61,3%) and at a high level in 38,7%. Correlation analysis revealed statistically significant positive relationships between spiritual self-realization and several personal traits, particularly dispositional hope ($r = 0,613$), wisdom ($r = 0,593$), creativity ($r = 0,475$), leadership ($r = 0,451$), and Justice ($r = 0,452$), all at the level of significance ($p < 0,01$). Additionally, other significant correlations were identified, which are discussed in detail in the article and represent valuable empirical findings that offer prospects for further research into the phenomenon of spiritual self-realization among youth in the context of professional training.

Key words: spirituality, self-realization, personal traits, character strengths, development, professional formation, positive psychology.

DOI <https://doi.org/10.23856/7027>

1. Introduction

Modern higher education imposes new requirements on the training of professionals in the field of psychology. One of the key conditions for a psychologist's professional development is spiritual self-realization, understood as the process of actualizing inner virtues – particularly spiritual virtues – that guide the individual toward a life filled with meaning, harmony, inner growth, and well-being. Spiritual self-realization is seen as the embodiment of the virtue of transcendence through its active expression in personal life, education, and professional activity.

Within the framework of positive psychology, which emphasizes personal strengths, the capacity for self-growth, and the pursuit of a fulfilling life, spiritual self-realization is considered an important factor in both subjective well-being and professional effectiveness. One of the core concepts that reflects the spiritual dimension of personality in the VIA (Values

in Action) model by M. Seligman is transcendence. It is identified as one of the 24 character strengths grouped into six core virtues, and is associated with the appreciation of beauty and excellence, gratitude, hope (optimism), spirituality/religiousness (sense of meaning), and humor (playfulness).

Transcendence is viewed not only as a stable personality trait but also as a dynamic process that ensures: the connection of future psychologists with higher meaning, spiritual values, and sources of inspiration; the activation of internal resources that support well-being, resilience, and life integrity; and the development of character strengths expressed in life attitudes, professional practice, and interpersonal relationships. This process is a fundamental aspect of spiritual self-realization and is understood as the integration of spiritual, moral, and personal dimensions, guiding individuals toward a meaningful and spiritually enriched life (Seligman, 2011).

Indicators of transcendence as a process of spiritual self-realization include: the presence of a spiritual orientation and belief in the meaning of life, a sense of belonging to something greater (through the power of spirituality); the ability to make sense of life experiences – both positive and negative (through hope and inspiration); emotional and value-based engagement expressed through feelings of gratitude, elevation, and appreciation of beauty; and motivation for moral development that activates the desire to live according to higher moral ideals.

Thus, within the framework of positive psychology, transcendence functions as a mechanism of spiritual self-realization, as it contributes to the growth of subjective well-being through meaning-making, integrates spiritual qualities into everyday practices, and supports the pursuit of a life that holds significance not only for oneself but also for others. It lies in the psychology student's ability to open up to higher spiritual values, search for meaning in life, experience spiritual elevation, and realize themselves through moral, emotional, and meaningful resources. This process is part of subjective well-being and a vital condition for spiritual growth.

This study hypothesizes that spiritual self-realization is connected to the personal characteristics of future psychologists, which manifest as character strengths. These strengths may be used to support further empirical exploration of the phenomenon of spiritual self-realization in psychological science.

The aim of this article is to empirically study the process of spiritual self-realization and to identify its connections with the character strengths of psychology students. These strengths may influence the realization of spiritual self-actualization in the context of educational and professional socialization and serve as valuable, scientifically grounded results for the further development of this research area in psychological science.

2. Theoretical background

The problem of spiritual self-realization of the individual is addressed in the works of many psychological researchers. In global psychology, this issue is explored by representatives of various scientific schools, including humanistic, existential, cognitive-behavioral, positive, and transpersonal psychology.

Representatives of the humanistic approach viewed spiritual self-realization as a higher human need, manifested in the pursuit of personal and spiritual growth, authenticity, freedom of choice, and the realization of spiritual potential. The search for life meaning and spiritual values is considered an essential component of complete spiritual self-disclosure of the personality (Maslow, 1954; Rogers, 1961; Allport, 1955).

Within existential psychology, the idea of life meaning plays a key role as the foundation for spiritual development and self-realization. The striving for meaning is seen as the primary human motivation, and spiritual self-realization is possible only through overcoming internal and external challenges and achieving existential maturity (*Frankl, 2006*).

In positive psychology, spiritual self-realization is regarded as one of the core virtues of transcendence, which contributes to subjective well-being, optimism, and resilience. It is closely connected with spiritual growth, as it enables a person to integrate their values, goals, and higher meanings into their spiritual development (*Peterson & Seligman, 2004*). The virtue of transcendence focuses on the connection with something greater than oneself, and on looking beyond personal needs to generate a sense of purpose or meaning (*Peterson & Seligman, 2004*).

Transpersonal psychology places particular emphasis on the spiritual dimension of being, mystical experience, and meditative practices, which facilitate going beyond the ego and foster self-disclosure. In this approach, spiritual self-realization is associated with spiritual awakening and the integration of the personality at a deeper level of consciousness (*Grof, 1985; Wilber, 2000*).

Each of the 24 character strengths can be viewed as spiritual or sacred and can support the individual on their spiritual journey. Every strength is a capacity to express goodness, to be good, to do good for others, and to convey a sense of meaning or purpose in the world (*Niemiec, Russo-Netzer & Pargament, 2020*).

Character strengths are understood as mechanisms that enable the behavioral expression of moral virtues in daily life, benefiting not only the individuals who practice them but also others in their social environment (*Peterson & Seligman, 2004*).

As the methodological basis of this study, the post-nonclassical paradigm was chosen, which provides a holistic and multifaceted understanding of the phenomenon of spirituality, the inner world of the individual, and the process of self-realization in the context of their temporal dynamics. This approach also opens the way for interdisciplinary analysis, allowing the integration of methodological approaches and scientific tools from various fields of knowledge such as religious studies, philosophy, cultural studies, ethics, aesthetics, sociology, history, pedagogy, and psychology. Through such an integrative approach, it becomes possible to develop a more comprehensive and systematic understanding of spirituality and self-realization in young individuals (*Vlasova, Vashchenko, Danyliuk, Shcherbyna, 2016*).

This topic is also actively discussed within the framework of the integrative approach, which combines elements of different psychological schools to achieve a deeper and more grounded understanding of spiritual self-realization and its role in spiritual development.

Thus, within various psychological paradigms, spiritual self-realization is considered a process that ensures the integrity of personal development, as well as the individual's adaptation, resilience, and inner harmony.

3. Methodology

The empirical study was conducted with the participation of 217 students enrolled in institutions of higher education in Ukraine, majoring in psychology and practical psychology in the cities of Kyiv and Ternopil. The participants ranged in age from 16 to 25 years ($M = 19,35$; $SD = 1,84$). Among them, 32 (14,7%) were male and 185 (85,3%) were female.

In terms of professional characteristics, 64,5% of the sample were students at a classical university, while 35,5% were studying at a pedagogical university. A majority of the participants (78,8%) were pursuing a Bachelor's degree, while 10,6% were working toward a Specialist

and another 10,6% toward a Master's degree. Regarding the program of study, 19,4% of the respondents specialized in practical psychology, and 80,6% in general psychology. Social and demographic data show that 35,5% studied in a large city, while 64,5% were based in a metropolis.

The Values in Action Inventory of Strengths (VIA-IS) by K. Peterson and M. Seligman, adapted into ukrainian by O. Vlasova and H. Laptieva (2024), was used as the main research tool. This questionnaire is designed to assess 24 character strengths, which are grouped into six core virtue categories: Wisdom and Knowledge: 1) curiosity; 2) love of learning; 3) judgment; 4) creativity; 5) Perspective Courage: 6) bravery; 7) persistence; 8) integrity (honesty); 9) zest; Humanity and Love: 10) kindness; 11) capacity to love; 12) social intelligence; Justice: 13) teamwork; 14) fairness; 15) leadership; Temperance: 16) self-regulation; 17) prudence; 18) humility/modesty; 19) forgiveness; Transcendence: 20) appreciation of beauty and excellence; 21) gratitude; 22) hope (optimism); 23) spirituality (sense of purpose); 24) humor. The overall score on the Transcendence scale was treated as a key variable, as it reflects the process of spiritual self-realization among future psychologists.

The empirical study also utilized the Dispositional Hope Scale by C. Snyder, adapted into ukrainian by O. Vlasova and H. Laptieva. This test is designed to measure dispositional hope by assessing the presence and intensity of two components: willpower and wayfinding ability.

Dispositional (stable, personal) hope, according to C. Snyder's concept, is a cognitive construct. The willpower component reveals the motivational aspect, reflecting a person's confidence in their ability to achieve goals despite difficulties. It acts as an internal drive that pushes an individual forward. The wayfinding ability is the cognitive component that characterizes a person's capacity to generate effective pathways to reach goals, especially under challenging or unpredictable life circumstances.

4. Results

Using the Values in Action Inventory of Strengths (VIA-IS) by K. Peterson and M. Seligman, it was possible to identify the relationships between spiritual self-realization (transcendence) and the personality traits of psychology students.

Let us begin with the transcendence scale, which, according to our research logic, represents a manifestation of the spiritual self-realization of the individual. The score ranges on this scale can be conventionally divided as follows: high: 40-50 points, medium: 20-39 points, low: 0-19 points. The minimum score on the subscales is 1 point, and the maximum is 10 points. These subscale scores can be conditionally divided as: high: 8-10 points, medium: 4-7 points, low: 0-3 points. Auxiliary scales clarify the essence of the main scale, where each response A or B scores 5 points.

Most respondents (61,3%) demonstrated a medium level of transcendence with an average score of 34,88 points; 38,7% showed a high level with an average score of 44,44 points. This indicates that the formation of the transcendence component, in this variation, is at a medium to low level for the majority of students.

The correlation analysis of spiritual self-realization with the character strengths of future psychologists reveals weak, moderate, and strong positive relationships between the overall transcendence score and many character strengths, as well as with the overall dispositional hope score and its components – willpower and the ability to find pathways for goal attainment among psychology students (Table 1).

Table 1

**Correlations of Spiritual Self-Realization (Transcendence) with Personality Traits
of Future Psychologists**

Virtues (Strengths) and Personality Traits	Spiritual Self-Realization (Transcendence)	
	r (Pearson correlation coefficient)	p (Significance level)
Curiosity	,331**	p<0,01
Love of Learning	,369**	p<0,01
Ingenuity	,475**	p<0,01
Perspective	,434**	p<0,01
Wisdom and Knowledge	,593**	p<0,01
Courage	,344**	p<0,01
Perseverance (Persistence)	,317**	p<0,01
Enthusiasm	,410 **	p<0,01
Bravery	,393**	p<0,01
Kindness	,152*	p<0,05
Ability to Love	,336**	p<0,01
Humanism and Love	,322**	p<0,01
Social Intelligence	,220**	p<0,01
Collectivism	,169*	p<0,05
Fairness	,238**	p<0,01
Justice	,452**	p<0,01
Leadership Qualities	,451**	p<0,01
Self-Control	,146*	p<0,05
Forgiveness	,149*	p<0,05
Moderation	,164*	p<0,05
Ability to Find Pathways to Goal Achievement	,499**	p<0,01
Willpower	,551**	p<0,01
Dispositional Hope	,613**	p<0,01

** p<0,01; * p<0,05

A qualitative analysis of the correlation results indicates the presence of a statistically significant relationship between spiritual self-realization (transcendence) and a number of personality traits reflecting the spiritual and value sphere of future psychologists. The highest correlation coefficients were found for the following variables: dispositional hope, which may be a key factor in spiritual self-realization ($r = 0,613$; $p < 0,01$); high wisdom scores ($r = 0,593$; $p < 0,01$); willpower as the motivational component of hope ($r = 0,551$; $p < 0,01$); the ability to find pathways to goal achievement as the cognitive component of hope ($r = 0,499$; $p < 0,01$); ingenuity, which as creativity helps to see new meanings and broad pathways of spiritual life ($r = 0,475$; $p < 0,01$); leadership qualities, as a manifestation of responsibility and influence ($r = 0,451$; $p < 0,01$); and justice (overall score) as the moral foundation of spiritual self-realization ($r = 0,452$; $p < 0,01$).

The closest links with spiritual self-realization (transcendence) are associated with the cognitive-motivational traits of dispositional hope, wisdom, willpower, creativity, as well as

moral and ethical attitudes of justice and leadership. These findings are important for further research into the phenomenon of spiritual self-realization and the identification of factors that may influence this process.

Moderate positive correlations were also found between spiritual self-realization (transcendence) and the following character strengths: perspective-taking ($r = 0,434$; $p < 0,01$), enthusiasm as emotional engagement that can enhance spiritual aspirations ($r = 0,410$; $p < 0,01$), bravery as an expression of determination ($r = 0,393$; $p < 0,01$), love of learning as a path to understanding the world, oneself, and one's higher values ($r = 0,369$; $p < 0,01$), courage which supports inner integrity and value consistency ($r = 0,344$; $p < 0,01$), capacity to love as an unconditional expression of love for others ($r = 0,336$; $p < 0,01$), curiosity as a desire for knowledge and self-discovery, foundational to the search for meaning in life ($r = 0,331$; $p < 0,01$), humanity and love as a basis for transcendent values (humaneness) ($r = 0,322$; $p < 0,01$), and perseverance, which aids in achieving spiritual goals ($r = 0,317$; $p < 0,01$).

There were also weaker but statistically significant correlations with the following traits: social intelligence, which facilitates effective interaction and interpersonal relationships ($r = 0,220$; $p < 0,01$); fairness as an individual trait ($r = 0,238$; $p < 0,01$); teamwork as a sense of unity and belonging ($r = 0,169$; $p < 0,05$); self-regulation as the internal management of emotional states ($r = 0,146$; $p < 0,05$); forgiveness as the ability to let go and reconcile ($r = 0,149$; $p < 0,05$); temperance as a form of restraint and a supporting ethical trait ($r = 0,164$; $p < 0,05$); and kindness as the capacity to act with goodness ($r = 0,152$; $p < 0,05$). These traits may be important indicators for further study of the spiritual growth and self-realization of young individuals.

Thus, the spiritual self-realization of a future psychologist is a multidimensional and multifaceted phenomenon, grounded in the interconnection of cognitive-motivational resources of the individual through personal traits such as hope, wisdom, willpower, and creativity; through moral and ethical traits such as fairness, leadership, and humanity; and through affective traits such as enthusiasm, capacity to love, and perseverance. These findings indicate coherence and integration of cognitive, emotional, and moral qualities within the spiritual self-realization of a psychology student.

5. Conclusions

The obtained results confirmed the existence of statistically significant positive correlations between spiritual self-realization (measured through transcendence) and the personal characteristics of psychology students. The spiritual self-realization of future specialists in psychology was found to be closely associated with such personal traits as dispositional hope, wisdom, willpower, creativity, leadership qualities, and fairness. This indicates that the spiritual dimension of personality is activated through cognitive-motivational, moral-ethical, and emotional-value resources, which form the foundation for the professional development of a psychologist.

Most respondents demonstrated a medium to high level of transcendence, reflecting the potential for further spiritual growth during the process of education and self-realization. High scores on such strengths as appreciation of beauty, gratitude, hope, humor, and sense of meaning in life serve as evidence of internal resources capable of supporting students in their spiritual self-realization.

The statistically significant results confirm that the development and expression of these personal qualities are fundamental for effective spiritual self-realization among psychology

students. In turn, this contributes to their professional maturity and the formation of a spiritually meaningful life. The findings highlight the potential for integrating positive psychology into the training system of psychologists, emphasizing the development of inner personal resources.

The prospects for future research lie in a deeper exploration of the multifaceted phenomenon of spiritual self-realization, particularly through the lens of positive psychology and the practical application of the findings in the educational process, which will foster the development of a harmonious and spiritually grounded future professional.

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INDIVIDUAL PSYCHOLOGICAL FACTORS IN STUDENTS' ADAPTATION UNDER LONG-TERM STRESS

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Summary

The article highlights the current problem of the influence of individual psychological factors on the process of adaptation of students in conditions of prolonged stress. Due to prolonged social and military upheavals, modern youth increasingly face psychological difficulties that complicate the process of learning, socialization and personal growth. Psychological factors such as anxiety, emotional stability, self-esteem, achievement motivation and the level of psychological resilience are studied. Considerable attention is paid to the analysis of coping strategies used by students in overcoming stressful situations, as well as the features of the formation of adaptive and maladaptive models of behavior. The presented results of the empirical study demonstrate that a high level of awareness, internal support and flexibility contributes to effective adaptation. It is shown that psychological support in an educational institution plays an important role in strengthening the internal resources of the individual. The potential of preventive programs for the development of stress resistance is also outlined. The author emphasizes the need to integrate psychoeducational activities into the educational space. The materials of the article may be useful to specialists in the field of educational psychology, teachers and higher education administration. Based on the data obtained, recommendations are formulated for practical psychologists on the prevention of maladjustment and support for the psych emotional state of students in conditions of instability and chronic stress.

Key words: individual psychological factors, adaptation, students, prolonged stress, stress resistance, coping strategies, psychological support.

DOI <https://doi.org/10.23856/7028>

1. Introduction

Modern social realities, in particular, prolonged military aggression, economic instability, uncertainty of the future and changes in the educational environment, create a powerful psycho-emotional burden on students. Prolonged stress becomes a constant companion of young students, which significantly affects their psychological well-being, academic motivation, interpersonal interaction and overall quality of life. Adaptation in such conditions requires the presence of internal resources, which include individual psychological characteristics of the personality. The study of these factors allows us to better understand the mechanisms of overcoming difficulties, identify potential areas of vulnerability and develop effective strategies for supporting young people in times of crisis. The focus of scientific analysis is on such components as emotional stability, self-esteem, coping strategies, level of anxiety, motivation and psychological resilience.

The purpose of the article: to identify and analyze individual psychological factors that influence the adaptation of students in conditions of prolonged stress, in order to identify

support resources and form practical recommendations for maintaining the mental health of young students.

2. An overview of the main material

When analyzing the concept of mental resilience, it is impossible to avoid the phenomenon of stress, which is its immediate context and factor. In scientific and everyday discourse, the term "stress" is used extremely widely, but often without taking into account its complex nature and the stages of the body's reaction to stress-causing factors. The concept of "stress" comes from physics and originally meant tension, pressure or force applied to a system. This term was introduced into psychology and medicine by Hans Selye in 1926. The scientist defined stress as a non-specific reaction of the body to any requirements, calling this process a general adaptation syndrome or biological stress. According to his concept, this reaction is a universal response of the body to a wide range of stimuli, both physical and psycho-emotional. G. Selye identified three main stages of biological stress:

1. The stage of anxiety reaction – characterized by the mobilization of physiological and psychological resources: there is an increase in blood pressure, body temperature, increased emotional reactions and increased sensitivity to external stimuli.

2. The stage of resistance (adaptation) – at this stage the body relatively well withstands the effects of the main stressor, but becomes more vulnerable to other stimuli. Psychologically, it manifests itself in the stabilization of the emotional sphere and concentration on solving the problem situation.

3. The stage of exhaustion – occurs under the condition of prolonged or excessively intense exposure to the stressor. The body's protective mechanisms are exhausted, there is a violation of physiological functions, decreased motivation, a feeling of helplessness, absent-mindedness and emotional destabilization.

G. Selye emphasized that stress is not always negative. He distinguished the concepts of eustress (positive) and distress (negative), noting that in certain circumstances stress mobilizes a person's internal resources and promotes effective activity. In subsequent approaches, these concepts were simplified, and the term "stress" began to be associated exclusively with negative psycho-emotional states, and also began to be identified primarily with psychological, rather than biological, influence.

Everyday reality demonstrates that it is impossible to completely avoid stress. At the same time, the degree of its influence largely depends on the individual reaction of a person. It is important to realize that negative consequences are generated not by the fact of the presence of stress itself, but by an inadequate or maladaptive reaction to it.

In this context, adaptation is considered as the ability of a subject to effectively overcome stress using functional coping strategies that ensure the preservation of mental well-being. Adaptive ways of overcoming stress include conscious response, rational assessment of the situation, active problem solving, and seeking support. In contrast, maladaptive strategies include denial of the stressor, avoidance, and the use of psychoactive substances to reduce emotional stress in the short term, which in the long term only increases behavioral disorganization.

Thus, the formation of mental resilience is a key task in the context of confronting chronic stress, and therefore an important area of psychological support in the educational environment, in particular in conditions of social crises and prolonged destabilizing circumstances.

During the stress response of the body, changes occur that can be classified into three main groups of indicators: physiological, psychological, and behavioral (*Bardyn, 2021*).

Physiological indicators include such manifestations as rapid heartbeat, dilated pupils, increased sweating, muscle tension in the arms, legs, and neck, dry mouth, tightness in the throat, psychomotor agitation, and alternating sensations of heat and cold. Such reactions are the result of activation of the sympathoadrenal system in response to the stressor.

Psychological indicators of stress include increased irritability, suspiciousness, hostility, feelings of unreasonable fear, anger attacks, apathy, depressive states, difficulty in making decisions, decreased self-esteem and cognitive impairment (thinking disorders) (Prokofieva, 2025).

Behavioral manifestations include increased excitability, nervous tics, impulsiveness, changes in appetite (anorexia or hyperphagia), sleep disorders (insomnia or hypersomnia), frequent emotional outbursts, increased conflict, decreased productivity, abuse of psychoactive substances (alcohol, tobacco) and even suicidal intentions. In response to the action of stressors, an individual engages a coping system – coping behavior, which is a conscious form of adaptation to a situation perceived as threatening. Unlike psychological defense, which operates mostly unconsciously, coping strategies are determined by choice and are aimed at actively reducing stress levels (Prokofieva, 2025: 286).

Coping strategies can be of different orientations. For example, cognitive coping involves searching for information about a stressful situation, analyzing ways to improve it or stabilize the emotional state. Coping strategies involve a direct response to the situation: changing circumstances, taking sedatives, physical activity, etc. At the same time, some people choose an escape-avoidance strategy, which is characterized by a lack of active response, which can potentially worsen the situation (Meshko, 2023).

Researchers pay special attention to maladaptive ways of coping with stress, including denial of the problem, avoidance of thoughts about the stressful situation, illusory satisfaction, and rationalization. Such strategies can temporarily reduce stress, but at the same time they deepen the problem and prevent a real solution to the situation.

Successful stress management is also possible through external support – turning to the social environment: friends, loved ones, a psychotherapist or a psychological help specialist. The presence of supportive social ties is considered one of the leading factors in maintaining mental health in conditions of prolonged stress (Oleś, 1993).

3. Individual psychological factors of personality adaptation to conditions of prolonged stress

Personality adaptation to complicated life circumstances, in particular to the influence of prolonged stress, is a complex multi-level psychological process. It involves not only modification of external behavior, but also a deep transformation of the internal regulatory system aimed at preserving personal integrity, psycho-emotional stability and effective functioning in a changing environment.

In modern psychological theory, adaptation is considered as a dynamic system of interaction between the subject and the environment, which ensures the establishment of a balance between the requirements of the environment and the individual capabilities of the individual (Lazarus, 1966; McCubbin & Patterson, 1983). Of particular relevance is the study of the adaptive resources of student youth, who combine a high level of personal and academic activity with increased vulnerability to psych traumatic influences of a social and existential nature. In conditions of social turbulence caused by military actions and general instability, individual psychological factors become crucial, determining the ability of the individual to effectively

adapt, while maintaining mental balance and vitality. According to modern empirical research (Leontiev, 2022; Stelmakh, 2023), such factors include:

- the level of self-esteem, which performs the function of regulating the emotional state, determines the degree of self-confidence and readiness to overcome difficulties;
- stress resistance, as a personality characteristic that allows you to maintain control over the situation and maintain productivity in difficult conditions;
- mental stability, which includes flexibility of thinking, the ability to mobilize internal resources, emotional self-regulation and psychological recovery after crisis situations;
- personal anxiety, which, at high levels, significantly complicates the adaptation process, reduces the effectiveness of coping strategies and can provoke the development of psychosomatic disorders;
- coping strategies are individual mechanisms for overcoming stress, including both conscious actions and unconscious forms of response. Depending on personal characteristics, strategies can be both constructive and destructive (Lazarus & Folkman, 1984).

Students, being in a phase of constant personal formation, face a wide range of challenges every day – from intense academic workload to identity crises and social uncertainty. In conditions of martial law, these factors are even more acute, forming a permanent stressful background that requires students to have a high level of internal regulation and adaptability.

Thus, a systematic study of individual psychological determinants of adaptation in conditions of prolonged stress allows not only to more deeply understand the mechanisms of mental self-preservation, but also creates a theoretical and practical basis for the development of psycho-prophylactic, corrective programs aimed at supporting student youth in conditions of protracted crisis situations.

4. Research results

To assess the stress resistance and social adaptation of students of higher education institutions, the following psychodiagnostic methods were used: Karen Lappert's test for determining mental stability, T. Holmes and R. Rage's stress resistance and social adaptation assessment method, C. Spielberger's personal anxiety research method, and T.V. Dembo's method, S.Ya. Rubinstein's (modified by A.M. Prykhozhan, adolescence and youth). The empirical study was conducted at the Open International University of Human Development "Ukraine". The study involved 60 students of the 1st-4th year of the specialty "Psychology" aged 18 to 23 years. The results of the study are presented in Table 1.

Table 1

Results of the study using the method "Determination of stress resistance and social adaptation"

Respondents	Levels of stress resistance and social adaptation		
	Low level	Threshold level	High level
Indicators (%) of 1st year students	17	50	33
Indicators (%) of 2nd year students	12	59	29
Indicators (%) of 3rd year students	24	45	31
Indicators (%) of 4th year students	9	47	44

As can be seen from the presented data, the threshold level of stress resistance and social adaptation prevails in most respondents. Such students are characterized by a decrease in the

level of stress resistance with an increase in the number and severity of stressful situations. To overcome negative states, they are forced to concentrate a significant part of their own vital energy and resources, which can subsequently determine emotional and physical exhaustion. The results of the 3rd year students, 24% of whom, as a result of the study, have a low level of stress resistance, which indicates that they have a high level of stress load and a very low level of stress resistance, which is a signal of serious anxiety. Such individuals have a high probability of nervous exhaustion, and as a result, the appearance and development of various psychosomatic diseases. It is advisable for such students to take measures to avoid stressful situations and those areas of activity that may be associated with stress. In our opinion, the indicators of a high level of stress resistance and social adaptation in 44% of graduate students are optimistic. They are characterized by high stress resistance, a predominance of optimistic moods and attitudes. They can effectively function and interact in various social and professional spheres, as they demonstrate a minimal level of stress load.

The next technique that we used for empirical research is the Karen Lappert test for determining mental resilience. High levels of stress are less common in groups of 2–4 years, which indicates the positive impact of stress management skills. The average level of stress is inherent in most respondents, this may indicate that stress management skills help to avoid high levels of stress, maintaining it at an average level. Low levels of stress prevail in 1, 2 and 4 years, which is a positive indicator of the general stress resistance of young men. Stress management skills have a positive impact on young men's ability to cope with stress, reducing the number of high stress events and maintaining stress at low or moderate levels Table 2.

Table 2

Distribution of Mental Resilience Test Scores Karen Lappert

Stress levels	Results of 4th year students		Results of 3rd year students		Results of 2nd year students		Results of 1st year students	
	the number of persons	%	the number of persons	%	the number of persons	%	the number of persons	%
Low	8	53,3	3	20	6	40	6	40
Medium	5	33,3	6	40	7	46,6	6	40
High	2	13,4	6	40	2	13,4	3	20

Using the methodology of studying personal anxiety by C. Spielberger, we obtained the following results, which are illustrated in Figure 1.

Comparative data indicate that under martial law, the level of personal anxiety among students has increased significantly. In particular, there is an increase in the proportion of those with medium and high levels of personal anxiety. Most students now demonstrate a medium level of anxiety, which indicates a general tendency to increase anxiety among young people in conditions of prolonged stress.

According to the results of an empirical study using the method of T. Dembo-S. Rubinstein in the modification of A. M. Prykhodzhan to determine the self-esteem of students-psychologists, it allows us to determine three key parameters of self-esteem: growth, realism and stability. The results obtained are structured in the form of a diagram (See Figure 2 and 3).

As can be seen from Figure 2, out of 60 subjects who participated in the study of the features of self-esteem development, 11 people were found to have an unrealistic (overestimated) level of self-esteem, and 3 people were found to have a low level of self-esteem, and

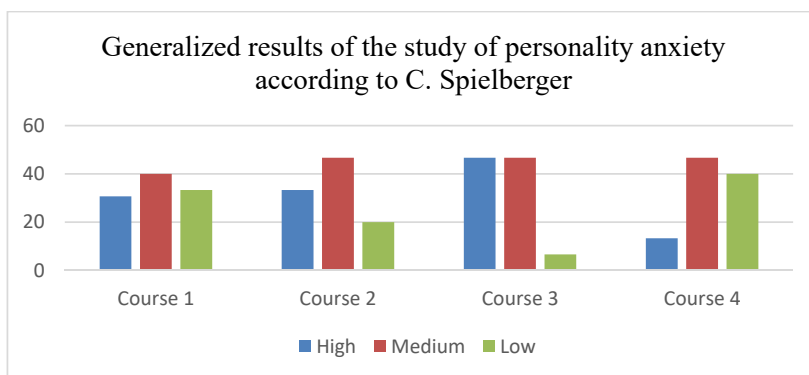


Fig. 1. Levels of personal anxiety of respondents

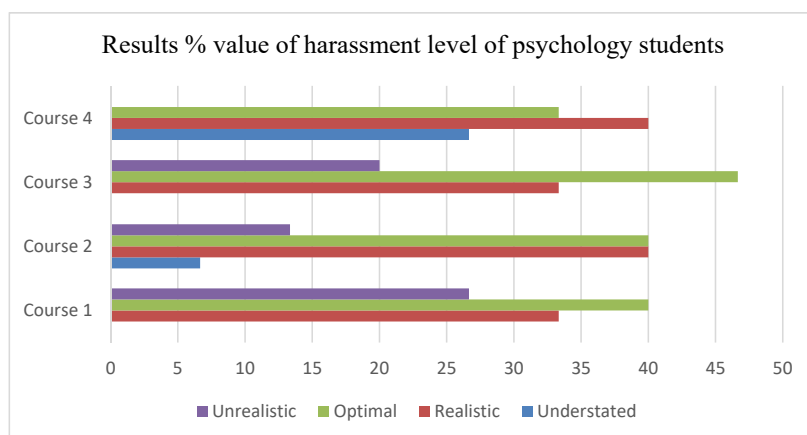


Fig. 2. Results of % value of self-esteem of psychology students according to the method of T. Dembo – S. Rubinshtein

the remaining 46 people had a realistic level of self-esteem. The results obtained indicate that a significant part of young people have an adequate idea of themselves, although in some cases there are deviations towards both overestimated and underestimated self-esteem, which requires further analysis and, if necessary, psych correction. It should be noted that the success of choosing a profession depends on the level of self-esteem: if the level of aspirations is overestimated, then the chosen profession, in the end, disappoints. Low self-esteem also negatively affects the choice of a profession and the development of the personality. The visual results of the obtained data regarding the level of harassment of the subjects are presented in the form (See Fig. 3).

In the first year, the optimal level of demands prevails (40%), as well as a significant proportion of students with a realistic level (33.34%). At the same time, an unrealistically high level of demands was found in 26.66% of respondents, which may be associated with excessive expectations of one's own capabilities with minimal experience. Understated demands were not recorded. In the second year, the situation remains similar: realistic and optimal levels are observed in 40% of the studied, unrealistic demands decrease to 13.34%, and underestimated

ones increase slightly (6.66%), which may indicate the first manifestations of a more critical self-assessment in the learning process.

Third-year students have the highest indicator of the optimal level of demands (46.66%) among all courses. The realistic level is 33.34%, the unrealistic level is 20%, and the underestimated level is absent. This structure indicates the gradual formation of an adequate idea of oneself and one's own capabilities.

In contrast, fourth-year students observe a decrease in the level of unrealistic demands to 0%, which may be a sign of mature self-esteem. The realistic level remains at 40%, the optimal level is 33.34%, while the underestimated level is demonstrated by 26.66% of the studied subjects. This may indicate fatigue, loss of confidence or the influence of stress factors during the period of completion of studies.

In general, it can be noted that with age and training experience, students tend to be more realistic in assessing their own capabilities and reduce the proportion of individuals with an unrealistic level of demands. At the same time, at the final stages of training, the risk of forming underestimated demands is recorded, which requires psychological support.

5. Recommendations for supporting the adaptation of students in conditions of prolonged stress

In order to maintain mental health, ensure emotional stability and increase the adaptability of students in conditions of prolonged stress, it is advisable to consider the following practical recommendations:

1. Stimulating adaptive coping strategies:
 - Planning a solution to the problem as a conscious cognitive strategy aimed at analyzing the situation and developing a clear sequence of actions.
 - Positive reappraisal of the situation – the ability to find opportunities for personal growth in a difficult experience.
 - Seeking social support – turning to friends, family, teachers or psychological help specialists.
 - Self-control – developing emotional regulation skills, the ability to restrain impulsive emotional reactions.
2. Formation of a task-oriented coping style:
 - This style involves the active inclusion of cognitive and behavioral resources of the individual for purposeful activity to overcome the stressor. Its effectiveness increases in conditions when the situation is under control.
 - In the event of an impossibility of immediate influence on the situation (for example, waiting for the results of a medical examination), it is important to provide psycho-emotional relief and prevent frustration by redirecting energy to meaningful activities.
3. Strengthening individual adaptation resources:
 - Increasing self-efficacy – forming in students self-confidence, the ability to cope with difficulties.
 - Developing self-regulation skills, in particular breathing techniques, relaxation, emotional self-observation.
 - Previous experience in overcoming difficult situations should be considered as a valuable resource that can be internalized as a survival strategy.
4. Applying mindfulness practices:

- Regular practice of conscious presence in the present moment helps reduce anxiety, symptoms of depression, and psycho-emotional exhaustion.

- Mindfulness techniques help to focus, reduce reactivity to external stimuli, and improve the general psychophysiological state.

5. Preventing the use of maladaptive strategies:

- Potentially harmful strategies include: avoiding the problem, distancing, self-blame, substance use, and compulsive behavior (overeating, gambling, gadget addiction, etc.).

- Although the use of such strategies provides a temporary reduction in emotional stress, in the long term it leads to a deepening of maladaptation, the development of addictions, anxiety, and affective disorders.

6. Expanding the resource base of education seekers:

- Promoting access to material, social, and psychological resources.

- Developing problem-solving skills, the ability to make decisions, and be responsible for one's own actions.

- Creating conditions in educational institutions for systemic psychological support, crisis counseling and preventive work with students. These recommendations can be the basis for the implementation of an institutional program to support the mental health of students in conditions of martial law, prolonged stress and social turbulence.

6. Conclusions

The results of the analysis show that individual psychological factors play an important role in the process of adapting students to conditions of prolonged stress. It was determined that the adaptive capabilities of the individual largely depend on the level of emotional stability, the development of coping strategies, self-esteem and the ability to reflect. At the same time, it was found that vulnerability to maladaptive manifestations increases in conditions of insufficient support, chronic emotional stress and low motivation for self-preservation. The results obtained can be used to develop preventive and corrective programs for psychological support of students in conditions of prolonged stress.

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THE ROLE OF EMOTIONAL INTELLIGENCE IN SHAPING ENVIRONMENTALLY RESPONSIBLE BEHAVIOR

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Summary

Emotional Intelligence (EI) is a multifaceted concept encompassing the ability to process emotional information for effective interaction and the formation of environmentally responsible behavior. This article summarizes theoretical approaches to the conceptualization of EI in the context of environmental responsibility through the analysis of three key models.

The Ability Model by Mayer and Salovey defines EI as a set of cognitive skills involving the perception, utilization, understanding, and management of emotions, which facilitates well-grounded environmental decisions, such as assessing the impact of environmental degradation. The Mixed Model by Bar-On integrates emotional and social competencies, such as empathy and adaptability, which motivate sustainable lifestyles, including the reduction of resource consumption. Petrides' Trait Model emphasizes subjective emotional self-perceptions, shaping emotional connectedness with nature and encouraging pro-environmental initiatives.

Each model offers a unique perspective on EI, underscoring its role in shaping environmental awareness through cognitive, social, and subjective mechanisms. The practical application of these models involves the development of educational programs aimed at fostering EI to support ecological practices such as waste recycling and the advocacy of green policies. For instance, Bar-On's model contributes to the formation of sustainability-oriented communities through collective action, while the Trait Model enhances individual motivation for eco-activism.

These approaches establish a foundation for integrating EI into policymaking that promotes sustainable development. Further research should aim to integrate these models to strengthen their influence on sustainable practices across diverse cultural and social contexts.

Key words: empathy, self-regulation, sustainability, emotional competence, environmental values.

DOI <https://doi.org/10.23856/7029>

1. Introduction

Emotional intelligence (EI) is a complex concept encompassing an individual's ability to process emotional information for effective self-interaction and interaction with others, which is critical for fostering environmentally responsible behavior. The theoretical foundations of EI are rooted in diverse models that propose distinct approaches to defining its components and structure. A pivotal model is the ability model proposed by Mayer and Salovey, which

conceptualizes EI as a set of cognitive skills for processing emotional information (*Metcalf et al., 2013*). This model delineates four components: emotion perception – the ability to recognize emotions in oneself and others through nonverbal cues, such as facial expressions or tone of voice; emotion utilization – the application of emotions to facilitate thinking and decision-making; emotion understanding – the analysis of the causes and consequences of emotional states; and emotion management – the regulation of one's own emotions and influence on others' emotions to achieve desired outcomes. This model emphasizes the cognitive dimension of EI, viewing it as an integral part of general intelligence, measurable through instruments like the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT). This framework enables analysis of how emotion processing can influence environmentally conscious decisions, such as understanding the emotional impact of environmental degradation.

An alternative approach is Bar-On's mixed model, which integrates emotional and social competencies within a broader framework (*Bar-On, 1997*). This model comprises five domains: intrapersonal skills – self-awareness, self-esteem, and independence; interpersonal skills – empathy and social responsibility; adaptability – flexibility and problem-solving; stress management – stress resilience and impulse control; and general mood – optimism and happiness. Unlike the cognitively oriented model of Mayer and Salovey, Bar-On's model highlights psychological traits that promote well-being and social adaptation. These aspects are particularly significant for environmental responsibility, as empathy and social responsibility can motivate sustainable lifestyles, such as reducing resource consumption (*Bar-On, 1997*).

A third approach is the trait EI model proposed by Petrides and Furnham, which defines EI as a constellation of emotional self-perceptions situated at the lower levels of personality trait hierarchies (*Petrides et al., 2001*). This model distinguishes trait EI, encompassing emotionality, self-control, sociability, and well-being, from ability EI, as described by Mayer and Salovey. Trait EI is assessed through self-reports, such as the Trait Emotional Intelligence Questionnaire (TEIQue). This approach emphasizes subjective emotional experiences, which can enhance environmental behavior by fostering an emotional connection with nature, for instance, motivating participation in conservation initiatives (*Petrides et al., 2001*).

Each model offers a unique perspective on EI's components and their impact on environmental responsibility. The ability model underscores cognitive processes that enable informed decisions regarding environmental actions (*Mayer et al., 1997*). Bar-On's mixed model emphasizes social and emotional competencies that promote sustainable behavior through collective action and stress resilience (*Bar-On, 1997*). The trait model focuses on subjective emotional experiences that can cultivate personal commitment to environmental protection (*Petrides et al., 2001*). These theoretical approaches provide a foundation for developing educational and social programs that enhance EI to promote environmental consciousness, such as encouraging recycling or supporting environmental policies (*Kaiser et al., 2003*).

2. Emotional Intelligence as a determinant of environmentally conscious behavior

Emotional intelligence (EI) plays a significant role in shaping environmentally conscious behavior, acting as a determinant that influences motivation, decision-making, and actions aimed at environmental preservation. Unlike previously considered aspects, such as the relationship between EI and environmental responsibility or its theoretical models, this text focuses on the mechanisms through which EI directly facilitates environmentally responsible actions, as well as on empirical data supporting this influence.

EI affects environmentally conscious behavior through an individual's ability to interpret emotional signals related to environmental issues. For example, people with well-developed EI are better at recognizing emotions evoked by information about climate change or pollution, such as anxiety or compassion for affected ecosystems, which can motivate actions like reducing one's carbon footprint (*Schultz, 2001*). This ability to perceive and analyze emotions helps to foster a deeper understanding of environmental consequences, which is crucial for transitioning from knowledge to tangible action (*Kaiser et al., 2003*).

Another mechanism is emotional regulation, which enables individuals to overcome psychological barriers associated with environmental engagement. For instance, feelings of powerlessness in the face of global ecological problems can be paralyzing; however, individuals with high EI are capable of regulating such emotions by focusing on practical steps, such as participating in local greening initiatives or reducing energy consumption (*Bar-On, 1997*). Such self-regulation promotes resilience to stress, which is essential for maintaining long-term environmental activism, particularly in conditions of information overload regarding environmental crises.

Empathy, as a component of EI, plays a particularly important role in fostering environmentally conscious behavior. Individuals with a high level of empathy are more likely to feel connected with nature, cultivating a biophilic attitude – a love for living systems (*Mayer et al., 1997*). This may manifest in actions such as supporting conservation organizations or rejecting products that harm the environment. Empirical studies indicate that empathy towards nature correlates with a willingness to adopt a more sustainable lifestyle, for example, by reducing meat consumption or opting for eco-friendly transportation (*Schultz, 2001*).

Social skills, another element of EI, contribute to environmentally conscious behavior by influencing communities. Individuals with well-developed social competencies can effectively communicate environmental ideas, persuade others of the need for sustainable development, and organize collective actions such as cleanup campaigns or the promotion of green technologies (*Bar-On, 1997*). For example, leaders of environmental movements often rely on social skills to mobilize groups, creating a ripple effect throughout society.

Empirical data confirm the connection between EI and pro-environmental behavior. Studies show that individuals with higher levels of EI are more likely to engage in pro-ecological actions, such as volunteering or supporting environmental policies, due to their greater capacity for self-reflection and awareness of the social consequences of their actions (*Petrides et al., 2001*). Furthermore, programs aimed at developing EI – for instance, training in empathy or emotional regulation – demonstrate growth in participants' environmental awareness, which translates into practical actions such as waste sorting or reducing energy consumption (*Kollmuss et al., 2002*).

Nevertheless, the impact of EI on environmental behavior has its limitations. Emotional sensitivity can sometimes lead to excessive anxiety, which in turn lowers motivation to act due to feelings of hopelessness (*Schultz, 2001*). Additionally, without access to resources or knowledge about specific environmental practices, EI may remain an unrealized potential (*Kaiser et al., 2003*).

In conclusion, emotional intelligence is a powerful determinant of environmentally conscious behavior, exerting influence through emotion perception, self-regulation, empathy, and social skills. Its development through targeted programs can enhance environmental activism and support sustainable development. Future research should focus on creating practical tools for integrating EI into environmental education in order to maximize its impact on individual and collective behavior (*Kaiser et al., 2003*).

3. The influence of emotional competence on the formation of environmental values

Emotional competence, defined as the ability to recognize, regulate, and direct emotions, significantly influences the formation of environmental values that promote sustainable attitudes toward nature. Emotional adaptation to changes in the environment, as a manifestation of emotional competence, contributes to the development of environmental values by enabling people to respond flexibly to environmental transformations. For example, in the context of deteriorating air quality or the reduction of green areas, individuals with high emotional competence can manage emotions such as sadness or irritation and channel them into developing values that support pro-environmental actions. This may manifest, as Bar-On (*Bar-On, 1997*) suggests, in valuing the preservation of nature through supporting air-cleaning initiatives or creating urban gardens. Such adaptation helps shape values that address contemporary ecological challenges.

Ecological reflection within personal narratives, supported by emotional competence, is an important mechanism for forming environmental values. People with well-developed emotional competence can analyze their emotional experiences related to nature and create personal stories that reflect their attitude toward the environment. For instance, reflecting on the joy of walking in a park may encourage the formation of a value for protecting green spaces, expressed through the support of local environmental protection projects, as Mayer & Salovey (*1997*) emphasize. This reflective process contributes to integrating environmental values into one's personal worldview.

Emotional competence also plays a role in forming environmental values through engagement with local environmental initiatives. Individuals with high emotional competence can effectively participate in local projects such as river clean-ups or eco-educational programs, using their emotional skills to build connections within the community. For example, Schultz (*2001*) highlights that they may develop a value of environmental responsibility by participating in local waste recycling campaigns, thereby strengthening their commitment to sustainable development. Such interaction fosters the formation of values with a strong local foundation.

Empirical studies confirm that emotional competence promotes the formation of environmental values through its impact on adaptation and local engagement. Research shows that people with higher emotional competence are more likely to develop values that support ecological initiatives, such as participating in local greening projects or supporting recycling programs (*Kollmuss et al., 2002*). Programs aimed at developing emotional competence also contribute to enhancing the value of environmental awareness, manifested in conscious actions like supporting local eco-initiatives (*Kaiser et al., 2003*).

However, there are limitations. For example, in communities with low levels of environmental activity, emotional competence may encounter a lack of opportunities for realizing these values (*Kollmuss et al., 2002*). Furthermore, excessive emotional sensitivity to environmental changes can lead to feelings of helplessness if not accompanied by community support, as Schultz (*2001*) notes. To address these challenges, programs that integrate emotional competence with local environmental resources and community support are necessary.

In summary, emotional competence shapes environmental values through adaptation to environmental changes, ecological reflection within personal narratives, and engagement with local initiatives. Its development through educational programs and local projects can enhance value-based perceptions of the environment. Future research by Kaiser & Fuhrer (*2003*) should focus on creating strategies that integrate emotional competence with local environmental initiatives to support values across different communities.

4. The role of empathy in decision-making for sustainable development

Empathy, as the ability to understand and share the emotions of others, plays a central role in decision-making aimed at sustainable development, which implies a balance between the economic, social, and environmental needs of current and future generations. Empathy promotes sustainable development decisions through interpersonal understanding of the needs of vulnerable groups, who are often most affected by environmental and social changes. People with a high level of empathy are able to feel an emotional connection with those suffering from the consequences of climate change, for example, communities losing access to water or land due to drought. This understanding encourages decisions that take into account the interests of such groups, such as supporting projects for water supply or the restoration of agricultural lands, according to Batson et al. (1997). Research by Schultz (2001) shows that empathy toward vulnerable groups increases the likelihood of making decisions aimed at social justice in the context of sustainable development. Such an interpersonal approach helps shape decisions that consider the long-term needs of society.

Social solidarity, reinforced by empathy, is another important factor in sustainable development decision-making. Empathy fosters the creation of shared understanding regarding environmental issues, motivating communities to support sustainable development policies. For instance, people who feel empathy for future generations are more likely to support initiatives such as reducing carbon emissions or transitioning to renewable energy sources, being aware of their impact on the quality of life for their descendants. The study by Kollmuss & Agyeman (2002) highlights that empathy for abstract groups, such as future generations, facilitates the formation of consensus for implementing green policies. This allows communities to unite around decisions that support sustainable development through shared values.

Empathy also plays a key role in global cooperation to address environmental challenges, which is fundamental to sustainable development. In a global context, individuals with a high level of empathy are capable of feeling compassion for communities in remote regions suffering from environmental crises, such as rising sea levels or forest degradation. This motivates support for international agreements, such as the Paris Agreement, or funding projects for climate change adaptation in developing countries. Research demonstrates that empathy toward global communities increases the willingness to compromise in international sustainable development negotiations (Markowitz et al, 2012). Such a global approach encourages decisions that consider the interests of the planet as a whole.

Empirical data confirm the significance of empathy in shaping sustainable development decisions. The study by Clayton & Myers (2009) shows that individuals with higher levels of empathy are more likely to make decisions supporting long-term environmental goals, such as investing in green technologies or supporting recycling programs. Moreover, programs that develop empathy through education or training contribute to increased readiness to make decisions that account for social and environmental justice (Pfattheicher et al, 2016). For example, empathy training has shown that participants are more likely to support policies aimed at reducing inequalities associated with environmental problems.

However, empathy in sustainable development decision-making has limitations. Excessive empathy toward certain groups may lead to neglecting broader environmental or economic consequences, complicating the achievement of the necessary balance for sustainable development (Kollmuss et al., 2002). Additionally, empathy may be less effective in situations of low environmental awareness, where people lack sufficient information to make informed decisions (Schultz, 2001). To overcome these challenges, programs combining the development of empathy with environmental education and critical thinking are necessary.

In conclusion, empathy shapes sustainable development decisions through interpersonal understanding, social solidarity, and global cooperation, fostering a balance between social, economic, and environmental needs. Its development through educational programs and international initiatives can enhance the readiness for decision-making that supports sustainable development.

5. Self-Regulation as a Mechanism for the Formation of Environmentally Responsible Practices

Self-regulation, as the ability to consciously control one's own thoughts, emotions, and behavior to achieve set goals, is a key psychological mechanism in shaping environmentally responsible practices that contribute to sustainable development and the preservation of natural resources. This text analyzes the impact of self-regulation on environmentally responsible behavior through cognitive self-discipline for overcoming short-term temptations, behavioral adaptation to environmental norms, and motivational resilience for maintaining long-term environmental actions, deliberately excluding previously examined aspects such as empathy or environmental education.

Cognitive self-discipline, as a component of self-regulation, plays a central role in the formation of environmentally responsible practices by enabling individuals to resist impulsive desires that contradict environmental goals. For example, individuals with a high level of self-regulation are capable of refusing excessive consumption, such as purchasing single-use plastic products, in favor of alternatives that reduce environmental impact, like using reusable containers. Research by Schultz (2001) shows that cognitive self-discipline encourages the selection of environmentally responsible choices in situations where short-term benefits compete with long-term ecological goals. This ability for self-control helps develop practices aligned with sustainable development principles, such as waste reduction and energy conservation.

Behavioral adaptation to environmental norms is another mechanism through which self-regulation promotes environmentally responsible practices. People with well-developed self-regulation are capable of consciously adjusting their behavior in accordance with social or legislative environmental standards, even when it requires effort or changes to habitual routines. For instance, regularly sorting waste or using public transportation instead of a personal car demands self-regulation to adhere to new norms. Research by Bamberg & Möser (2007) emphasizes that self-regulation facilitates adaptation to environmental norms, especially in communities with a high level of social pressure toward ecological responsibility. This process contributes to the formation of practices that become a sustainable part of daily life.

Motivational resilience, supported by self-regulation, is critically important for maintaining long-term environmentally responsible practices. Environmental actions such as reducing one's carbon footprint or supporting reforestation initiatives often require prolonged commitment, despite the lack of immediate results or external rewards. Individuals with high levels of self-regulation can sustain internal motivation, overcoming fatigue or frustration caused by the slow progress in solving environmental problems. Research by Clayton & Myers (Clayton *et al*, 2009) demonstrates that motivational resilience, reinforced by self-regulation, increases the likelihood of consistent environmental practices, such as regular use of energy-efficient technologies. This resilience ensures long-term commitment to environmental responsibility.

Empirical data confirm the significance of self-regulation in shaping environmentally responsible practices. A study by Osbaldiston & Schott (2012) shows that people with higher

levels of self-regulation are more likely to consistently demonstrate environmentally responsible behaviors, such as conserving water or supporting green initiatives, even in challenging economic conditions. Furthermore, programs that develop self-regulation through behavioral management training help increase the frequency of environmentally responsible actions, such as recycling or using bicycles for transportation. For example, one study found that participants in self-regulation training more frequently integrated environmental practices into their daily routines.

However, self-regulation as a mechanism for shaping environmentally responsible practices has certain limitations. In situations of high cognitive load or stress, self-regulation may weaken, reducing the likelihood of environmentally conscious actions (*Bamberg et al., 2007*). Additionally, in communities with low levels of environmental awareness, self-regulation alone may be insufficient without external support, such as access to recycling infrastructure (*Schultz, 2001*). To address these challenges, programs are needed that combine the development of self-regulation with environmental education and the creation of favorable conditions for environmental practices.

Self-regulation shapes environmentally responsible practices through cognitive self-discipline, behavioral adaptation to norms, and motivational resilience, contributing to sustainable development. Its development through educational programs and infrastructure support can strengthen commitment to environmental responsibility.

6. Social competencies and their significance for advancing environmental initiatives

Social competencies, as a set of skills enabling effective interaction with others, relationship-building, and the coordination of joint actions, play a crucial role in promoting environmental initiatives aimed at addressing both global and local ecological problems.

Effective communication in intergroup interactions, as a manifestation of social competencies, is a fundamental element in advancing environmental initiatives. Individuals with well-developed social competencies can articulate environmental ideas clearly and persuasively, adapting messages to different audiences such as communities, businesses, or governmental bodies. For example, communication skills allow activists to present the benefits of urban greening initiatives in ways that consider the interests of local residents – such as improving air quality or creating recreational areas. Research shows that social competencies, particularly active listening and persuasive argumentation skills, increase the effectiveness of environmental campaigns, such as programs to reduce plastic waste (*Moser et al., 2011*). Such communication encourages broader public engagement in environmental initiatives.

The development of social capital, underpinned by social competencies, is another important mechanism for promoting environmental initiatives. Social capital, which includes networks of trust, interaction, and cooperation, is built through individuals' ability to establish strong interpersonal connections. People with high social competencies can create and sustain networks that unite civil society organizations, volunteers, and local leaders to implement environmental projects. For instance, organizing joint clean-up actions in natural areas or promoting energy efficiency initiatives relies on the ability to coordinate the efforts of diverse groups. Research by *Krasny & Tidball (2012)* emphasizes that social competencies, such as networking and conflict resolution skills, contribute to the development of social capital, which in turn increases the success of environmental projects like the creation of community gardens. This process ensures a resource base for long-term initiatives.

Facilitating cross-sectoral cooperation, enabled by social competencies, plays a critical role in advancing environmental initiatives that require collaboration among governmental,

private, and civil society sectors. Individuals with strong social competencies can act as intermediaries, reconciling the interests of various stakeholders to achieve shared environmental goals. For example, the creation of regional waste recycling programs requires collaboration among local authorities, businesses, and community organizations, which depends on facilitation, negotiation, and group dynamics management skills. Research demonstrates that social competencies, particularly consensus-building abilities, enhance the effectiveness of cross-sectoral environmental initiatives such as implementing green construction standards (*Reed, 2008*). This approach promotes the integration of resources and knowledge necessary for the implementation of complex environmental projects.

Empirical data confirm the importance of social competencies in promoting environmental initiatives. Studies show that individuals with high social competencies are more likely to contribute to the successful implementation of environmental projects, such as ecosystem restoration, through effective group coordination (*Pretty et al, 2004*). Programs that develop social competencies via communication or facilitation training also increase community involvement in environmental initiatives, such as energy efficiency campaigns (*Dietz, 2010*). For instance, research findings reveal that participants of social competence training programs are more often the initiators of local environmental projects.

However, social competencies have limitations in advancing environmental initiatives. In communities with low levels of trust or social cohesion, social competencies may be less effective due to resistance to cooperation (*Pretty et al, 2004*). Moreover, excessive reliance on individual social skills can lead to uneven distribution of responsibility if institutional structures fail to support initiatives (*Moser et al., 2011*). To overcome these challenges, programs are needed that combine the development of social competencies with institutional support and the creation of enabling conditions for cooperation.

Social competencies promote environmental initiatives through effective communication, the development of social capital, and the facilitation of cross-sectoral cooperation, ensuring the engagement of diverse groups in addressing environmental problems. Their enhancement through training programs and institutional support can strengthen the effectiveness of environmental projects.

7. Ethical aspects of using emotional intelligence in shaping environmentally responsible behavior

Emotional intelligence, as the ability to recognize, understand, and manage one's own emotions and those of others, represents a powerful tool for shaping environmentally responsible behavior that contributes to sustainable development and the preservation of the natural environment. However, the use of emotional intelligence in environmental initiatives raises a number of ethical issues that require careful analysis to ensure fair and responsible application.

A potentially manipulative influence of emotional intelligence on environmentally responsible behavior constitutes one of the key ethical challenges. The application of emotional intelligence, for instance, through emotionally charged campaigns or narratives, can motivate individuals to engage in pro-environmental actions such as reducing consumption or supporting recycling by appealing to emotions such as guilt, fear, or compassion. Nevertheless, this may border on manipulation if such strategies limit individuals' freedom of choice or exploit emotional vulnerability. For example, campaigns that excessively emphasize the suffering of animals caused by pollution may exert emotional pressure, compelling people to act without deeper reflection. The study by Schultz (*2001*) highlights that the use of emotional appeals in

environmental campaigns may become ethically problematic if it is not accompanied by transparent information and respect for individual autonomy. An ethical application of emotional intelligence requires a balance between motivating pro-environmental behavior and preserving individuals' right to make conscious, autonomous decisions.

Equity in the distribution of emotional resources for fostering environmentally responsible behavior represents another important ethical dimension. Emotional intelligence is frequently applied in educational programs and public initiatives aimed at behavior change, yet access to such resources can be uneven. For instance, communities with lower socio-economic status may have limited opportunities to participate in emotional intelligence training programs focused on environmental awareness compared to wealthier regions. This creates a risk of exacerbating inequality, whereby only certain groups receive the tools to shape environmentally responsible behaviors. The research by Kollmuss & Agyeman (2002) points out that the unequal distribution of psychological resources, including emotional intelligence development programs, can restrict the effectiveness of environmental initiatives within marginalized communities. An ethical approach requires ensuring inclusive access to such resources so that all social groups have the opportunity to develop environmentally responsible behaviors.

Responsibility for the unintended consequences of using emotional intelligence in environmental initiatives constitutes yet another important ethical concern. Applying emotional intelligence to encourage pro-environmental actions, such as reducing plastic use or supporting green technologies, may produce unforeseen effects, including emotional burnout or social polarization. For example, campaigns that employ emotional intelligence to accentuate global environmental threats may evoke feelings of hopelessness within certain groups, thereby weakening their motivation to act. The study by Markowitz & Shariff (2012) demonstrates that excessive use of emotional stimuli in environmental campaigns can lead to psychological stress if not accompanied by supportive strategies. Ethical responsibility obliges the initiators of such campaigns to anticipate potential adverse outcomes and develop mechanisms to mitigate them – for example, by providing psychological support or offering practical, actionable solutions.

Empirical evidence confirms the necessity of an ethical approach to the use of emotional intelligence in environmental initiatives. Research by Clayton & Myers (2009) shows that programs utilizing emotional intelligence to shape environmental behavior are more effective when they incorporate ethical principles such as transparency and respect for individual autonomy. Furthermore, emotional intelligence training programs that include ethical components – for instance, teaching participants to avoid manipulative techniques – contribute to greater trust in environmental initiatives (Pfattheicher *et al.*, 2016). One study found that participants in ethically oriented programs more frequently demonstrated sustainable environmental behaviors, such as supporting recycling initiatives.

Nonetheless, the ethical application of emotional intelligence faces certain limitations. For example, in cultures with high levels of individualism, ethical principles such as respect for autonomy may conflict with the necessity for swift collective action to address urgent environmental issues (Kollmuss *et al.*, 2002). Additionally, the absence of standardized ethical guidelines for the use of emotional intelligence in environmental campaigns may lead to abuses, such as the deployment of manipulative narratives (Markowitz *et al.*, 2012). To address these challenges, it is necessary to develop ethical codes and programs that integrate emotional intelligence development with clear moral guidelines.

Emotional intelligence plays a significant role in shaping environmentally responsible behavior, yet its application gives rise to ethical challenges related to manipulative influence, equity in resource distribution, and responsibility for unintended consequences. An ethical

approach to the use of emotional intelligence – grounded in transparency, inclusivity, and foresight regarding potential outcomes – can enhance the effectiveness of environmental initiatives.

8. Obstacles and limitations in the application of emotional intelligence to environmental issues

Cognitive biases affecting the perception of environmental issues represent a significant obstacle to the effective application of emotional intelligence. Emotional intelligence is often employed to strengthen the emotional connection with nature, for example, through campaigns that evoke empathy toward affected ecosystems. However, cognitive biases such as temporal discounting or optimism bias can weaken the impact of such emotional stimuli. For instance, people may experience an emotional response to messages about melting glaciers but, due to these biases, believe that the consequences will not affect them personally or will occur in the distant future, which reduces motivation to act. Gifford's research (2011) demonstrates that cognitive biases limit the ability of emotional intelligence to transform emotional reactions into concrete environmental actions, such as reducing one's carbon footprint. This obstacle requires combining emotional intelligence with cognitive strategies to overcome biases.

Cultural differences in the perception of emotional stimuli create additional limitations for the universal application of emotional intelligence to environmental issues. Emotional intelligence depends on cultural norms that determine how people interpret and express emotions related to environmental problems. For example, in individualistic cultures, emotional appeals for environmental protection may emphasize personal responsibility, whereas in collectivist cultures, appeals to shared values prove more effective. This complicates the creation of universal campaigns that rely on emotional intelligence. Kitayama & Markus's study (Kitayama *et al.*, 2000) highlights that cultural differences in expressing emotions, such as compassion toward nature, restrict the effectiveness of global environmental initiatives that rely on emotional intelligence. Overcoming this obstacle requires adapting emotional strategies to cultural contexts, which demands additional resources and expertise.

Resource constraints for scaling up emotional intelligence development programs present another significant barrier. Programs that use emotional intelligence to promote environmentally responsible behavior – such as training sessions to develop emotional sensitivity to environmental issues – require substantial financial, human, and time resources. In many regions, especially in low-income countries, such programs remain inaccessible due to a lack of funding or qualified specialists. This limits the potential for widespread implementation of emotional intelligence as a tool for shaping environmental awareness. Stevenson *et al.* (2013) point out that resource limitations, such as insufficient infrastructure for environmental education, reduce the effectiveness of emotional intelligence development programs in marginalized communities. This issue further exacerbates inequality in access to tools that could foster pro-environmental behavior.

Empirical evidence confirms that the obstacles to applying emotional intelligence to environmental issues are systemic in nature. Clayton & Myers's research (Clayton *et al.*, 2009) shows that cognitive biases and cultural differences reduce the effectiveness of emotional intelligence in motivating environmental actions such as supporting green technologies or participating in recycling programs. Additionally, resource constraints complicate the scaling of initiatives that employ emotional intelligence, particularly in regions with limited access to education (Kollmuss *et al.*, 2002). For instance, Weber's study (2016) emphasizes that emotional

intelligence development programs are less effective in contexts of economic instability, where basic needs are prioritized.

However, these obstacles are not insurmountable. Cognitive biases, for example, can be partially addressed by integrating emotional intelligence with informational campaigns that provide clear data on environmental consequences, as suggested by Gifford (2011). Cultural differences require the localization of emotional intelligence-based strategies by involving local leaders and adapting content (Kitayama *et al.*, 2000). Resource limitations can be mitigated through the use of digital platforms to disseminate emotional intelligence training, thereby reducing costs (Stevenson *et al.*, 2013). Nonetheless, these solutions demand coordinated efforts and additional investments.

In summary, the application of emotional intelligence to environmental issues faces obstacles such as cognitive biases, cultural differences, and resource limitations that diminish its effectiveness in shaping pro-environmental behavior. Overcoming these barriers through integration with informational strategies, localization, and digital technologies can enhance its impact.

9. Conclusions

Emotional intelligence is an important resource for shaping a sustainable society that harmoniously integrates economic, social, and environmental goals. The integration of emotional intelligence into social processes can promote enhanced cooperation, responsibility, and long-term thinking necessary for sustainable development. This text analyzes strategies for integrating emotional intelligence through the development of emotional skills within educational systems, the application of emotional intelligence in sustainable leadership, and its use in public dialogues to address environmental and social challenges – intentionally avoiding previously discussed aspects such as ethical dilemmas or cognitive biases.

Development of Emotional Skills in Educational Systems

The development of emotional skills within education is one of the key strategies for integrating emotional intelligence into the formation of a sustainable society. Educational programs that include emotional intelligence training can nurture generations capable of making conscious decisions while considering social and environmental consequences. For instance, incorporating exercises on emotion recognition or conflict management into school curricula can help students develop sensitivity to issues such as climate change and social inequality. Research by Ojala (2012) demonstrates that educational initiatives aimed at cultivating emotional intelligence increase young people's willingness to participate in environmental projects, including afforestation campaigns and energy efficiency initiatives. This strategy contributes to the formation of a society where emotional skills become a foundation for sustainable thinking and action.

Applying emotional intelligence in the development of sustainable leadership represents another effective strategy. Leaders with a high level of emotional intelligence are able to motivate teams, build trust, and coordinate efforts toward achieving sustainable development goals. For example, leaders employing emotional intelligence within the corporate sector can promote initiatives to reduce emissions or implement green technologies, leveraging empathy and persuasive communication skills to engage stakeholders. The study by Metcalf & Benn (Metcalf *et al.*, 2013) emphasizes that emotional intelligence in leadership enhances the effective implementation of sustainability strategies within organizations, such as transitions to circular economy models. This approach enables leaders to create emotionally engaged, long-term sustainability-focused organizational cultures.

The integration of emotional intelligence into public dialogues is a crucial strategy for addressing environmental and social challenges in a sustainable society. Public dialogues concerning issues like climate adaptation or natural resource distribution are often accompanied by conflicting interests. Emotional intelligence can assist facilitators and participants in managing emotions, building mutual understanding, and achieving consensus. For example, employing active listening skills and recognizing emotional triggers in dialogues about water use can foster fair resource distribution between communities. Research by Day & O'Riordan (2001) shows that applying emotional intelligence within public consultations increases the effectiveness of resolving environmental conflicts, such as those related to nature reserve management. This strategy fosters the development of an inclusive society grounded in mutual respect and shared objectives.

Empirical data support the effectiveness of strategies integrating emotional intelligence into sustainable society building. Research by Clayton & Myers (Clayton et al, 2009) demonstrates that programs developing emotional intelligence in education and leadership increase involvement in sustainability initiatives, such as support for renewable energy projects or social programs. Additionally, emotional intelligence training applied in public dialogues improves groups' ability to reach compromises in complex environmental issues (Dietz, 2010). For example, studies have shown that participants using emotional intelligence skills during dialogues more frequently supported joint decisions, such as regional climate adaptation plans.

However, the integration of emotional intelligence faces certain limitations. For instance, implementing emotional intelligence development programs in education requires significant resources, which may be challenging in underfunded regions (Ojala, 2012). In leadership, emotional intelligence may be less effective in rigidly hierarchical organizations that prioritize short-term outcomes (Metcalfe et al, 2013). In public dialogues, emotional intelligence may complicate achieving consensus amid deep ideological divisions (Clayton et al, 2009). Overcoming these challenges requires combining emotional intelligence with institutional support, adequate resources, and contextual adaptation.

Emotional intelligence can be integrated into the formation of a sustainable society through the development of emotional skills within educational systems, its application in sustainable leadership, and its use in public dialogues. These strategies promote cooperation and responsibility for social and environmental objectives, forming the foundation for a society oriented toward long-term sustainability.

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FEATURES AND FACTORS OF SUBJECTIVE WELL-BEING OF MOTHERS RAISING CHILDREN WITH ORGANIC NERVOUS SYSTEM LESIONS

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Summary

Introduction. Given the significant number of children with special needs in Ukraine and worldwide, there is an acute need for a detailed study of the peculiarities of their families, especially mothers, who are the main caregivers. The life of a mother of a child with an organic nervous system lesion often requires full concentration on the child's needs, which leads to the abandonment of professional self-realization and a change of the usual way of life to round-the-clock care. This is accompanied by a high level of stress, a decrease in life satisfaction, and emotional burnout, which negatively affects her SWB.

Methods. Brief Multidimensional Wellbeing Questionnaire “PERMA-Profilier” (Savchenko, O. & Lavrynenko, D., 2023); Patient Health Questionnaire 9 (*List of valid... assistance*, 2023); Generalized Anxiety Disorder 7 (*List of valid... assistance*, 2023); Connor-Davidson Resilience Scale (CD-RISC-10) (Shkolina, N. V., 2020).; Posttraumatic Growth Inventory (PTGI) (Zubrovsky, D., 2018); Coping Inventory for Stressful Situations (CISS) (adapted by T. Kryukova) (Karamushka, L. M., Kredentser, O. V., & Tereshchenko, K. V., 2022); The Shwartz Value Survey (SVS) (adaptation by I. Semkiw) (Nahrniak, K. M., 2017) and questionnaire.

Sample. The empirical study sample includes 93 mothers who raise children with organic nervous system lesions.

Results. Three types of mothers were identified, depending on the level of their SWB and psychological characteristics: Type 1 – high level of SWB with personal growth; Type 2 – moderately-low level of SWB with preserved productivity and with pronounced anxiety and depressive symptoms; Type 3 – low level of SWB without personal growth. The factors of SWB were determined for mothers in the cluster with a high level of SWB, and for mothers from the clusters with low and moderately-low levels of SWB.

Key words: clusters, values, personal growth, posttraumatic growth, coping strategies, anxiety, depressive symptoms.

DOI <https://doi.org/10.23856/7030>

1. Introduction

The problem of subjective well-being (SWB) is central to modern positive psychology, gaining particular relevance in the context of studying individuals experiencing prolonged stressful situations and facing the challenges of extreme motherhood. Given the significant number of children with special needs in Ukraine and globally, there is an urgent need for a detailed study of the characteristics of their families, especially mothers, who are the primary caregivers. The life of a mother raising a child with an organic nervous system lesion often demands complete focus on the child's needs, leading to the abandonment of professional self-realization and a shift in the usual lifestyle to round-the-clock care (Mushkevych, 2016).

This is accompanied by high levels of stress, reduced life satisfaction, and emotional burn-out, negatively impacting her SWB (*Maistruk, 2010; Smith & Blamires, 2022*). According to official data from the Ministry of Healthcare of Ukraine at the end of 2023, approximately 159,000 children with special needs were registered in medical and preventive institutions, specialized schools, and boarding facilities (*UNICEF Ukraine, 2024*). While the father typically assumes responsibility for the family's financial well-being and seeking additional resources for the child's rehabilitation and treatment (*Falovska, 2021*), the mother often bears the primary caregiving burden. Therefore, identifying factors that support or deplete a woman's internal resources is critically important for developing targeted psychological assistance programs aimed at preserving her mental health and resilience. This underlies the relevance and choice of the present study's topic.

The aim of the article is to study the features and factors of SWB of mothers raising children with organic nervous system lesions. In accordance with this aim, the following objectives were set: to determine the level of SWB and its psychological characteristics in mothers raising children with organic nervous system lesions, to identify types of psychological functioning of mothers depending on their level of SWB, and to reveal the leading psychological factors of mothers' SWB in different clusters.

2. Main part

One of the most common nosologies caused by organic nervous system lesions is cerebral palsy (CP). CP syndrome is considered a consequence of disturbances in the processes of early prenatal or postnatal brain development. This type of disorder is complex, profound, and typically irreversible (*Kleshcherova, 2019*). CP is not exclusively a physical impairment, as it is often popularly understood, but represents a complex neurodevelopmental disorder that is the leading cause of neurological disorders in childhood (*Rosenbaum et al., 2007*). In addition to motor impairments, this syndrome is accompanied by a wide range of non-physical difficulties, including epileptic seizures, sensory and perceptual dysfunctions, learning disabilities, difficulties in social interaction, and behavioral deviations.

Receiving such a diagnosis changes the entire family's way of life. In addition to daily chores, parents must regularly visit doctors and rehabilitation centers. A significant amount of time is spent on additional classes, rehabilitation, and special education for the child. The physical and psychological burden on parents sharply increases, which can cause emotional burnout and stress (*Smith & Blamires, 2022*). Therefore, modern research emphasizes the need for comprehensive family support.

The daily lives of mothers caring for children with CP undergo a significant burden, as they most often play the role of primary caregivers. For instance, one systematic review found that the majority of study participants were mothers (184 out of 226 individuals) (*Elangkovan & Shorey, 2020*). O. Yefimova, based on conducted research, concluded that with the appearance of a child with developmental disorders in the family, there is an almost complete change in the social status of mothers – 50% of mothers are forced to leave their main job and dedicate themselves to the child. To some extent, mothers of such children become "social invalids" due to the hopelessness of the situation (*Shevchuk & Vlasova, 2021*). At the same time, authors note significant differences between the psycho-emotional state of mothers and fathers. In this regard, mothers are more vulnerable to emotional difficulties and chronic stress (*Smith & Blamires, 2022*). Most studies by Western authors emphasize a wide range of neurotic and psycho-emotional disorders observed in parents of children with CP (*Mushkevych, 2016*),

including a decrease in emotional background, increased anxiety, frequent manifestations of emotional burnout, depression, apathy, and irritability (Smith & Blamires, 2022). Studies show that one of the most pronounced emotional manifestations of parents of a child with developmental disabilities is anxiety (Rakhmanov, 2016). Changes in the personal sphere are also observed, namely: impaired self-identity, decreased self-esteem, feelings of helplessness, guilt, and emotional isolation (Elangkovan & Shorey, 2020). Research conducted in Great Britain showed that about 75% of almost a thousand surveyed parents of children with craniocerebral injuries, including CP, rated their parenting as extremely stressful. Similar conclusions were obtained in a number of international studies, which confirmed that parents of children with CP have lower indicators of psychosocial well-being compared to parents of neurotypical children (Cheshire et al., 2010).

Thus, the functioning of mothers raising a child with an organic nervous system lesion changes comprehensively, encompassing various spheres of life. This requires a holistic interdisciplinary approach to psychological support, with mandatory consideration not only of the mothers' personal state but also of the peculiarities of their social interaction and psychosomatic well-being, and from this, to a significant extent, depends on how well the child can adapt to social life.

3. Results

SWB was assessed using the "Well-being" scale of the Brief Multidimensional Wellbeing Questionnaire "PERMA-Profilier" (adaptation by Savchenko & Lavrynenko, 2023).

The results of the empirical study indicate that the largest percentage (58.4%) of mothers in our study, who are raising children with organic nervous system lesions, have an average level of SWB, while others fall into the low (13.5%) and high (28.1%) levels. Such results allow us to assert that women with the unique experience of motherhood, raising children with physical disabilities, experience less life satisfaction, as a result of forced self-sacrifice, chronic fatigue, and prolonged stress.

The results of the correlation analysis revealed an inverse correlation between the level of SWB and:

- The level of anxiety (-0.382^{***}) and depressive symptoms (-0.536^{***}), which indicates that anxiety and depressive symptoms are significant negative factors for SWB.
- The emotion-oriented coping strategy (-0.463^{***}) – a decrease in emotional reactivity is associated with an increased sense of well-being.
- A direct correlation was found between SWB and the following indicators:
 - Task-oriented coping (0.285^{***}), avoidance strategy (0.324^{***}), and the social diversion subscale (0.473^{***}) – under conditions of prolonged stress, mothers tend to mobilize efforts for active problem-solving, while also using avoidance and seeking social support as additional adaptive strategies.
 - Values of self-direction (0.353^{***}), benevolence (0.281^{***}), stimulation (0.271^{***}), hedonism (0.233^{**}), achievement (0.159^{*}), and security (0.153^{*}) – mothers' internal sense of well-being is largely associated with the desire for personal freedom, while achievement and security play a secondary but important role in maintaining psychological balance.
 - Resilience (0.430^{***}) – the higher the level of resilience in mothers, the higher their level of SWB, as women who are able to overcome stress and find internal resources to overcome difficulties more often demonstrate a higher level of life satisfaction, positive mood, energy, and conscious life meanings.

– Posttraumatic growth in terms of "Relationship to Others" (0.290**), which may indicate a relatively smaller impact of interpersonal re-evaluation on the sense of well-being; "Personal Strength" (0.423***) and "New Possibilities" (0.352***), which indicates the leading role of internal resources and the ability to form a positive psychological state under difficult life circumstances. The overall posttraumatic growth index also demonstrates a medium-strength correlation (0.367***) with SWB, confirming that difficulties can have a transforming and strengthening effect on the individual, contributing to an increase in their life satisfaction.

– The level of financial well-being (0.215**) and the subjective assessment of the child's illness severity (−0.325**), which indicates that a higher level of financial security contributes to an increase in SWB, while the subjective perception of the child's illness has a negative impact on its level.

To identify types of psychological functioning in mothers of children with organic nervous system lesions, a K-means cluster analysis was performed based on psychological characteristics that have significant associations with SWB and its components from the PERMA-Profiler (Table 1). The Gap-statistic method was used to determine the optimal number of clusters, which indicated the presence of three optimal clusters, uniting 93 mothers.

The first cluster, "low without personal growth", is characterized by vulnerability with low SWB and included 24 mothers. It demonstrates: 1) a very low level of posttraumatic growth, indicating an absence of positive changes during the traumatic situation of motherhood; 2) value orientations showing a lack of internal resources, specifically: low scores on scales of stimulation, self-direction, security, achievement, benevolence, hedonism; 3) a high level of maladaptive coping strategies, indicating ineffective ways of problem-solving; 4) low scores on PERMA scales; 5) a level of resilience indicating a reduced ability to adapt to stressful events and challenges and less psychological flexibility; 6) a high level of depressive symptoms and anxiety. This cluster demonstrates the lowest level of SWB, emotional resources, adaptive strategies, and personal and posttraumatic growth, indicating a need for professional psychological assistance.

The second cluster, "moderately-low SWB with preserved productivity and marked anxiety and depressive symptoms", included 23 mothers with internal resources but simultaneously high anxiety and depressive symptoms. This indicates a need for developing mechanisms to cope with emotional overload, as shown by their characteristic features: 1) a minimal level of posttraumatic growth, with all its indicators being negative and tending towards zero, suggesting an insufficient awareness of new possibilities, reduced personal strength, and difficulties in re-evaluating life values and relationships; 2) a high orientation towards achievement and security, indicating a desire for goal achievement and stability, with lower priority for self-direction, hedonism, and stimulation, and the lowest orientation towards benevolence, indicating a reduced focus on support and harmony in relationships with others; 3) this group also showed a non-high orientation towards constructive task-solving, but simultaneously a high orientation towards emotions in problem-solving, while avoidance and social diversion strategies were not dominant; 4) the highest scores among SWB components from the PERMA model were on the "achievement" scale and negative emotions, indicating a contradictory internal state, while other component indicators had a negative connotation, suggesting the need for external specialized support to improve SWB; 5) resilience indicators were not high but already positive, indicating a tendency towards better adaptability; 6) increased levels of anxiety and depressive symptoms. Despite positive dynamics in SWB, value orientations, and coping strategies, this group still demonstrates psychoemotional tension, requiring the development of self-regulation and stress resistance.

Table 1

Cluster Analysis of Mothers' Subjective Well-being

	Indicator	Cluster 1, n = 24	Cluster 2, n = 23	Cluster 3, n = 46
PTGI	Index	-0.776	-0.252	1.109
	Relationship to Others	-0.692	-0.029	0.840
	New Possibilities	-0.513	-0.394	0.997
	Personal Strength	-0.858	-0.229	0.872
Values	Benevolence	-0.478	-0.060	0.537
	Self-direction	-0.868	0.382	0.227
	Stimulation	-0.932	0.272	0.442
	Hedonism	-0.438	0.349	0.306
	Achievement	-0.495	0.866	-0.001
	Security	-0.636	0.666	-0.081
Coping Strategies	Task-Oriented Coping	-0.658	0.317	0.259
	Emotion-Oriented Coping	0.633	0.651	-0.128
	Avoidance	-0.547	0.001	0.552
	Social Diversion Subscale	-0.956	-0.371	0.626
PERMA	Positive Emotions	-1.228	-0.571	0.744
	Engagement	-1.318	0.218	0.510
	Relationships	-1.365	-0.351	0.532
	Meaning	-1.371	-0.224	0.704
	Achievement	-0.707	0.843	0.014
	Negative Emotions	-0.035	0.850	-0.270
	Health	-0.987	-0.137	0.478
Resilience		-0.583	0.037	0.355
Depressive Symptoms		0.620	0.875	-0.521
Anxiety		0.333	1.000	-0.267

The third cluster, "high SWB with personal growth", was the largest (n=46), characterized by optimal SWB, functional coping strategies with conscious values, and low levels of anxiety and depression. This cluster shows: 1) the highest level of posttraumatic growth, indicating significant positive changes after experiencing a crisis (awareness of new possibilities, increased personal strength, and re-evaluated, adapted values); 2) the most developed values: benevolence, stimulation, hedonism, self-direction, indicating an orientation towards openness to new experiences, satisfaction, self-expression, and maintaining harmonious relationships with others. In contrast, values such as achievement and security are less pronounced and require additional attention in the process of psychological support to strengthen feelings of stability, responsibility, and confidence in one's achievements; 3) moderately balanced coping strategies characterized by a high orientation towards tasks, indicating a desire for active problem-solving, a low level of emotion-oriented coping, indicating limited emotional involvement in overcoming difficulties, active engagement in social support, and the use of avoidance strategies, which can be an adaptive response to temporary overload, but also requires careful analysis for long-term problem avoidance; 4) a positive PERMA profile is observed; 5) resilience is moderately high (0.36), indicating the mothers' ability to adapt to difficult life circumstances

and effectively recover after stressful events; 6) low levels of anxiety and depressive symptoms indicate a stable emotional state and the absence of pronounced signs of psychological distress in most members of this cluster group. This group is characterized by a stable psychological state, adaptive coping strategies, and a resourceful value orientation, indicating a good level of psychological adaptation to SWB.

To gain a deeper understanding of intergroup differences after clustering mothers by their SWB level, a one-way non-parametric analysis of variance using the Kruskal-Wallis criterion was conducted. This approach is appropriate due to the lack of normal distribution for some variables, which was previously established using the Shapiro-Wilk test. The analysis results indicated statistically significant differences between mother clusters across a range of psychological characteristics: the highest effect sizes were observed for the scales of depressive symptoms ($\chi^2=34.03$; $p<0.001$; $\epsilon^2=0.369$) and anxiety ($\chi^2=28.58$; $p<0.001$; $\epsilon^2=0.311$), indicating a strong association between emotional disturbances and the level of SWB. Significant intergroup differences were found for all key indicators of posttraumatic growth. The highest values were obtained for the posttraumatic growth scales: personal strength ($\chi^2=27.96$; $p<0.001$; $\epsilon^2=0.304$), new possibilities ($\chi^2=22.10$; $p<0.001$; $\epsilon^2=0.24$), and the overall posttraumatic growth index ($\chi^2=27.15$; $p<0.001$; $\epsilon^2=0.030$). This indicates that the ability to transform crisis experience into positive changes varies significantly depending on the level of SWB. Substantial differences were also observed in the components "Relationship to Others" ($\chi^2=13.67$; $p=0.001$; $\epsilon^2=0.149$), "Appreciation of Life" ($\chi^2=10.75$; $p=0.005$; $\epsilon^2=0.116$), and "Spiritual Change" ($\chi^2=7.03$; $p=0.030$; $\epsilon^2=0.076$). Although the effect size for these indicators is smaller, it is statistically significant and indicates the importance of these characteristics in the structure of SWB of mothers raising children with organic nervous system lesions. The highest effects were recorded for the following values: achievement ($\chi^2=25.48$; $p<0.001$; $\epsilon^2=0.277$), self-direction ($\chi^2=23.72$; $p<0.001$; $\epsilon^2=0.258$), universalism ($\chi^2=20.76$; $p<0.001$; $\epsilon^2=0.226$), stimulation ($\chi^2=16.76$; $p<0.001$; $\epsilon^2=0.182$), and security ($\chi^2=14.87$; $p<0.001$; $\epsilon^2=0.161$). These results suggest that mothers with a high level of SWB are characterized by more pronounced autonomous and self-oriented value orientations. At the same time, significant differences were also found for the "Benevolence" ($\chi^2=10.37$; $p=0.006$; $\epsilon^2=0.113$) and "Hedonism" ($\chi^2=9.09$; $p=0.011$; $\epsilon^2=0.099$) scales, indicating differentiation in the mothers' value orientation system, particularly in the need to establish warm relationships with others and the pursuit of satisfaction and life pleasures. Different approaches to stress coping also demonstrated a statistically significant difference between groups. The most pronounced differences were found for: emotion-oriented coping ($\chi^2=22.60$; $p<0.001$; $\epsilon^2=0.246$), social diversion ($\chi^2=20.83$; $p<0.001$; $\epsilon^2=0.226$), and task-oriented coping ($\chi^2=16.75$; $p<0.001$; $\epsilon^2=0.182$). Thus, emotional regulation and the use of social support differ significantly depending on the level of SWB, which must be considered when constructing an intervention program. A key step was comparing the PERMA model indicators. All five main and two additional components of the model demonstrated statistically significant intergroup differences: positive emotions ($\chi^2=44.78$; $p<0.001$; $\epsilon^2=0.487$), meaning in life ($\chi^2=41.12$; $p<0.001$; $\epsilon^2=0.447$), achievement ($\chi^2=34.03$; $p<0.001$; $\epsilon^2=0.370$), relationships ($\chi^2=32.44$; $p<0.001$; $\epsilon^2=0.353$), engagement ($\chi^2=31.81$; $p<0.001$; $\epsilon^2=0.346$), negative emotions ($\chi^2=30.34$; $p<0.001$; $\epsilon^2=0.330$), and health ($\chi^2=22.96$; $p<0.001$; $\epsilon^2=0.250$). The most pronounced differences were observed in the overall well-being level ($\chi^2=46.96$; $p<0.001$; $\epsilon^2=0.51$). The obtained results confirm the validity of the model as an indicator of SWB in this sample and highlight its importance as a theoretical and methodological basis for a psychological support program for mothers of children with organic nervous system lesions. The results of the one-way non-parametric analysis of variance using the Kruskal-Wallis criterion revealed

statistically significant differences between the three mother clusters across most of the studied psychological variables. This indicates the psychological heterogeneity of the groups of mothers and confirms the expediency of a differentiated approach in psychological support.

To gain a deeper understanding of the impact of psychological and social factors on the SWB of mothers raising children with organic nervous system lesions, multiple linear regression analysis was conducted within the identified clusters, with the PERMA well-being criterion as the dependent variable. This allowed for investigating the specificity of well-being predictors within distinct groups of mothers with varying levels of SWB and identifying unique factors that determine the variability of their SWB.

The model constructed for mothers in the high SWB cluster ($n=46$) was statistically significant and well-fitted according to the data: the multiple regression coefficient ($R=0.860$) indicates a strong positive linear relationship, and the coefficient of determination ($R^2=0.740$) indicates that 74% of the variation in the well-being indicator can be explained by the set of independent predictors included in the model: 1) "Benevolence" value ($\beta=0.543$; $p=0.004$) – positively associated with the level of SWB, indicating the importance of an orientation towards benevolent interaction with others for maintaining a high emotional and psychosocial status; 2) Depressive symptoms ($\beta=-0.087$; $p=0.040$) – has a negative contribution, which is consistent with theoretical provisions about the destructive impact of depressive symptoms on overall well-being; 3) Anxiety level ($\beta=0.075$; $p=0.050$) – this indicator has a positive coefficient value, which may indicate not pathological anxiety, but increased mobilization or tension associated with responsibility for a child with an organic nervous system lesion. Within a high level of SWB, this can be interpreted as adaptive anxiety that activates mothers' resources. Other variables, including coping strategies, financial status, severity of the child's illness, resilience, and posttraumatic growth index and components, did not reach a statistically significant level, although some showed tendencies towards significance (e.g., "avoidance" coping $p=0.083$). Thus, for mothers in the high SWB cluster, the regression model is as follows: Well-being = $7.067 + 0.543$ (Benevolence value) – 0.087 (depressive symptoms level) + 0.075 (anxiety level) + ε .

Given the specificity of mother distribution in the cluster division and the peculiarities of performing regression analysis, it was found that in two (clusters 1 and 2) out of three clusters, the number of mothers was less than the number of independent variables that showed significant correlational relationships with the SWB indicator. This creates statistical limitations regarding the correct application of linear regression, particularly coefficient instability and insufficient statistical significance. Therefore, it was decided to combine the two clusters – mothers with low ($n=24$) and moderately low ($n=23$) SWB – into one group. Such a combination is justified not only statistically but also psychologically, as the profiles of these clusters are characterized by similar indicators of anxiety and depressive symptoms, stress resistance levels, and less pronounced resource factors compared to the third cluster, which demonstrates a high level of SWB.

The results of the multiple linear regression analysis for mothers with low and moderately low SWB were statistically significant with a sufficient level of explanatory power: the multiple regression coefficient ($R=0.791$) indicates a strong positive linear relationship, and the coefficient of determination ($R^2=0.625$) indicates that 62.5% of the variation in the well-being indicator is explained by the used predictors. This is a fairly high indicator, suggesting good explanatory power of the model, which included the following factors: 1) Subjective assessment of the child's illness severity "Very severe" ($\beta=-2.512$; $p<0.001$) – this is the most significant predictor, indicating that with an increase in the severity of the child's illness, the mother's SWB significantly decreases. This highlights the increasing physical, emotional, and financial

burden associated with caring for a child with more serious health problems, which directly affects her internal state. The subjective assessment of the child's illness severity "Severe" also acts as a predictor for SWB ($\beta=-0.82$; $p=0.046$); 2) The depressive symptoms indicator showed high statistical significance ($\beta=-0.093$; $p=0.001$) with a negative coefficient. This indicates that a higher level of depressive symptoms in the mother significantly reduces her SWB. This result is expected and emphasizes the critical need for qualified assistance to mothers in overcoming depressive states, which is one of the key obstacles to achieving their internal harmony. 3) Family financial well-being level 5 (We can afford to buy almost anything we want) ($\beta=1.433$; $p=0.028$). The positive coefficient and significant p-value indicate that a better financial situation is positively associated with mothers' SWB. The availability of sufficient material resources likely reduces the level of stress associated with paying for treatment, rehabilitation, special equipment, and meeting the child's daily needs, which positively affects the mother's overall well-being; 4) "Benevolence" value ($\beta=0.295$; $p=0.038$) – a higher orientation towards caring for the well-being of others, supporting close relationships, and tolerance positively affects mothers' SWB. This may indicate that women who are more inclined to empathy and altruism can find additional sources of meaning and satisfaction in their caregiving role; 5) "Self-direction" value ($\beta=0.531$; $p=0.006$). This predictor was positive and statistically significant, indicating that a higher orientation towards independence of thought, action, creativity, and choosing one's own path is positively associated with an increased level of mothers' SWB. This may indicate that mothers who are able to maintain or develop their autonomy and personal flexibility, despite the challenges of motherhood, adapt better and maintain their internal resources; 6) The "social diversion" coping strategy has a positive and statistically significant impact on SWB ($\beta=0.131$; $p=0.028$). The result indicates that using a strategy that involves diversion or support in social interactions positively correlates with the level of well-being. This emphasizes the importance of social support, the opportunity to distract from problems, communicate, and feel part of a community, which contributes to better psychological adaptation.

4. Conclusions

The conducted research confirms that mothers raising children with organic nervous system lesions face significant psychological challenges that affect their SWB. The identification of three typological groups of mothers with different well-being profiles and the identification of specific factors for each group (including psychoemotional state, value orientations, and coping strategies) emphasize the need for differentiated approaches in psychological support.

5. Prospects for further research

Further research can focus on the development and approbation of targeted psychological intervention programs adapted to the identified types of mothers. Also promising is the study of long-term changes in mothers' SWB, the dynamics of their psychological resources, and the impact of social support on each of the identified groups. The study of the father's and other family members' roles in shaping the well-being of families raising children with special needs is also of significant interest.

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