

A vibrant oil painting of an Amazonian landscape. In the foreground, a large, dark brown tree trunk curves from the left side towards the center. Several colorful parrots, including red and green ones, are perched on the branches. A blue bird is in flight in the center of the image. The background features a lush green forest under a bright blue sky with soft white clouds. The overall style is painterly and detailed.

REVISTA

# AMAZONIA

## Investiga

November 2023. Vol. 12 Issue 71

ISSN 2322-6307  
[www.amazoniainvestiga.info](http://www.amazoniainvestiga.info)



Periodicity  
Montly  
Since: 2012

## EDITORIAL TEAM

### Editor

**Diego Felipe Arbeláez Campillo.** Research Group Languages, Representations and Education, Universidad de la Amazonia. (Colombia)

### Coeditor

**Magda Julissa Rojas Bahamón.** Doctor Education and Environmental Culture, Surcolombiana University. Professor IE Jorge Eliécer Gaitán. Researcher recognized by the Ministry of Sciences of Colombia (Colombia)

### Editorial board

**Doctor Getman Anatolii P.** Doctor of Legal Sciences, Professor, Rector of Yaroslav Mudryi National Law University.

**PhD. Sergey V. Novikov Vyacheslavovich.** Director of the Institute of Economics and Humanities of Engineering, Institute of Economics and Humanities of Engineering, Moscow Aviation Institute (National Research University), (Russia).

**PhD. Danilyan Oleg G.** Doctor of Philosophical Sciences. Professor, Head of the Department of Philosophy, Yaroslav Mudryi National Law University (Ukraine).

**PhD. Tatsiy Vasyl Ya.** Doctor of Legal Sciences. Professor, Rector's advisor Yaroslav Mudryi National University of Law (Ukraine).

**PhD. Nadiia Skliar.** Ph.D. in Economics, Post-Doctoral Fellow. National Institute for Strategic Studies, Kyiv, Ukraine. Associate Professor of the Department of State and Legal Disciplines. Donetsk Law Institute, MIA of Ukraine, Kryvyi Rih, Ukraine.

**PhD. Aleksandr Alekseevich Korostelev.** Doctor of pedagogical sciences. Associate professor. Director of the Center of scientific journals Federal State Budget Educational Institution of Higher Education «Togliatti State University» (Russia). SPIN-код: 2796-5077.

**Doctor Juan L. Manzano Kienzler.** Doctor of Education Universidad Pedagógica Experimental Libertador (UPEL). (Venezuela).

**PhD. Osadchenko Inna Ivanovna.** Doctor of pedagogical sciences. Professor Department of pedagogy and educational management Uman State Pedagogical University named Pavlo Tychyna. (Ukraine).

**Doctor Tetiana Faichuk.** Potebnia Institute of Linguistics of the National Academy of Sciences of Ukraine. Kyiv. (Ukraine).

**PhD. Popovych Ihor Stepanovych.** Doctor of Psychological Sciences. Full Professor of Department General and Social Psychology, Kherson State University. Kherson. (Ukraine).



**Nadia Figol.** National Technical University of Ukraine Igo (Ukraine).

**PhD. Lucelly Correa Cruz.** Doctor Education and Environmental Culture Universidad of the Amazonia. Professor Universidad of the Amazonia. (Colombia).

**PhD. Olga I. Vaganova.** Minin Nizhny Novgorod State Pedagogical University (Russia).

**PhD. Lillyam López Pino.** Doctor Education. Universidad of the Amazonia. (Colombia).

**Doctor Bell Manrique Losada.** Doctor in Engineering. Universidad de Medellín. Professor Universidad de Medellín. (Colombia).

**PhD. Olga Vladimirovna Trischuk.** Doctor of Social Communications. Professor Horizons of Printing. (Ukraine).

**PhD. Reyber Parra.** Doctor in Education. Universidad de Zulia. (Venezuela).

**PhD. IS Pinkovetskaia.** Ulyanovsk State University, Ulyanovsk. (Russia).

**PhD. Eduardo Saguier.** Ph.D. Washington University, St. Louis, Missouri (USA). (Argentina).

**PhD. Ligia Terezinha Lopes Simonian.** Universidad Federal del Pará. Belém. Professor Núcleo de Altos Estudos Amazônicos. (Brazil).

#### Scientific Board

**Doctor Miguel Armando López Leyva.** Director Instituto Investigaciones Sociales Universidad Autónoma de Mexico, UNAM, Mexico.

**PhD. Georgina María Esther Aguirre Lora.** Doctor of Pedagogy. President of the Mexican Society for the History of Education. UNAM. (Mexico). ORCID

**Doctor Adelmar Santos de Araújo.** Grupo de Pesquisa do Centro de Educação Popular e Pesquisas Econômicas e Sociais (CEPPES). História Contemporânea/Educação, Centro Universitário Uni-Araguaia. (Brazil)

**Doctor Joaquim Júlio Almeida Júnior.** Doctor en Sistema de Cultivo. Coordinador del Centro de Investigación de Fitotecnia. Profesor Titular en UniFIMES - Centro Universitario de Mineiros. Research Group UniFIMES – Centro Universitário de Mineiros. (Brazil).

**Doctor Clarimar José Coelho.** Doutor em Engenharia Eletrônica y Computación. Laboratório de Laboratorio de Computación Científica / Pontificia Universidad Católica de Goiás / UniEvangélica. Inteligencia artificial, reconocimiento de patrones, modelos matemáticos y computacionales, Laboratorio de Computación Científica / Pontificia Universidad Católica de Goiás / UniEvangélica. (Brazil).

**Doctor Ressiliane Ribeiro Prata-Alonso.** Post-doctor Environmental Sciences. Centro Universitário Araguaia, researcher, professor, coordinator Extension. (Brazil).

**Doctor Saura Soraia Chung.** Professor at School of Physical Education and Sports. Research Group PULA Centro de Estudos Socioculturais. Universidad de São Paulo. (Brazil).

**Doctor Darci Schnorrenberger.** Universidade Federal de Santa. Associado no Departamento de Ciências Contábeis. (Brazil).

---

**Doctor Emil José Hernández – Ruz.** Dr. Genetic and Molecular Biology. Universidade Federal do Pará, Altamira. Conservation Genetic and Amazonian diversity. (Brazil).

**Doctora Priscilla Guedes Gambale.** Faculdade de São Miguel do Iguaçu, Faei, Paraná. (Brazil).

**PhD. Zbigniew Kaźmierczyk.** Department of History of Literature at the Institute of Polish Language and Literature at the University of Gdańsk. Associate professor. The head of the scientific and research Laboratory of Ethnogenetic Literature. (Poland).

**PhD. Pablo Vommaro.** Universidad de Buenos Aires, CONICET - CLACSO (Consejo Latinoamericano de Ciencias Sociales), (Argentina).

**Beata Trojanowska.** Kazimierz Wielki University. Dean of Education of the Faculty of Literature Study in Bydgoszcz. (Poland).

**PhD. Luis Antonio García Gutiérrez.** Doctor in Electronic Engineering Universite De Toulouse. Doctor in Electronic Engineering University of the Andes. Post-doctor LAAS-CNRS Electronic Engineering. Toulouse University. (Francia).

**Ph.D. Carmen Beatriz Torres.** Universidad Santo Tomas. (Colombia).

**Dr. Jesica Arcangeli.** Posgrado en Ciencias Biológicas. Departamento de Zoología, Instituto de Biología, Universidad Nacional Autónoma de México. (Mexico).

**Ph.D. Ademir Araujo da Costa.** Universidad Federal do Rio Grande do Norte. (Brazil).

**Ph.D. Nyuara Araujo da Silva Mesquita.** Universidade Federal de Goiás. (Brazil).

**Ph.D. Paulo Moreira Pinto.** Universidade Federal do Para. (Brazil)

**Ph.D. Marcio David Macedo Da Silva.** Doctor of Social and Environmental Sciences, NAEA/UFPA - Nucleo de Altos estudios Amazónicos. (Brazil).

**Ph.D. Rafael Gerardo Arce.** Doctor en Humanidades y Artes con Mención en Literatura. Facultad de Humanidades y Artes. Universidad Nacional de Rosario, Argentina.

**PhD. Marianna Andreyevna Dudareva.** Head of the Department of Literature of the Peoples of Russia and the CIS, Head of the Department publication policy and advertising of the Youth magazine. (Russia).

**PhD. Olga Kiseleva.** Ulyanovsk State University, Ulyanovsk (Russia).

**Ph.D. Carlos Angel Arboleda Mora.** Fundación Universitaria Católica del Norte. (Colombia).

**PhD. Pablo Martínez Calleja.** Universidad Leuphana Lünenburg. (Alemania).

**M.Sc. Juan de Dios Rodríguez.** Decano Universidad Pedagógica y Tecnológica de Colombia (Colombia)

**PhD. Isabel Contreras.** Universidad Iberoamericana. (México).

**PhD. Ana Cristina Rocha Silva.** Phd. Desenvolvimento Socioambiental del PPGDSTU/NAEA/UFPA and professor UNIFAP (Universidad Federal del Amapá). (Brazil).

**PhD. Gian Carlo Delgado Ramos.** Doctor en Ciencias Ambientales, Universidad Autónoma de Barcelona. Universidad Nacional Autónoma de México (UNAM), México.

**PhD. Nelson Ernesto López.** Director Doctorado en Educación y Cultura Ambiental, Universidad Surcolombiana, Colombia.

**PhD. Cleofé Alvites-Huamani.** Directora Doctorado en Educación Universidad César Vallejo. (Perú).

**PhD. John Alexander Rojas Montero.** Universidad Pedagógica Nacional. (Colombia).

**PhD. Alfredo Olaya.** Doctor in Hydraulic Engineering. Professor Universidad Surcolombiana. (Colombia).

**Ph.D. Denise Machado Cardoso.** Federal University of Para. (Brazil)

**Ph.D. Luz Stella Cañón Cueca.** Secretaría de Educación de Bogotá. (Colombia).

**M.Sc. Libardo Motta.** Master in Natural and Exact Sciences. Universidad Nacional de Colombia. (Colombia).

**Lic. Kelly Rebeca Infante Díaz.** Licenciada en Bibliotecología, Fundación Instituto de Estudios Avanzados – IDEA. (Venezuela).

**PhD. Daniela S. Veas Iniesta.** Postgraduate student. Institute of Engineering Economics and Humanities. Moscow Aviation Institute (National Research University), Moscow. (Russia).

**PhD. Fredy Alexis Rivera Angel.** Doctorando en Ciencias. Desarrollo Socioambiental en el NAEA de la Universidad Federal de Pará. NAEA Universidad Federal de Pará. (Brazil).

**Miguel Angel Alcalde.** Magíster en Biotecnología. Universidad de Barcelona (España)

**Sergio Daniel Cubides Cubillos.** Doutorando no Programa Interunidades em Biotecnologia (IPT/USP/Instituto Butantan). Universidade de São Paulo, Instituto de Ciências Biomédicas - SP, (Brazil)

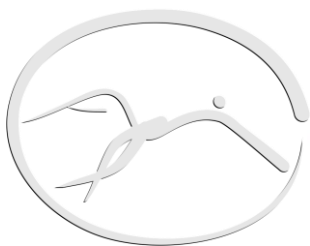
**PhD. Angela Maria Alvarez Gómez.** Post-Doctoral fellow Centre of Excellence in New Target Discovery, Butantan Institute, Sao Paulo. (Brazil).

**Marcia Cristina Santana.** Zootechnist - UFV Master in Nutrition and Ruminant Production - UFV Doctor in Nutrition and Animal Feed. UNESP Professora de Zootecnia IFGoiano. (Brazil).

**PhD. Martha Cecilia Arbelaéz Gómez.** Doctor Psicología de la Educación. Universidad Tecnológica de Pereira.

**Dr. Yan Kapranov.** Doctor of Philological Sciences, Associate Professor at Kyiv National Linguistic University (Kyiv, Ukraine).

The content of the published articles and reviews is the responsibility of the authors and does not reflect the point of view or opinion of the editors or Primate Publishing House.

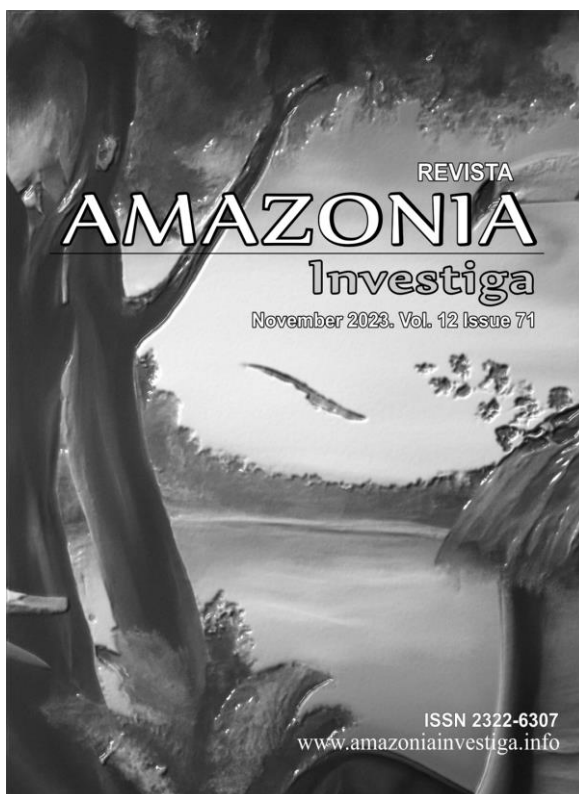


# AMAZONIA

## Investiga

Virtual, multidisciplinary and monthly scientific publication

**VOLUME 12 - ISSUE 71**



**Cover image**

Based on the work of master Wilgberto Ramírez



## CONTENIDO

Modelo de sistema viable para la gestión de riesgo operacional en instituciones bancarias <i>Maricela Cuellar Orozco, Julian Patiño Ortiz, Lorena Cuellar Orozco, Armando Cuellar Orozco, Miguel Patiño Ortiz</i> .....	9
Evaluación de riesgos psicosociales en una empresa de transporte en Caquetá Colombia <i>Mabel Cristina Mosquera Rojas, Hernán David Romero Reyes</i> .....	26
The concept of the pilot project for the dual format of training specialists: directorial education <i>Svitlana Shumakova, Sergey Gordeev, Roman Nabokov, Viktoriia Buhaiova, Alina Borysova</i> .....	40
Ukrainian vocal paradigm of Boleslav Yavorsky <i>Valentina Antonyuk, Mariya Kalashnyk, Oleksandr Stakhevych, Oleksandr Rudenko, Valentyn Lihus</i> .....	54
The impact of blended learning on undergraduate english language learners: a case study at Ha'il University, Saudi Arabia <i>Badriah Alkhannani</i> .....	61
Historical evolution of legislative regulation of the media in the west <i>Simona Ernestovna Lebedeva, Grigory Vladislavovich Vakku, Larisa Boleslavovna Solovey, Dmitry Konstantinovich Goncharov</i> .....	77
Administrative and legal methods of preventing corruption among public authorities: the experience of EU countries <i>Stanislav Zlyvko, Viacheslav Puzyrnyi, Svitlana Nishchymna, Oleksandr Tkachenko, Oleksandr Samofalov</i> .....	83
The impact of disinformation on the state information policy <i>Ihor Khmyrov, Anton Khriapynskyi, Ivo Svoboda, Mykhailo Shevchuk, Kateryna Dotsenko</i> .....	93
Forensic information sources during the investigation of war crimes <i>Andriy Shulha, Andrii Tkach, Yevheniia Murzo, Maryna Horodetska, Tetiana Sokur</i> .....	103
On the ways of product quality fixation from the perspective of consumption psychology theory <i>Elena Anatolyevna Reznik</i> .....	117
Didactic potential of MOOCs in teaching Russian as a foreign language <i>Irina A. Dinevich, Anna S. Ivanova, Marina N. Kunovski</i> .....	126
The reflection of managerial control actions in the digital twin of the organization <i>Mikhail V. Samosudov, Pavel P. Bagrin, Arseniy V. Matyash, Yan V. Zuikov, Victoria A. Andreeva</i> .....	138
The essence and specifics of organizing the teachers training for children with disabilities <i>Lidia Mamchur, Liudmyla Shuppe, Viktoriya Barkasi, Mariia Bykova, Iryna Bodnaruk</i> .....	149
Theoretical and methodological approaches to the educational potential of students in higher education institutions <i>Vitalii Leleka, Maryna Khrolenko, Antonina Kushnir, Iryna Protsenko, Andrii Petriv</i> .....	162
International standards and domestic legislation on human organ donation and transplantation <i>Parvina Ismayilova</i> .....	175
Youth religious education: from the ideas of reformist pedagogy to modern times <i>Oleksiy Karamanov, Andrii Prokip, Andrii Tsiupryk, Kateryna Ivashchenko, Tetiana Koliada, Alla Dobryden</i> .....	188
Modern trends of physical education and sports in the education system of Ukraine <i>Viktoriya Babalich, Nataliya Sobko, Tetiana Maleniuk, Serhiy Sobko, Yuliia Kovalova</i> .....	199
US-Brunei cooperation in the 2000s: an analysis <i>Inna Pidberezhnykh</i> .....	214
Language policy and its media representation in post-war Ukraine: Implications for identity and inclusivity <i>Tatyana Plekhanova, Iryna Strashko, Oleksandr Hryshchenko, Zoia Komarova, Maryia Savitskaya</i> .....	223
Analysis of the role and use of prefixes in word formation in modern german compared to english <i>Malahat Maharramova</i> .....	233
Changes in the semantic profile to evaluate the quality and safety of life <i>Nataliia Ridei, Nataliia Tytova, Tetiana Sydorenko, Svitlana Tsymbal, Maryna Liashenko</i> .....	242

---

Concepts of sustainable public administration: perspectives and challenges <i>Alla Vasina, Grygorii Monastyrskyi, Viktoriia Ivanova, Kateryna Maistrenko, Yuzef Tsal-Tsalko</i> ....	252
War memes: language transformations after the Russian invasion of Ukraine <i>Tetiana Faichuk, Ilona Myroshnichenko, Mariia Vakulich, Nadija Fihol, Iryna Stohnii</i> .....	263
European experience of dual education for future teachers in Ukraine <i>Halyna Kondratska, Natalya Grigorieva, Kseniia Kugai, Maryna Vyshnevskia, Stanislav Sapozhnykov</i> .....	271
The impact of digital technologies on the effectiveness of english language learning by medical students <i>Anna Levitskaia</i> .....	284
The role of transnational electronic evidence in the investigation of crimes <i>Nataliia Akhtyrskia, Olena Kostiuchenko, Yurii Sereda, Anna Vynohradova, Ivan Miroshnykov</i> .....	293



DOI: <https://doi.org/10.34069/AI/2023.71.11.1>

How to Cite:

Cuellar-Orozco, M., Patiño-Ortiz, J., Cuellar-Orozco, L., Cuellar-Orozco, A., & Patiño-Ortiz, M. (2023). Modelo de sistema viable para la gestión de riesgo operacional en instituciones bancarias. *Amazonia Investiga*, 12(71), 9-25.  
<https://doi.org/10.34069/AI/2023.71.11.1>



## Modelo de sistema viable para la gestión de riesgo operacional en instituciones bancarias

### Viable system model for operational risk management in banking institutions

Received: September 22, 2023

Accepted: November 15, 2023

Written by:


**Maricela Cuellar-Orozco<sup>1</sup>** <https://orcid.org/0000-0002-6558-4938>**Julian Patiño-Ortiz<sup>2</sup>** <https://orcid.org/0000-0001-8106-9293>**Lorena Cuellar-Orozco<sup>3</sup>** <https://orcid.org/0009-0001-8583-245X>**Armando Cuellar-Orozco<sup>4</sup>** <https://orcid.org/0009-0006-9766-6571>**Miguel Patiño-Ortiz<sup>5</sup>** <https://orcid.org/0000-0002-5630-8077>


#### Resumen


A partir de los lineamientos que exigen las instancias reguladoras a las instituciones bancarias para poder gestionar sus riesgos operacionales, establecen estándares y marcos que definen sus estructuras de gestión de riesgo para permitir a las instituciones bancarias controlar, mitigar y evitar la materialización del riesgo. Desafortunadamente los marcos hacen que las instituciones bancarias corran el riesgo de desaparecer si no proponen soluciones flexibles en el manejo de reserva de capital para el riesgo operacional. La flexibilidad de la estructura organizacional es necesaria para la viabilidad en la situación actual por lo que la propuesta es la utilización del Modelo de Sistema Viable (VSM) que permite gestionar y supervisar el riesgo operacional de las instituciones bancarias como un marco adaptable e integral basado en un modelo científico con enfoque sistémico. La metodología se realiza en el contexto bancario mexicano, demostrando que al aplicar el VSM


#### Abstract


Based on the guidelines that regulatory bodies require from banking institutions in order to manage their operational risks, they establish standards and frameworks that define their risk management structures to allow banking institutions to control, mitigate and avoid the materialization of risk. Unfortunately, the frameworks put banking institutions at risk of disappearing if they do not propose flexible solutions in the management of capital reserve for operational risk. The flexibility of the organizational structure is necessary for viability in the current situation, so the proposal is the use of the Viable System Model (VSM) that allows managing and supervising the operational risk of banking institutions as an adaptable and comprehensive framework based in a scientific model with a systemic approach. The methodology is carried out in the Mexican banking context, demonstrating that by applying the VSM as a framework to manage operational risk, the

<sup>1</sup> Doctora en Ciencias en Administración, Profesora Investigadora en el Instituto Politécnico Nacional, ESIME Zacatenco, Ciudad de México, México.  WoS Researcher ID: JVZ-8260-2024

<sup>2</sup> Doctor en Ciencias en Ingeniería Mecánica y Doctor en Ciencias en Administración, Profesor Investigador en el Instituto Politécnico Nacional, ESIME Zacatenco, Ciudad de México, México.  WoS Researcher ID: HMY-3376-2023

<sup>3</sup> Candidata para el Doctorado en Ingeniería de Sistemas, Instituto Politécnico Nacional, ESIME Zacatenco, Ciudad de México, México.  WoS Researcher ID: JVZ-8311-2024

<sup>4</sup> Maestro en Ciencias en Ingeniería de Sistemas, Profesor Titular en el Tecnológico Nacional de México, TES de Cuautitlán Izcalli, Estado de México, México.  WoS Researcher ID: JVZ-8348-2024

<sup>5</sup> Doctor en Ciencias en Ingeniería Mecánica, Profesor Investigador en el Instituto Politécnico Nacional, ESIME Zacatenco, Ciudad de México, México.  WoS Researcher ID: JVZ-7493-2024

como marco para gestionar el riesgo operacional se logra la viabilidad y flexibilidad de los criterios para el correcto manejo de las amenazas futuras. El modelo proporciona un marco integral de gestión del riesgo operacional con un enfoque sistémico.

**Palabras clave:** Gestión de riesgos, riesgo operacional, modelo de sistema viable, cibernética, sistema.

## Introducción

A lo largo de las crisis financieras, se han registrado muchas pérdidas de alto perfil en la industria financiera que se han atribuido al riesgo operacional. Entre los sucesos de pérdidas por riesgo operacional se encuentran los registrados por Société Générale y JP-Morgan Chase con pérdidas de más de \$7 mil millones y \$5 mil millones de dólares respectivamente, en incidentes separados de transacciones no autorizadas (Berger et al., 2022). Una característica distintiva del riesgo operacional es su potencial sobre consecuencias devastadoras que van desde grandes pérdidas monetarias y reputaciones destrozadas hasta amenazas a la estabilidad de las instituciones financieras a nivel mundial (Curry, 2012).

A través del tiempo estos eventos han modificaron la mentalidad de las instituciones financieras respecto al manejo del riesgo operacional. Las instituciones financieras tienen el objetivo de generar ganancias, el beneficio es una devolución a los propietarios del negocio por las actividades operativas que realice la institución, la cual deberá asumir el riesgo operativo como la pérdida directa o indirecta de cada uno de los procesos (Corrigan, 2013). Ante la necesidad de controles en el sistema financiero internacional se crea el Comité de Supervisión Bancaria de Basilea (BSBC), como un organismo regulador con la función de introducir metodologías para que los bancos puedan calcular del capital regulatorio del riesgo operacional (Mignola et al., 2016).

El BCBS define al riesgo operacional como pérdidas ocasionadas por procesos internos de la institución, actividades de su personal, sistemas inadecuados o fallidos y/o factores exógenos como los eventos externos (BCBS-BIS, 2006). El riesgo operacional es ocasionado por diversas actividades que se realizan dentro y fuera de la organización. El riesgo operativo es considerado como la forma de riesgo más pernicioso debido a su contribución a numerosas fallas en las instituciones financieras (Jorion, 2007).

viability and flexibility of the criteria for the correct management of future threats is achieved. The model provides a comprehensive operational risk management framework with a systemic approach.

**Key words:** Risk management, operational risk, viable system model, cybernetics, system.

Las instituciones financieras requieren implementar la gestión de riesgo para prevenir y minimizar la ocurrencia de eventos, debe dar atención a los procesos y funciones, para evitar violar los procedimientos (Andersen et al., 2012). La combinación de una eficaz gestión del riesgo con el estricto cumplimiento de una gobernanza corporativa son elemento clave para el éxito en las instituciones bancarias (Aebi et al., 2012), la cuantificación de las probabilidades de pérdidas y efectos secundarios permite tomar decisiones preventivas, correctivas y reductivas (Balteş & Ciuhureanu, 2010), poder anticiparse con acciones que permita facilitar el conocimiento de los factores de riesgo a la gerencia (Beals et al., 2019).

El uso del proceso de gestión de riesgos ayuda a las instituciones a tener resultados favorables como la adopción de mejores prácticas con el apoyo de las partes interesadas (Ruiz-Canela, 2021), o mejorar su capacidad de gestión para enfrentar la incertidumbre y los impactos negativos (Raz & Hillson, 2005). Prioritariamente, la gestión de riesgos operacionales es minimizar las pérdidas de la institución bancaria y preservar su capital y activos, el impacto será obtener mejores resultados de la actividad para determinar, mantener y controlar el nivel de riesgo operacional (Chauhan et al., 2019).

La gestión de riesgos operacionales con enfoque de principios cibernéticos permitirá a las instituciones financieras mejorar sistemas con la complejidad que amerita el manejo de riesgos operacionales. En el presente trabajo se diseña el Modelado de Sistema Viable VSM de una institución financiera con la finalidad de poder optimizar el manejo de sus riesgos operacionales, lo que implicó mejorar los modelos internos y a futuro permitirá reconocerlos y optimizarlos con suficiente antelación. Las consecuencias de una gestión eficaz orientarán a una reestructura orgánica, mejorará la toma de decisiones, reducirá el cargo de capital, así como el

cumplimiento de las especificaciones normativas.

### Marco Teórico o Revisión de literatura

Stafford Beer fundó la cibernética de gestión, actualmente conocida como Cibernética Organizacional (CO), en la que presenta a las organizaciones como sistemas que sobreviven al medio ambiente por su característica de adaptabilidad, definiendo a la organización como sistema viable cuando es capaz de mantener su existencia independiente. El modelo fue desarrollado por Beer y plasmado en diversas publicaciones, con enfoque teórico publicó dos trabajos, *Brain of the Firm* (1972) y *Heart of Enterprise* (1979), con un enfoque metodológico desarrolló *Diagnosing the System for Organizations* (1985).

El Modelo de Sistema Viable VSM utiliza principios cibernéticos, entre los conceptos relevantes tenemos la Ley de la Variedad de Ashby (1956) o la formalización matemática del comportamiento de redes neuronales enunciado en el Modelo de Neuronas de McCulloch y Pitts (1943). En relación a la CO el trabajo de Brocklesby y Cummings (1996) reconocen en el VSM el enfoque evolutivo y mesurado de los cambios en la institución como un modelo organizacional lo cual permite a las empresas fortalecerse con las similitudes entre organización y modelo, Espinosa y Harden (2008) consideran que las organizaciones deben ser diseñadas con fundamentos cibernéticos para que sean viables en medios ambientes adversos y para Hoverstadt y Loh (2017) el VSM debe ser modelado continuamente para una variedad de diferentes contextos, incluidos contextos con propósitos dispares.

Un VSM debe presentar características de retroalimentación y variedad, que son conceptos cibernéticos de manejo de transformaciones (Beer, 1984), que permiten comprender a las organizaciones y mejorar sistemas con extrema complejidad, autorregulación y probabilismo. El mecanismo de retroalimentación negativa se puede emplear para garantizar que estén regulados para lograr los objetivos preferidos. La ingeniería de variedades ofrece un medio para asegurar el control de los sistemas probabilísticos, cuyo comportamiento no se puede predecir de antemano (Jackson, 2003).

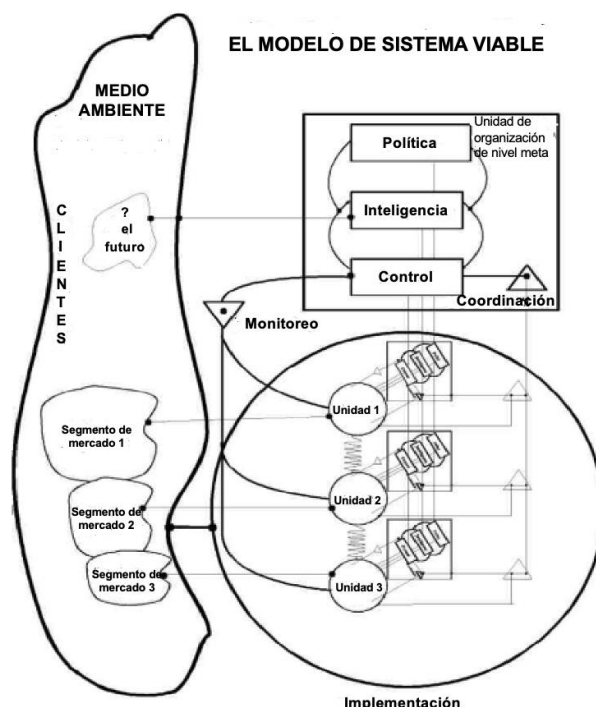
La teoría de los sistemas sociales ofrece la perspectiva sociológica en la complejidad sobre su forma de actuar ante los desafíos del medio ambiente, Luhmann (1995) postula que “un sistema es menos complejo que su medio ambiente”, debido a que una organización vista como sistema selecciona únicamente una limitada cantidad de información disponible fuera de sus límites, para que pueda existir un sistema social su razón es la reducción de la complejidad entendida como el horizonte infinito de posibilidades de acción y experiencia (Schneider, Wickert & Marti, 2016).

El modelado de sistemas viables debe considerarse una de las herramientas más poderosas en el estudio de estructuras organizacionales (Espejo, Bowling & Hoverstadt, 1999). Para modelar un sistema social se utilizan metodologías como la de Sistemas Suaves (Checkland, 1981) que hace uso de modelos de actividad humana, con la finalidad de evaluar y analizar a los entes participantes de una situación problema en el mundo, las percepciones de esa situación y la disposición para seleccionar acciones concretas que permitan adaptarse a las percepciones y juicios de un conjunto de actores. Esta metodología, lo que hace es buscar soluciones a un conflicto establecido en donde intervienen elementos sociales, políticos y humanos.

Un sistema es viable cumpliendo los requisitos que la teoría específica, para que una organización sea viable debe de disponer de cinco sistemas gerenciales con sus interrelaciones (Fig. 1):

**Sistema 1 (S1)**, denominado “Operación” tiene la función de gestionar las operaciones de las actividades primarias, así como los activos, que son definidas como unidades operativas (Huygh & Haes, 2019). Las unidades operativas producen resultados, los cuales pueden ser bienes o servicios en una organización (Sadi, Wilberg, Tommelein & Lindemann, 2016).

**Sistema 2 (S2)**, denominado “Coordinación” es el proceso de autorregulación para hacer frente a las oscilaciones que surgen a través de las interacciones entre o dentro de los sistemas viables integrados, esta gestión reduce el conflicto entre ellas y crea cohesión para mantener la estabilidad (Beer, 1979).



**Figura 1.** Modelo de Sistema Viable.  
Source: Beer (1984)

**Sistema 3 (S3)**, denominado “Control” gestiona los procesos (Shaw et al., 2020), controla la operación del sistema en foco (Beer, 1985). El S3 debe integrar los elementos operativos en un todo cohesivo (Jafarov & Lewis, 2014) y mantener en equilibrio la autonomía de cada uno de los sistemas viables conservando la cohesión total del sistema (Anderton, 1989).

**Sistema 3\* (S3\*)**, denominado “Auditoría” es el canal de auditorías en el cual permite que el S3 obtenga información directamente de las unidades operativas del S1 (Beer, 1985), se complementa con la función de seguimiento y validación (Schwaninger & Scheef, 2016).

**Sistema 4 (S4)**, denominado “Inteligencia” tiene la función de gestión de los posibles estados futuros del sistema (Hoverstadt, 2010). El S4 se ocupa de la vinculación entre la comunicación externa con el entorno total del sistema (Beer, 1985), recopila y analiza información del entorno para identificar desafíos y oportunidades (Huygh & Haes, 2019).

**Sistema 5, Política.-** Es la función de gestión de toma de decisiones. El S5 toma las decisiones finales dentro de una recursión del sistema viable, proporcionando un cierre lógico, así

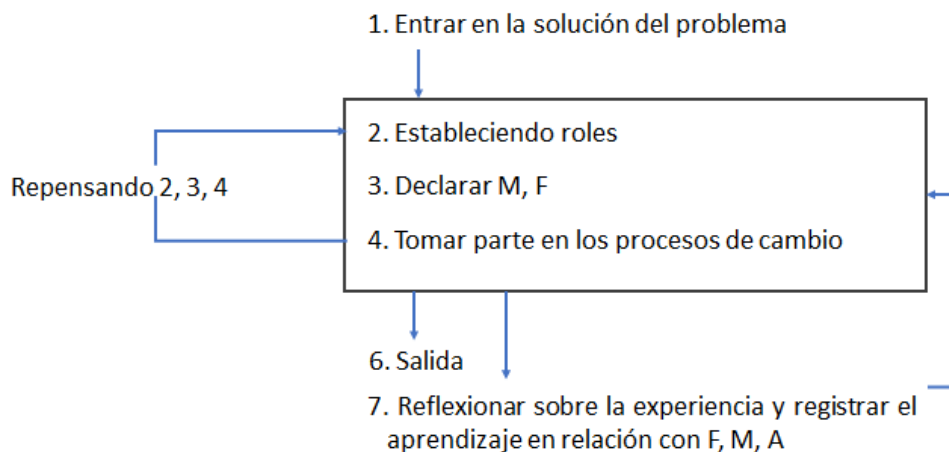
como decide la estrategia de la organización (Beer, 1985). Establece un equilibrio entre la orientación presente y futura de las acciones de inteligencia del S4 y el proceso de gestión del S3 (Schwaninger & Scheef, 2016).

El modelo analiza un nivel de recursión o también denominado “sistema *in focus*” de una organización y sus relaciones con los otros niveles. El principio de recursividad aborda el hecho de que “todo sistema viable contiene y está contenido en un sistema viable” (Beer, 1984). Así, el modelo cubre cualquier organización en su totalidad.

### Metodología

Esta investigación se ha realizado con un enfoque sistémico presentado por Checkland y la estrategia es investigación-acción, la cual es un método de investigación cualitativo y se basa en la participación de investigadores y personal bancario. El método de investigación-acción (Checkland & Holwell, 1998) se basa en el marco FMA (donde F es un marco de ideas; M es la metodología aplicada y A es el área de interés) para guiar la planeación e implementación de investigación acción (Fig. 2).





**Figura 2.** Proceso de investigación de acciones.  
 Source: Checkland & Holwell (1998)

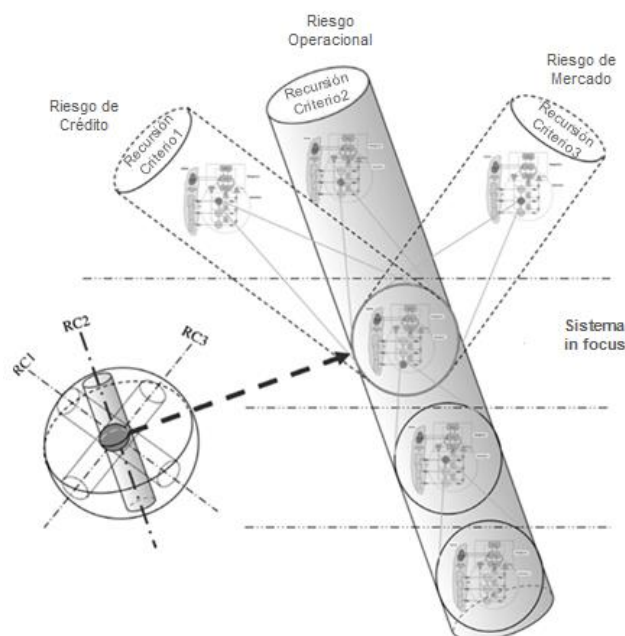
El problema de investigación en el mundo real fue diagnosticar la estructura organizacional que permita optimizar el manejo del riesgo operacional en una institución bancaria mexicana como un área de preocupación para el sistema bancario nacional, con la finalidad de lograr la viabilidad. La investigación se realiza con un enfoque sistémico y estrategia de investigación acción (Checkland & Holwell, 1998). Uno de los autores es empleado bancario. Para guiar la planeación e implementación del proceso de investigación de acciones (Fig. 3), el equipo de investigación después de varias sesiones constituye el F (marco de ideas) y M (metodología aplicada), se inició el diagnóstico de la estructura organizacional. La investigación se realizó en la matriz de uno de los principales bancos mexicanos, dada la información y su manejo quedará sin enunciarlo debido a su protección. Los datos se recopilaron mediante examen de la experiencia pasada en riesgos en organizaciones similares y en la misma organización, opinión de expertos, entrevistas y observación personal. El modelo VSM fue desarrollado utilizando la metodología de Viplan que utilizó Espejo et al., (1999) el cual está compuesto por 1) Formación de declaración de identidad, 2) Modelado estructural,

3) Comprensión y desarrollo de la complejidad 4) Evaluación de la discrecionalidad de la gestión, 5) Puntos de diagnóstico y 6) Diseño S1-S5.

#### 1) Formación de declaración de identidad

En el primer paso es conocer la identidad y el propósito de la institución bancaria mexicana, para ello se nombra el sistema, esto se ocupa como una herramienta para estudiar la identidad de las organizaciones, se describe la organización con un método de asignación de nombres apropiados a cada actividad del proceso de riesgo operacional en que involucra a todos los actores. La identidad y descripción de la institución bancaria se determina cuando los observadores puedan resolver los cuestionamientos que plantea el Método Viplan. En principio se determina el sistema *in focus*.

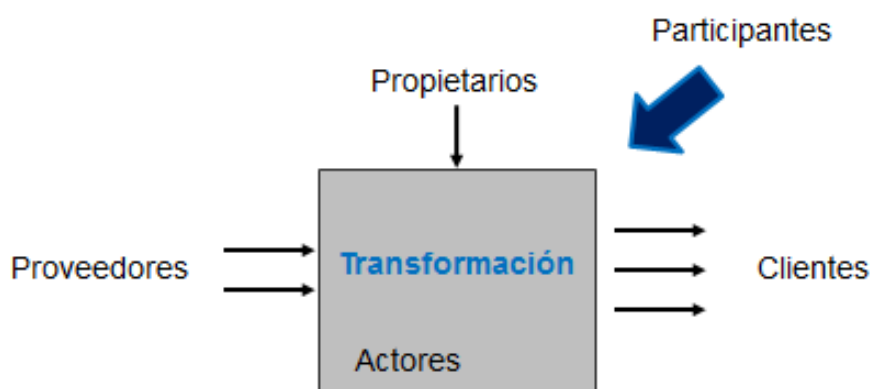
*Determinar el sistema in focus:* El análisis VSM se puede extender tanto hacia arriba como hacia abajo. Para determinar el sistema *in focus* se considera la estructura del sistema bancario por nivel de recursión y referente al riesgo operacional lo apropiado para su gestión en el banco mexicano (Fig. 3).



**Figura 3.** Sistema *in focus*, adaptado de Pérez-Ríos (2010).

*Determinar la identidad con TASCOI:* La estructura de la situación puede definirse en términos de nombres, Checkland (1981) establece el mnemotécnico CATWOE para las descripciones estructuradas concisas o

definiciones raíz del problema o resultado deseado. Otra estructura la desarrolló Espejo (1988), Espejo et al., (1999) definiendo TASCOI, la cual será utilizada para este trabajo (Fig. 4):

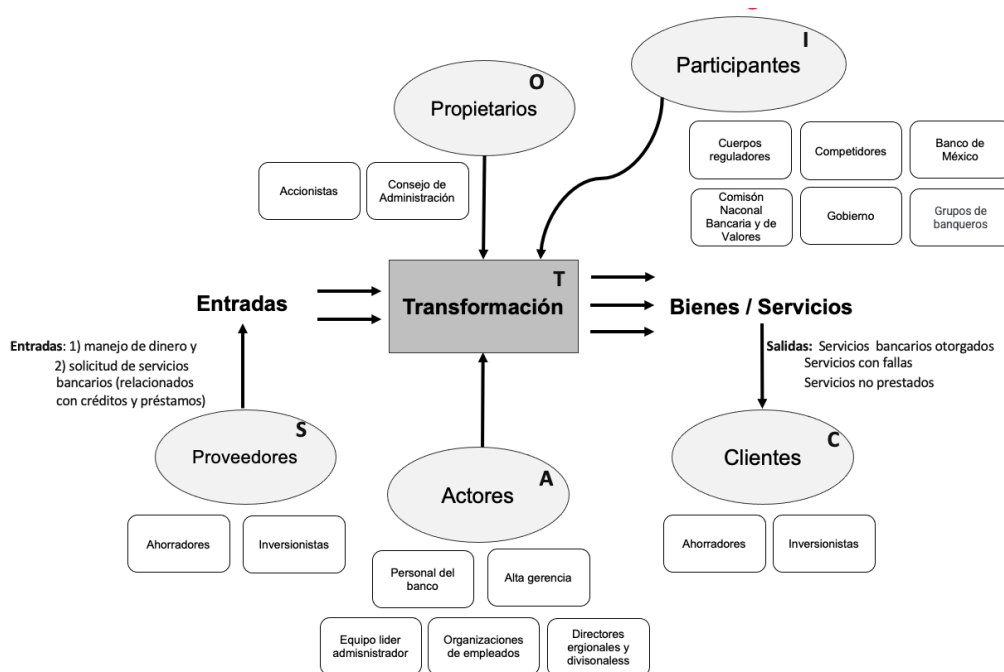


**Figura 4.** TASCOI en términos de transformación como caja negra.  
Source: Espejo (1988), Espejo et al., (1999)

*Identificar la actividad principal:* En este caso la actividad principal para la gestión de riesgo operacional es analizar como las instituciones bancarias realizan la gestión sin descuidar el interés de los accionistas y la operación de la institución bancaria. La gestión del riesgo operacional debe garantizar el cumplimiento de los objetivos para lo cual la institución bancaria toma riesgos para prosperar, en un ambiente tan complejo puede fallar debido a la ineficaz forma de gestionar los riesgos, por lo que debe destinar recursos para fortalecer la gestión y toma de decisiones.

*Actividad de apoyo/reguladora:* La actividad principal la realizan las unidades organizacionales que generan los productos o servicios y donde se presentan los riesgos en las instituciones bancarias. La actividad reguladora y de apoyo es la función de creación y regulación para que no se presente una gestión ineficaz en la administración de los riesgos operacionales.

La gestión del riesgo operacional en institución bancaria mexicana queda estructurada con TASCOI de la siguiente manera (Fig. 5).

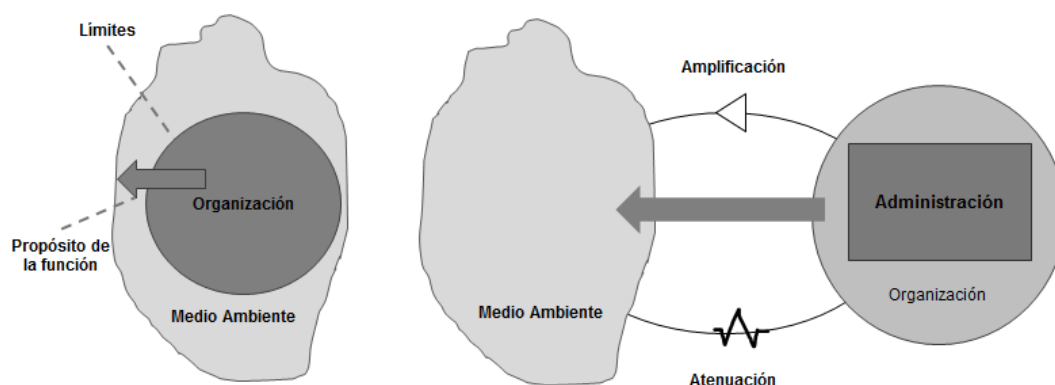


**Figura 5.** Determinando TASCOI para la gestión de riesgos operacionales.

## 2) Modelado estructural

El segundo paso del método Viplan es el modelado estructural (Fig. 6). En este paso se identifica el entorno de la institución bancaria. Dos aspectos a considerar son, conocer el entorno actual y el entorno a futuro, para ello es

necesario conocer los cambios demográficos, tecnológicos, sociales y de comportamiento, la inestabilidad global, el auge y la interconectividad de los mercados emergentes, el auge del capitalismo dirigido por el estado y la guerra por los recursos naturales.



*Nota:* Interacción de la organización, con su administración y el medio ambiente.

**Figura 6.** La organización y su medio ambiente, Pérez-Ríos (2010).

Las instituciones deben identificar los límites y el medio ambiente en el presente y futuro en el que opera la institución bancaria, se han definido las presiones fiscales y el malestar político social, definiendo los elementos necesarios para estudiar la institución bancaria y evaluar su capacidad de cumplimiento de propósitos.

La evaluación de la capacidad de cumplimiento de propósitos utiliza dos dimensiones, la primera es la vertical se refiere a la variedad

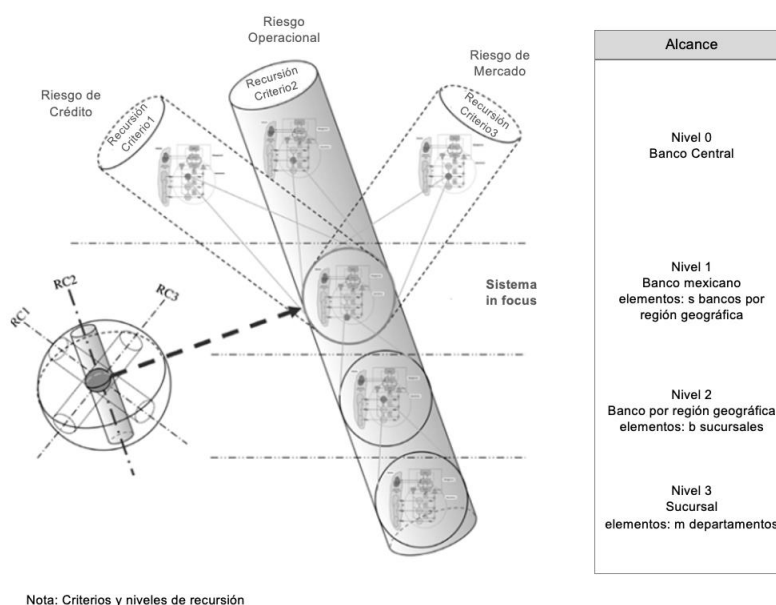
(complejidad) del entorno global que enfrenta la institución bancaria, identificando subambientes dentro del medio ambiente total, en su caso podría identificarse a su vez subambientes, y así sucesivamente. Al proceso se le conoce como “desdoblamiento de la complejidad” y permitirá potenciar la capacidad de la institución para absorber la complejidad. La segunda dimensión es la horizontal que define los diferentes niveles en el que está involucrada la institución respecto a su medio ambiente (Espejo & Harnden, 1989).

La selección de un nivel de estudio en particular se denominará “organización *in focus*”, será el nivel de la organización donde a detalle se analice su entorno, la gestión y relaciones entre ellos.

### 3) Comprensión y desarrollo de la complejidad

El uso del VSM como herramienta de diagnóstico permite conocer parte de una intervención de la banca nacional bajo los conceptos de Beer. La estructura básica del VSM en la banca nacional (Fig. 7), muestra al sistema

bancario respecto a la gestión de riesgos, las operaciones bancarias están definidas por criterios y niveles de recursividad. La gestión de riesgos debe ser manejada sistémicamente, los riesgos son clasificados en riesgo operacional, de crédito y de mercado y gestionados en diferentes niveles. Cada nivel representa un sistema viable para la gestión del riesgo operacional, en el nivel 0 se establece a nivel nacional la gestión del Banco Central, el nivel 1 corresponde la gestión a los bancos mexicanos por firma, el nivel 2 se establece al banco por región geográfica, y el nivel de recursión 3 corresponde a la sucursal.



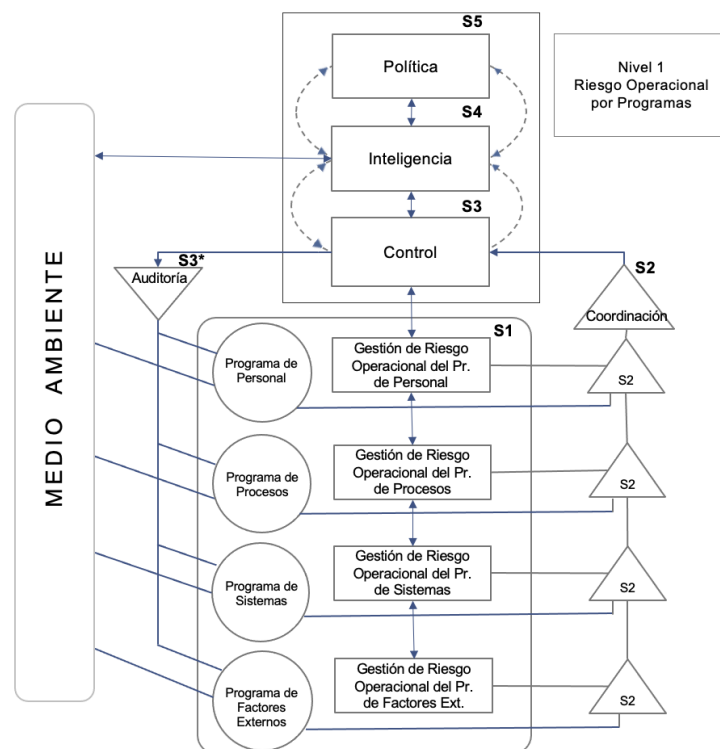
**Figura 7.** Sistema *in focus*, criterios y niveles de recursión, adaptado de Pérez-Ríos (2010).

### 4) Evaluación de la discrecionalidad.

El sistema viable presenta recursión descendiendo al siguiente nivel (Fig. 8), encontramos el Sistema *in focus* para la gestión de riesgos operacionales, compuesto por las unidades productivas establecidas por las fuentes

que producen el riesgo operacional ocasionados por personas, procesos, sistemas y factores externos, cada uno de ellos serán atendidos por programas, debe observarse que su organización de sistemas viables no corresponde a una descomposición jerárquica, sino a sistemas dentro de sistemas.





**Figura 8.** Gestión de riesgo operacional en la institución bancaria, nivel de recurrencia 1 (*in focus*).

Existen niveles de recursividad, para cada uno de los programas, en el que cada institución bancaria definirá la gestión del riesgo operacional, para intégralos a cada programa y permitir gestionar de manera sistémica al riesgo operacional, y así sucesivamente definiendo los niveles de recursividad que se diseñe en el modelo.

Uno de los factores que se deben considerar es la discrecionalidad en la gestión de las evaluaciones, la cual consisten en identificar los elementos de la estructura en cada nivel de recursión, se determina los recursos discrecionales y las funciones relacionadas con la actividad principal de la institución bancaria.

##### 5) Puntos de diagnóstico

Este paso es necesario aclarar la gestión del riesgo operacional para evaluar la alineación de la estrategia empresarial con el valor empresarial de la gestión. La implementación de un sistema de información en las instituciones financieras debe evaluarse de conformidad con los objetivos de la institución bancaria. Cada sistema de información debe alinearse con la estrategia de la institución, como ejemplo en el banco para lograr los objetivos del riesgo operacional contrato un equipo externo para mejorar un programa de riesgo tecnológico para cumplir con las expectativas regulatorias del BCBS, los recursos temporales en un objetivo específico, permitió

liberar recursos al grupo de expertos técnicos y centrarse en crear mejoras. El resultado en este paso garantiza que la inversión de capital en los programas de riesgo tecnológico este alineada con los objetivos de la institución bancaria.

##### 6) Diseño S1-S5

En este paso se realiza el diagnóstico y diseño de mecanismos estructurales, se elabora un VSM para la institución bancaria mexicana como paso final del método Viplan.

**Sistema 1 (S1):** Operaciones relacionadas con la identificación del riesgo operacional.

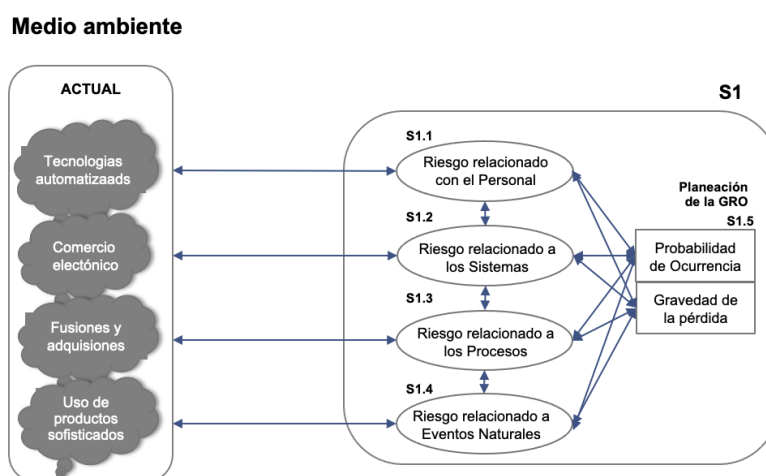
Las unidades operativas (UO) de gestión del riesgo operacional tienen la responsabilidad de ejecutar funciones de control y provisión de bienes y servicios bancarios. La identificación de los procesos clave y tipos de riesgo operacional surgen de los procesos de definición y categorización, a) el primero se ubican los riesgos, revisando y listando las exposiciones a pérdidas, se define el enfoque para la estimación de pérdidas operativas y calidad y uso de los datos y posteriormente b) el segundo tiene por objetivo revisar y listar todas las exposiciones a pérdidas, para lo cual se utilizan diversos métodos como cuestionarios, listas de verificación o estados financieros.

La atención de todos los referentes a las operaciones inadecuadas o fallidas de servicios bancarios son atendidas por el Comité Operativo del Riesgo Operacional. El comité se forma para la dirección de la actividad de cada programa por riesgo operacional, en el que deben conocer el perfil del riesgo operacional relacionado con a) personal, b) sistemas y tecnología de la información, c) procesos, y d) eventos naturales. La estructura se presenta con los expertos relacionados con cada riesgo operacional y los jefes divisionales del dominio del riesgo operacional.

La Figura 9 muestra cómo se define el S1 para identificar el riesgo operacional para que las instituciones bancarias definan y categoricen el riesgo para priorizarlo, se integra el sistema de

planeación para que de manera holística, los subsistemas S1.1, S1.2, S1.3 y S1.4 se comuniquen entre sí, permitiendo planear los riesgos inherentes y residuales, definiendo el uso de técnicas tanto cualitativas como cuantitativas dichos riesgos se pueden clasificar siguiendo dos dimensiones; probabilidad de ocurrencia y gravedad de la pérdida. Los reguladores han determinado la identificación de riesgos como un tema principal, donde el establecimiento y la implementación de un proceso integral de identificación le permite a la institución y sus niveles de recursividad poder capturar y medir los riesgos.

Las unidades operativas deben detectar el grado de amenaza para alertar a los directivos a través de un canal algedónico.



**Figura 9.** S1 Operaciones relacionadas con la identificación del riesgo operacional.

La identificación de riesgos operacionales es necesaria para conocer la exposición e identificar oportunidades para crear valor en los procesos. Las instituciones también deben priorizar los riesgos operacionales evaluando los modelos de gestión de riesgo y determinado el nivel de precisión, confiabilidad y transparencia requerido para los casos de uso relacionados. Un modelo que se usa para sugerir una decisión de bajo impacto tendrá un perfil de riesgo más bajo que un modelo que se requiere para tomar decisiones más especializadas.

Sistema 2 (S2): Coordinación de la gestión de riesgo de las operaciones del S1.

El S2 proporciona a las unidades operativas la coordinación para que pueda llevarse la implementación y monitoreo de las actividades realizadas en el S1, la coordinación de estas actividades permite al sistema la búsqueda de la

máxima autonomía otorgada sujeta únicamente a que el todo continúa existiendo. El S2 es responsable de la declaración de gestión de riesgos definiendo objetivos y políticas de la organización, permite que los ejecutivos operativos tengan conocimiento del impacto de los RO y otorga la autoridad necesaria al gestor de riesgos. La coordinación rigurosa entre unidades operativas es vital para asegurar la cobertura global de la organización.

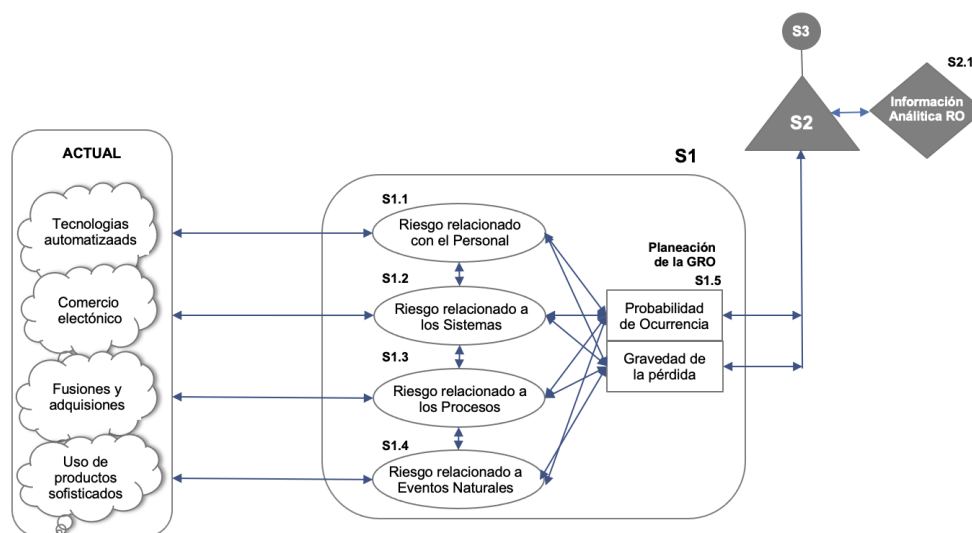
La finalidad del S2 es mantener la coordinación de la gestión del riesgo operacional entre cada subsistema 1, debe proporcionar estándares, políticas, procedimientos e instrucciones de trabajo de riesgos operacionales para el S1, referente a la atención de los requerimientos de los reguladores, el S2 proporciona políticas e instrucciones sobre estándares internacionales de riesgo operacional.

El S2 establece un proceso sistemático para evaluar el riesgo operacional, estableciendo procedimientos e instrucciones de riesgo operacional con definición de roles, obligaciones y responsabilidades respecto a las aplicaciones, capacitar a los empleados para mejorar el conocimiento respecto a los riesgos operacionales.

El S2 realiza actividades relacionadas con informar el estado el riesgo operacional a determinados periodos, de conformidad con los estándares o marcos. De la misma manera documentar los riesgos que se materializaron a

causa de la aplicación de legislaciones extranjeras.

Las funciones del S2 son la de gestionar la coordinación de las actividades del S1, autorregular las oscilaciones entre o dentro de los sistemas viables, reducir el conflicto, crear cohesión para mantener la estabilidad y garantiza la comunicación entre el S1 y S3. El S2 es el responsable de autorregular las interacciones dentro de los sistemas viables integrados del S1, lo cual establece una comprensión compartida de los riesgos operacionales (Fig. 10).



**Figura 10.** Coordinación de la gestión de riesgo de las operaciones del S1.

Sistema 3 (S3): Control de la gestión de riesgos operacionales.

El control de la gestión del riesgo operacional (S3) es responsable de regular las operaciones internas de institución bancaria respecto de la gestión de los riesgos operacionales, en este sistema se debe administrar, controlar y reportar el riesgo operacional, contribuyendo al diseño de programas y proyectos que mejoren el estado de los riesgos operacionales, lo cual deberá ser autorizado por los S4 y S5.

El S3 controla la operación del sistema S1, las gestiones que realiza es el análisis de la efectividad de las soluciones con el propósito de mantener controlado el perfil del riesgo, por lo que establece mecanismo que permitan realizar el análisis de riesgos. En primera instancia sí de manera anticipada el riesgo no se ha consumado se debe gestionar estrategias de control, las cuales permiten reducir la frecuencia o la gravedad de una pérdida definiendo la técnica

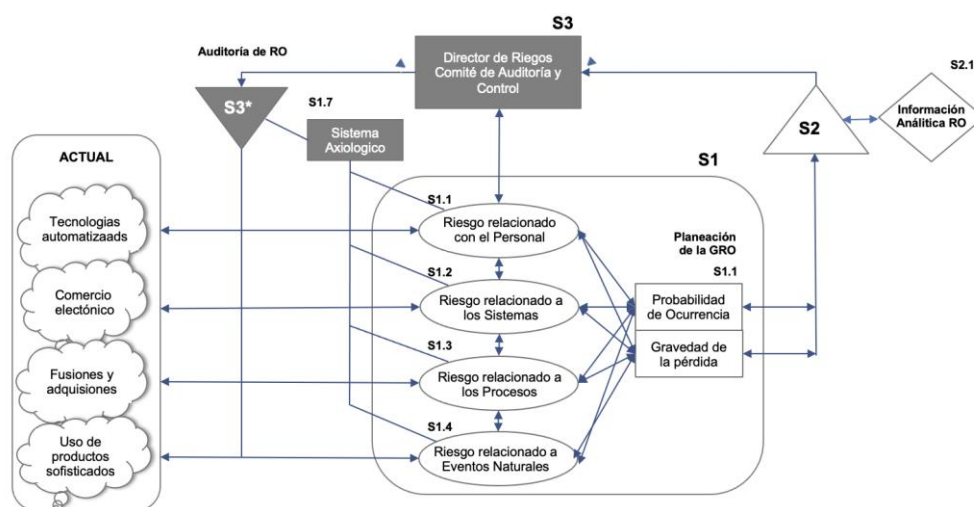
para prevenir, reducir e impedir la pérdida, en segunda instancia sí se ha consumado la ocurrencia del evento se utiliza estrategias de financiación de pérdidas, entre ellas se utilizan la retención y transferencia de riesgo. El uso de estas estrategias garantiza la asignación de recursos y fomenta la cohesión, esta sinergia entre operaciones maximiza los resultados.

El control de gestión de riesgos operacionales es supervisado por el Comité de Auditoría y Control para la gestión de riesgos operacionales, conformado por el director de riesgos operacionales, el gerente de riesgos operacionales y el auditor líder de riesgos operacionales. Las funciones del comité es la comunicación y difusión que genera el S3, se realiza el informe interno sobre riesgos operacionales que contenga insumos financieros, operativos y de cumplimiento, así como datos externos relevantes que contenga información sobre eventos y condiciones. De la misma manera se elaboran los informes de riesgos que

contengan las descripciones cualitativas de las tendencias y desafíos respecto a los riesgos operacionales.

El Sistema de Auditoría (S3\*) desempeña las funciones de obtener información del S3-S1, proporcionar información con alta precisión,

complementar con seguimiento y validación y finalmente auditar el riesgo operacional en las unidades operativas, por lo que se considera vital la creación del Subsistema Axiológico S1.7 que permita el desempeño organizacional apegado a sus principios y valores (Fig. 11).



**Figura 11.** Control S3 y Auditoría S3\* de la gestión de riesgos operacionales.

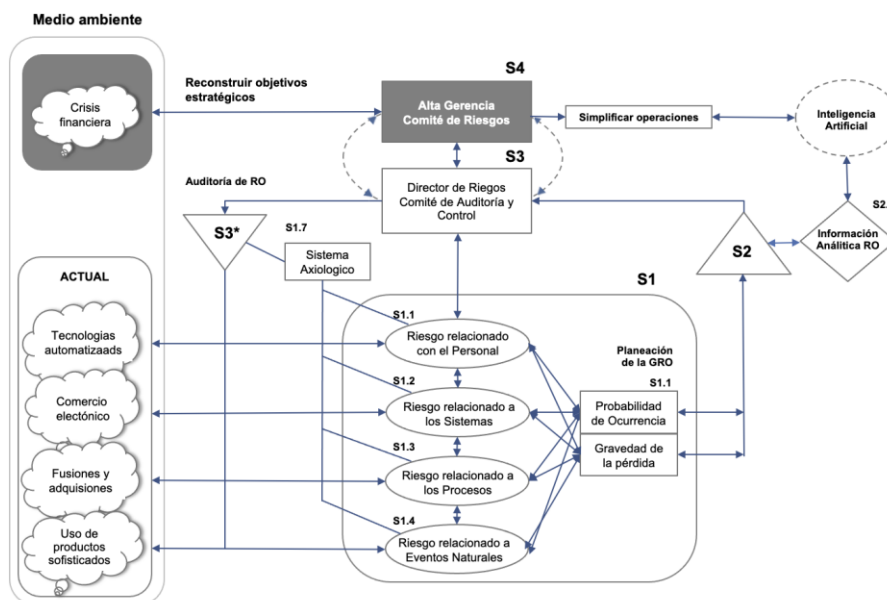
Sistema 4 (S4): Gestión del entorno de los riesgos operacionales.

El compromiso del S4 es la comunicación externa de los riesgos operacionales con el entorno del sistema, se ocupa de las actividades externas y de mediano y largo plazo del sistema, monitoreando lo que está sucediendo, detecta las oportunidades y amenazas en el entorno del sistema. La responsabilidad es rastrear el riesgo relacionado con el futuro entorno de los riesgos operacionales y tener la capacidad de predecir, analizar y simular los cambios, lo que permitirá a las instituciones bancarias tomar decisiones que aumenten la probabilidad de lograr objetivos futuros, así como de reconfigurar los objetivos estratégicos de riesgos operacionales.

Este sistema ofrece posibles recomendaciones para acciones futuras respecto a los cambios que están aconteciendo en el entorno de la institución bancaria, con la finalidad de mantener un estado constante de preparación para el cambio y asegurar su adaptación.

Se crea el Comité de Riesgos el cual juntamente con la Alta Dirección gestionan las funciones del S4, entre las actividades que desarrolla están las de recopilar y analizar información para identificar desafíos y oportunidades, administrar afuera con visión a futuro, gestionar estados futuros para que la organización se adapte a los cambios del entorno externo y establecer canales de comunicación externa (Fig. 12).





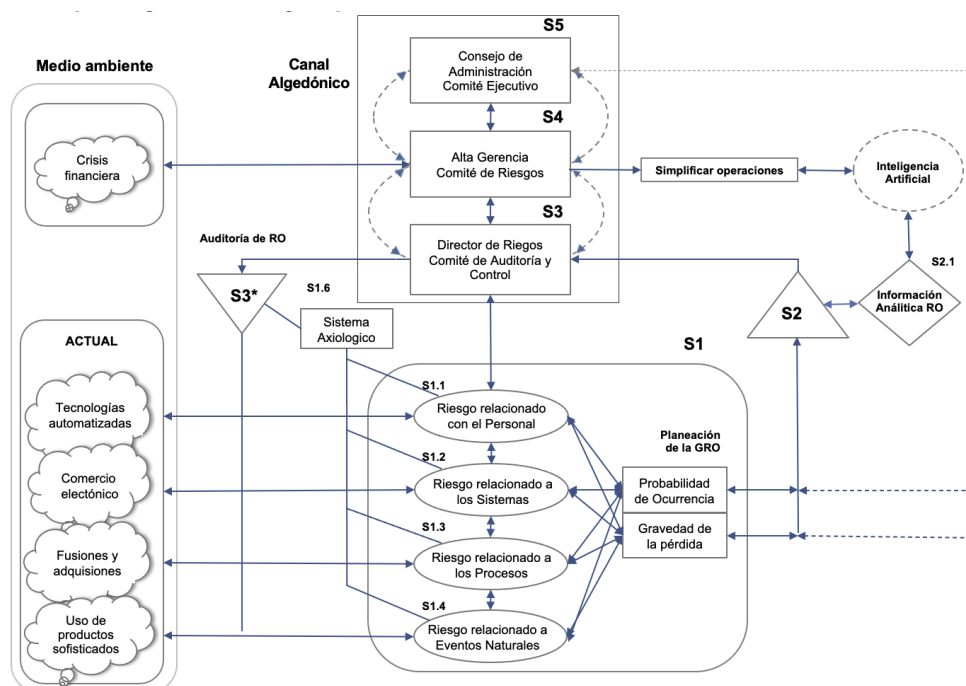
**Figura 12.** Gestión del entorno interno del riesgo operacional.

Sistema 5 (S5): Gestión del entorno externo del riesgo operacional.

El S5 actúa como árbitro en los S3 (entorno interno) y S4 (entorno externo) equilibrando las necesidades para tomar la decisión de cual rumbo se promulgará. Este sistema define la misión, visión, valores, y objetivos sobre los riesgos operacionales, asegurando que la institución bancaria tenga la capacidad de adaptabilidad con un grado aceptable de estabilidad interna, asegurándose que el riesgo operacional no supere el apetito de riesgo de la institución. El sistema

tiene entre sus funciones la de generar políticas generales para la definición de la gestión de riesgos operacionales; establecer una visión del riesgo; gestionar proactivamente el riesgo, las regulaciones y el capital.

Se crea el Comité Ejecutivo el cual gestiona junto con el Consejo de Administración las funciones del S5, definen la estrategia de la organización, toman decisiones, crean y mantienen la identidad del sistema, establecen la dirección general, valores y propósitos y soluciona conflictos entre S3 y S4 (Fig. 13).



**Figura 13.** Modelo del Sistema Viable para la Gestión del Riesgo Operacional.

## Resultados y discusión

Las instituciones bancarias deben adoptar respuestas en la institución completa y en todos los niveles dado que el riesgo operacional se presenta de una variedad de fuentes.

El Sistema 1 es responsable de la producción y entrega de los bienes o servicios de la institución bancaria al entorno pertinente, que permite al S1 gestionar el riesgo operacional ocasionado por el uso creciente de tecnologías automatizadas, el crecimiento del comercio electrónico, las fusiones y adquisiciones, y el uso de productos sofisticados que pueden conducir a errores del sistema, robo interno y externo, problemas de seguridad, entre otros. El S1 está compuesto por unidades organizativas operativas, cada uno de estos sistemas viables son responsables de las actividades o productos. Las principales actividades que una institución bancaria desarrolla respecto a la gestión de riesgo operacional es identificar los eventos que causan pérdidas, los cuales son ocasionadas por las personas S1.1, sistemas S1.2, procesos S1.3 y eventos naturales S1.4, cada uno de los cuatro componentes del S1 tienen su gestión y operación que pueden filtrar información al nivel superior, aminorando la heterogeneidad mediante un canal algeodónico.

Subsistema de Planeación (S1.5), es claro, que su funcionamiento se requiere dado que la gestión del riesgo operacional es llevada por una dirección dentro de la estructura del banco central a cada una de las regiones geográficas y sus sucursales, por lo que los resultados que se produzcan requieren de la planeación de casos imprevistos, la identificación de las fuentes de los riesgos por errores y abusos internos; violaciones externas; problemas en el funcionamiento de las relaciones con los clientes, inadecuada comercialización de productos y los procedimientos comerciales; e implementación de procesos y decisiones comerciales permitirá al sistema de planeación identificar los eventos por probabilidad de ocurrencia y gravedad de pérdida y en consecuencia definir la forma de actuar ante estos.

El Sistema 2 coordina la implementación y el monitoreo para que funcionen armónicamente las unidades operativas del S1. Existe una interface en donde se conecta con el Subsistema de Planeación S1.5 como responsable de administrar la información, procesos y suministros, evitando generar conflictos para alcanzar los objetivos, lo que le permite fortalecer al S2 para que coordine los equipos,

defina las bases de conocimiento, la programación de tareas, establezca las normas operativas destinadas a proporcionar estándares de comportamiento, sistematice las actividades, establezca el uso de instructivos o lineamientos, incorpore sistemas de calidad, la coordinación de estas actividades mejoraran las capacidades de gestión, reduciendo la materialización de los riesgos operacionales.

El Subsistema S2.1 referido a la Información Analítica del sistema es el área que se incorpora con la finalidad de que la institución bancaria maneje su información para poder modelar la exposición al riesgo operacional es la encargada de desarrollar la documentación adecuada, mejorar la calidad de los datos, conocer las tendencias de mercado, realizar el análisis de la forma funcional del algoritmo y parámetros que permita medir la exposición al riesgo y entender posibles problemas.

El Sistema 3 es el responsable de administrar las unidades operativas del S1, tiene la función de integrar al grupo para que funcione armónicamente y explorar las sinergias de las interacciones entre las unidades operativas del S1. El S3-da seguimiento diario a las operaciones de la institución bancaria, en el área central el director de riesgos administra el área para determinar los niveles aceptables de riesgo y determinar la exposición, a nivel de recursividad de las sucursales, coordina las actividades para que las ejecuten de conformidad con las políticas, establece de manera periódica una evaluación de control y riesgos, desarrolla planes de acción para monitorear el nivel de tolerancia. Las instituciones bancarias deben manejar un entorno de control sólido fortaleciendo su capacidad de monitoreo de controles e identificando las estrategias apropiadas de mitigación o transferencia de riesgos, las decisiones deben ser resueltas por el Consejo de Administración.

Sistema 3\* es un sistema de apoyo al S3, su función es auditar el funcionamiento del S1, obtiene información que contiene registros históricos de los riesgos identificados y sus calificaciones, esta información es proporcionada por los departamentos de gestión legal, departamento de seguridad y gestión de riesgos, así como del sistema de información analítica que contiene información de alta prioridad contra lavado de dinero o de inspecciones. La finalidad es poder registrar de manera adecuada el seguimiento de la auditoría para identificar los eventos de pérdidas.

En el banco se opera el Comité de Auditoría y Control cuya misión es revisar la efectividad de la gestión de Control Interno, informando al Consejo de Administración sobre el desempeño de los responsables de las funciones con riesgos clave, el estado del marco de control interno, informar de la ausencia de materialización de pérdidas, contingencias o incertidumbre ocasionadas por una gestión deficiente de controles internos, así como informes de Auditoría Interna y Externa e informes Regulatorios.

Sistemas de interrelaciones entre los sistemas tenemos el canal vertical entre Sistemas de relación (1-3), negociación de metas y recursos: rendición de cuentas, gestión por objetivos, control de presupuesto, gestión por excepción, intervención únicamente si la cohesión de toda la organización es amenazada)

Subsistema 3.1 definido como Subsistema Axiológico S3.1 cumple la función de otorgar valor axiológico a cada una de las Unidades Operativas de S1 y sus respectivas auditorías practicadas por el S3\*, debe vigilar que se lleven las auditorías bajo parámetros éticos otorgando que los resultados se hallan evaluado con efectividad bajo controles clave que mitiguen los riesgos. El canal algebrónico permite que la iniciativa del Consejo de Administración e implementada por el Comité Ejecutivo enfoca el sistema axiológico como parámetro de control a la gestión de riesgos operacionales permite que el banco tenga una cultura guiada por estándares sobre el comportamiento profesional y responsable.

El Sistema 4 es el responsable del futuro de la institución bancaria y su medio ambiente, a nivel central la estructura orgánica debe tener departamentos que sean responsables del futuro de la organización, cada uno de ellos deben formar un grupo de trabajo que permita determinar los planes estratégicos. Estos departamentos junto con el director general diseñan los planes estratégicos para adaptarse al futuro, la autorización es dada por el Comité de Riesgos el cual monitorea el estado de los riesgos de alta prioridad y emergentes, establece planes estratégicos que permita gestionar acciones de mitigación, además ante una solicitud de la administración se encarga de realizar el reporte cuando surgen pérdidas inesperadas o incidentes que identifican deficiencias en el marco de control o incumplimiento de políticas. La Inteligencia Artificial es introducida como herramienta en la construcción del entorno, le dará al S4 fortaleza al poder reconocer patrones

complejos sobre el ambiente y predicciones para mantener la estabilidad en turbulencias.

El Sistema 5 representa la máxima autoridad en la organización tomando decisiones estratégicas sobre la definición de la gestión de riesgos y gobernabilidad, tiene la misión de considerar los factores internos y externos que garanticen el equilibrio entre el presente y futuro de la institución bancaria y es el único subsistema que tiene la capacidad de regular las interacciones entre el S3 y S4. El S5 establece la identidad de la institución bancaria define la gestión del riesgo operacional y rechaza lo que no es válido. El uso del VSM para el sistema bancario es recursivo, en el nivel central el Consejo de Administración es la estructura de gobierno de máxima autoridad. El Comité Ejecutivo le informa al Consejo de Administración lo que se aprueba y revisa continuamente, permitiendo tomar las decisiones finales sobre su estrategia en equilibrio entre el presente de las decisiones de gestión y el futuro de las acciones de inteligencia en todos los niveles de la institución, productos, procesos y sistemas importantes.

## Conclusiones

El sistema financiero opera generando ganancias analizando los riesgos potenciales en cualquier nivel del sistema, institución bancaria, sucursal, departamentos, etc. Para evitar que se materialice el riesgo operacional los bancos requieren un marco para lograr los mejores resultados. Para encontrar un desempeño estable los bancos deben observar el funcionamiento operativo el cual resulta muy complejo teniendo en cuenta que surge de la imperfección de los procesos y sistemas, de acciones incorrectas de las personas o de imprevistos ocasionados por eventos externos.

El riesgo operacional está establecido por la especificidad presente y dinámica en cada actividad, el éxito de la gestión se debe a la definición y precisión de los roles y responsabilidades de los interesados y de una estructura organizativa adecuada. El riesgo operacional es el resultado de un mal funcionamiento del sistema por lo que el uso del Modelo de Sistema Viable VSM en cualquier nivel de recursividad de la institución bancaria le permita gestionar el riesgo operacional con un diagnóstico y diseño de estructuras organizativas para funcionar con mayor eficiencia.

El modelo presenta cómo las instituciones bancarias son viables en cinco subsistemas gerenciales y sus interrelaciones, cuya capacidad

de gestión permite la simplificación o modificación de productos, operaciones y estructura organizacional. La transformación mejora los servicios y procesos, reduce los costos estructurales y los niveles del riesgo operacional.

### Referentes Bibliográficas

- Aebi, V., Sabato, G., & Schmid, M. M. (2012). Risk management, corporate governance, and bank performance in the financial crisis. *Journal of Banking & Finance*, 3636(12), 3213-3226
- Andersen, L.B., Häger, D., Maberg, S., Næss, M.B., & Tunglund, M. (2012). The financial crisis in an operational risk management context - A review of causes and influencing factors. *Reliability Engineering & System Safety*, 105, 3-12
- Anderton, R. (1989). The need for formal development of the VSM. In Espejo, R. & Harnden, R. (eds.). *The Viable System Model: Interpretations and Applications of Stafford Beer's VSM*. Chichester: John Wiley. ISBN-10: 0471922889
- Ashby, W. R. (1956). *An introduction to cybernetics*. London: Chapman & Hall
- Baltes, N., & Ciuhureanu, A.T. (2010). Study on The Risk Management In Banking Institutions. *Studies in Business and Economics*, 5(3), 67-78
- BCBS-BIS (2006). *International convergence of capital measurement and capital standards - A revised framework comprehensive version*. <http://www.bis.org>
- Beals, S., Fox, C., & Minsky, S. (2015). *Why a Mature ERM Effort is Worth the Investment*. Risk Management and Insurance Society (RIMS) Executive Report. Disponible en: <https://acortar.link/kk4yVi> (consultado en enero de 2019)
- Beer, S. (1972). *Brain of the Firm: A Development in Management Cybernetics*. New York: Herder and Herder
- Beer, S. (1979). *The Heart of Enterprise*. Chichester: John Wiley
- Beer, S. (1984). The Viable System Model: Its Provenance, Development, Methodology and Pathology. *The Journal of the Operational Research Society*, 35(1), 7-25
- Beer, S. (1985). *Diagnosing the system for organizations*. Chichester: John Wiley
- Berger, A.N., Curti, F., Mihov, A., & Sedunov, J. (2022). Operational Risk is More Systemic than You Think: Evidence from U.S. Bank Holding Companies. *Journal of Banking & Finance*, 143, 106619
- Brocklesby, J., & Cummings, S. (1996). Designing a viable organization structure. *Range Planning*, 29(1), 49-57
- Chauhan, V., Yadav, R., & Choudhary, V. (2019). Analyzing the impact of consumer innovative-ness and perceived risk in internet banking adoption: A study of Indian consumers. *International Journal of Bank Marketing*, 37(1), 323-39
- Checkland, P. (1981). *Systems Thinking, Systems Practice*. Chichester, Wiley
- Checkland, P., & Holwell, S. (1998). Action research: its nature and validity. *Syst Pract Action Res*, 11(1), 9-21. <https://doi.org/10.1023/A:1022908820784>
- Corrigan, J., Luraschi, P., & Cante, N. (2013). *Operational risk modelling framework*. New York (USA): Milliman. Recuperado de: <https://acortar.link/sUODsx>
- Curry, T.J. (2012). Comptroller of the Currency. [File PDF]. Recuperado de: <https://acortar.link/fe1kku>
- Espejo, R. (1988). "Seeing Complexity" - the cybernetic viewpoint. *Transactions of the Institute of Measurement & Control*, 10(3), 139-144
- Espejo, R., & Harnden, R. (1989). *The Viable System Model: Interpretations and applications of Stafford Beer's VSM*. Chichester: John Wiley. ISBN-10: 0471922889
- Espejo, R., Bowling, D., & Hoverstadt, P. (1999). The viable system model and the Viplan software. *Kybernetes*, 28(6/7), 661-678
- Espinosa, A., & Harden, R. (2008). A complexity approach to sustainability – Stafford Beer revisited. *European Journal of Operational Research*, 187(2), 636-651
- Hoverstadt, P. (2010). The Viable System Model. In: Reynolds, M., Holwell, S. (eds) *Systems Approaches to Managing Change: A Practical Guide*. Springer, London. [https://doi.org/10.1007/978-1-84882-809-4\\_3](https://doi.org/10.1007/978-1-84882-809-4_3)
- Hoverstadt, P., & Loh, L. (2017). *Patterns of strategy*. Abingdon: Routledge
- Huygh, T., & Haes, S. (2019). Investigating IT Governance through the Viable System Model. *Information Systems Management*, 36(2), 168-192
- Jackson, M.C. (2003). *Systems Thinking: Creative Holism for Managers*. Chichester: John Wiley. <https://acortar.link/oZA5pP>
- Jafarov, N., & Lewis, E. (2014). Mapping the Cybernetic Principles of Viable System Model to Enterprise Service Bus. *Information Technology in Industry*, 2(3).
- Jorion, P. (2007). *Value at Risk: The New Benchmark for Managing Financial Risk*. New York: McGraw-Hill.



- <https://acortar.link/NW6VeQ>
- Luhmann, N. (1995). *Poder*. Barcelona: Anthropos-Universidad Iberoamericana
- McCulloch, W.S., & Pitts, W. (1943). A logical calculus of the ideas immanent in nervous activity. *Bull Math Biol*, 5, 115-130
- Mignola, G., Ugoccioni, R., & Cope, E. (2016). Comments on the Basel Committee on Banking Supervision Proposal for a New Standardized Approach for Operational Risk. *Journal of Operational Risk*, 11(3).
- Pérez-Ríos, J (2010). Models of organizational cybernetics for diagnosis and design. *Kybernetes*, 39(9/10), 1529-1550
- Raz, T., & Hillson, D. (2005). A Comparative Review of Risk Management Standards. *Risk Management*, 7(4), 53-66
- Ruiz-Canela, J. (2021). How Can Enterprise Risk Management Help in Evaluating the Operational Risks for a Telecommunications Company? *Journal of Risk and Financial Management*, 14, 139
- Sadi, T., Wilberg, J., Tommelein, I.D., & Lindemann, U. (8, 2016). Supporting the design of competitive organizations by a domain-specific application framework for the viable system model. In *DSM 2016: Sustainability in modern project management-Proceedings of the 18th International DSM Conference, São Paulo, August 29th and 30th, 2016* (pp. 077-087)
- Schneider, A., Wickert, C., & Marti, E. (2016). Reducing Complexity by Creating Complexity: A systems theory perspective on how organizations respond to their environments. *Journal of Management Studies*, 54(2), 182-208
- Schwaninger, M., & Scheef, C. (2016). A test of the viable system model: theoretical claim vs empirical evidence. *Cybernetics and Systems*, 47(7), 544-569
- Shaw, D., Fattoum, A., Moreno, J., & Bealt, J. (2020). A structured methodology to peer review disaster risk reduction activities: The Viable System Review. *International Journal of Disaster Risk Reduction*, 46, 101486

DOI: <https://doi.org/10.34069/AI/2023.71.11.2>

How to Cite:

Mosquera Rojas, M.C., & Romero Reyes, H.D. (2023). Evaluación de riesgos psicosociales en una empresa de transporte en Caquetá Colombia. *Amazonia Investiga*, 12(71), 26-39. <https://doi.org/10.34069/AI/2023.71.11.2>


## Evaluación de riesgos psicosociales en una empresa de transporte en Caquetá Colombia

### Evaluation of psychosocial risks in a transportation company in Caquetá, Colombia

Received: September 28, 2023

Accepted: November 24, 2023

Written by:

**Mabel Cristina Mosquera Rojas<sup>1</sup>** <https://orcid.org/0009-0004-1664-0771>**Hernán David Romero Reyes<sup>2</sup>** <https://orcid.org/0009-0003-9124-3058>

#### Resumen

El objetivo de este estudio fue evaluar los riesgos psicosociales en una empresa de transporte en Caquetá, Colombia, siguiendo la metodología establecida en la Resolución 2764 de 2022 del Ministerio del Trabajo. La muestra incluyó 50 trabajadores divididos en dos grupos: profesionales/directivos (n=6) y operativos/asistenciales (n=44). Se utilizó la Batería de Instrumentos para la Evaluación de Factores de Riesgo Psicosocial adoptada por dicha resolución. El estudio muestra detalles de los resultados de los diversos dominios con alta prevalencia de riesgo en ambos grupos. Se concluye que es necesario implementar medidas de intervención priorizando los dominios identificados con mayor prevalencia de riesgo psicosocial.

**Palabras clave:** Riesgos psicosociales, Empresa de transporte, Resolución 2764 de 2022, Evaluación de riesgos, Prevalencia.

#### Introducción

Los riesgos psicosociales en el trabajo son factores que pueden afectar la salud física y mental de los trabajadores, así como su rendimiento laboral. Estos factores pueden ser de origen organizacional, individual o ambiental.

En el caso de las empresas de transporte, los riesgos psicosociales pueden ser particularmente relevantes, ya que los trabajadores suelen estar expuestos a condiciones de trabajo estresantes, como largas horas de trabajo, turnos rotativos,

#### Abstract

The purpose of this study was to assess psychosocial risks in a transportation company in Caquetá, Colombia, following the methodology established in Resolution 2764 of 2022 by the Ministry of Labor. The sample included 50 workers divided into two groups: professionals/directors (n=6) and operational/assistant (n=44). The Battery of Instruments for the Assessment of Psychosocial Risk Factors adopted by this resolution was used. The study provides details of the results from various domains with a high prevalence of risk in both groups. It concludes that it is necessary to implement intervention measures prioritizing the domains identified with the highest prevalence of psychosocial risk.

**Key words:** Psychosocial risks, transportation company, Resolution 2764 of 2022, risk assessment, prevalence.

trabajo nocturno, exposición a riesgos físicos y emocionales, etc.

En Colombia, la Resolución 2764 de 2022 establece los requisitos para la identificación, evaluación y prevención de los riesgos psicosociales en el trabajo. Esta resolución obliga a las empresas a realizar una evaluación periódica de los riesgos psicosociales a los que están expuestos sus trabajadores.

<sup>1</sup> Psicóloga. Especialista en Gerencia para la gerencia en seguridad y salud en el trabajo, Universidad de Manizales, Colombia.

<sup>2</sup> Psicólogo, Master en dirección de personas y Gestión Empresarial, Especialista en Gestión de la Seguridad y Salud en el Trabajo, Universidad de la Amazonia, Colombia.

El objetivo de este artículo es presentar los resultados de una evaluación de riesgos psicosociales realizada en una empresa de transporte ubicada en el Caquetá, Colombia. La evaluación se realizó siguiendo lo establecido en la Resolución 2764 de 2022. Se utilizó una metodología que incluyó la aplicación de una encuesta a los trabajadores, así como la realización de entrevistas a los directivos de la empresa.

Esta evaluación es esencial, dado que los trabajadores del transporte enfrentan desafíos únicos, incluyendo largas horas de conducción, aislamiento social, y estrés, los cuales pueden impactar significativamente tanto en su bienestar físico y mental como en su rendimiento laboral.

La investigación se justifica por la relevancia de garantizar un ambiente laboral saludable y productivo, así como por cumplir con regulaciones legales colombianas. En este estudio, se aplicaron diversos instrumentos, como fichas de datos generales, evaluación de factores de riesgo intralaboral y extralaboral, y evaluación de estrés. Además, se organizó a los trabajadores en dos grupos: profesionales y directivos (INTRALABORAL A) y trabajadores operativos y/o asistenciales (INTRALABORAL B), para un análisis más detallado.

En los apartados siguientes, el lector encontrará una revisión de la literatura pertinente, una descripción detallada de la metodología empleada, los resultados obtenidos y su discusión, seguidos de las conclusiones y las referencias utilizadas. Este artículo busca contribuir al entendimiento y mejora de las condiciones laborales en el sector del transporte, enfatizando la importancia de abordar los riesgos psicosociales para el beneficio de los trabajadores y la eficiencia empresarial.

### Revisión de literatura

La investigación sobre riesgos psicosociales laborales ha cobrado creciente interés en las últimas dos décadas, constituyéndose en un amplio campo de producción académica y aplicación práctica por parte de organizaciones y entidades gubernamentales (Neffa, 2020). Si bien existen múltiples definiciones y enfoques teóricos para abordar esta temática, la Organización Internacional del Trabajo (2016, p.2) los conceptualiza como "aquellas interacciones entre el trabajo, su medio ambiente, la satisfacción en el trabajo y las condiciones de su organización, por una parte, y por la otra, las

capacidades del trabajador, sus necesidades, su cultura y su situación personal fuera del trabajo".

Diversos autores coinciden en señalar que la exposición crónica a factores de riesgo psicosocial puede tener importantes consecuencias sobre la salud mental y física de los trabajadores, observándose mayores tasas de ausentismo, rotación de personal, disminución de la satisfacción laboral, aparición de enfermedades cardiovasculares, trastornos musculoesqueléticos y deterioro del bienestar general (Neffa, 2020; Siegrist & Li, 2016).

### Factores de riesgo psicosocial en el sector transporte

Múltiples investigaciones a nivel internacional han examinado la presencia de factores psicosociales nocivos entre trabajadores del transporte terrestre y operadores logísticos. Giorgi et al. (2018) identificaron altos niveles de estrés laboral y burnout entre transportistas italianos, asociándolos significativamente a los turnos rotativos, extensas jornadas de trabajo, sobrecarga de tareas y bajo soporte organizacional. Otros estudios, como el de García-Calvo et al. (2007), se estableció que los conductores de autobús urbano presentaron niveles elevados de estrés, ansiedad y depresión. Estos resultados sugieren que la exposición a riesgos psicosociales en el trabajo de transporte puede tener un impacto negativo en la salud mental de los trabajadores.

La amplia mayoría de las investigaciones en este sector se han focalizado en el análisis de factores intralaborales, existiendo aún vacíos importantes respecto a la evaluación de riesgos psicosociales extralaborales y su interrelación (Gutiérrez-Herrera, 2022). En esta línea, algunos autores comienzan a destacar la relevancia del apoyo familiar y social como variable protectora de la salud mental en una ocupación signada por la movilidad geográfica y los extensos periodos lejos del hogar (Cendales, 2021; Giorgi et al., 2020).

Entre los principales efectos derivados de estos factores de riesgo, se ha documentado un incremento en trastornos gastrointestinales y enfermedades cardiovasculares entre transportistas, como consecuencia de los malos hábitos alimentarios, el sedentarismo y los ritmos de trabajo extenuantes propios de la actividad (Bigert et al., 2016).

Asimismo, las altas exigencias emocionales, la continua rotación de tareas y los problemas en la

organización del trabajo exacerbaban el estrés psicológico, la fatiga crónica y el desgaste profesional entre estos operadores (De Geus et al., 2008).

### **Investigaciones con trabajadores del transporte terrestre en Colombia.**

En el ámbito nacional, distintos estudios coinciden en advertir sobre la presencia de una variedad de factores psicosociales nocivos entre trabajadores del transporte público y empresas de carga por carretera. Rodríguez-Muñoz, et al., (2022) detectó una asociación significativa entre varios dominios psicosociales críticos (altas demandas cuantitativas, bajo control y recompensas limitadas) con los niveles de compromiso organizacional reportados por transportistas de una empresa privada de Lima. Resultados similares fueron descritos en investigaciones con conductores del servicio público en Manizales (Gutiérrez-Herrera, 2022) y otro estudio que estableció la relación entre los factores intralaborales y la satisfacción laboral de los empleados de una empresa de servicios en Medellín (López-González, 2020).

Si bien la mayoría de estudios existentes se enfocan exclusivamente en factores intralaborales, algunos autores nacionales comienzan a destacar la influencia del contexto extra-laboral y su impacto en la salud mental de los trabajadores (Martínez-Sánchez, 2019). No obstante, aún son escasos los análisis integrales y sistemáticos de ambas esferas (intralaboral y extralaboral) y su interrelación en la configuración de entornos psicosociales más o menos saludables para estos trabajadores.

Recientemente, la Resolución 2764 de 2022 del Ministerio de Trabajo brindó orientaciones y herramientas estandarizadas para evaluar y prevenir factores de riesgo psicosocial en empresas colombianas, alineando los requerimientos locales con estándares internacionalmente validados. No obstante, se requieren más investigaciones que adapten las directrices allí propuestas a las necesidades y realidades particulares de trabajadores en diferentes sectores económicos y zonas geográficas del país.

### **Justificación y vacíos de investigación sobre riesgos psicosociales en el transporte terrestre.**

Son aún escasos los estudios que aborden integralmente la relación e influencia recíproca entre condiciones psicosociales intra y extralaborales sobre la salud mental, física y

desempeño de trabajadores en el sector transporte, tanto en Colombia como en Latinoamérica. Esta ausencia de comprensión holística limita el diseño de intervenciones organizacionales y políticas públicas que aborden eficazmente los factores de mayor incidencia sobre el bienestar de esta creciente población trabajadora.

Asimismo, no se dispone de investigaciones focalizadas en la región amazónica colombiana que analicen los factores de riesgo psicosocial prevalentes entre empresas y trabajadores vinculados la prestación de servicios de transporte terrestre de pasajeros y carga. Las particulares condiciones geográficas, ambientales, sociales y laborales bajo las cuales operan estas organizaciones en dicha zona del país probablemente conlleven desafíos psicosociales específicos aún no explorados por la comunidad científica nacional.

Atendiendo a estas brechas y necesidades de investigación anteriormente descritas, el presente estudio se plantea como objetivo caracterizar la presencia de factores de riesgo psicosocial intra y extralaboral en trabajadores de una empresa de transporte terrestre del Caquetá, analizando similitudes y diferencias entre perfiles ocupacionales. Se espera generar evidencia actualizada que permita orientar programas organizacionales de salud ocupacional y bienestar laboral, así como políticas públicas sectoriales, adaptadas a la realidad local de esta región.

### **Metodología**

La metodología adoptada para este estudio se alinea con los requerimientos de la Resolución 2764 de 2022 (Ministerio del Trabajo, 2022), que proporciona directrices para evaluar y manejar los riesgos psicosociales en el trabajo. El diseño de la investigación incluyó tanto un enfoque cuantitativo como cualitativo para abordar de manera integral los factores de riesgo psicosociales. Esta resolución establece que la evaluación debe realizarse en tres etapas:

**Etapas de identificación:** En esta etapa se identifican los factores de riesgo psicosocial presentes en la empresa a partir del nivel de riesgo ya sea bajo, medio, alto, muy alto.

**Etapas de evaluación:** En esta etapa se evalúa la magnitud de los factores de riesgo identificados de acuerdo a su prioridad.

**Etapla de intervención:** En esta etapa se establecen las medidas de intervención para controlar los factores de riesgo.

De esta manera, la investigación se desarrolló así:

### Etapla de identificación

En la etapa de identificación, se utilizó una metodología que incluyó la aplicación de una encuesta a los trabajadores, así como la realización de entrevistas a los directivos de la empresa.

La encuesta se aplicó a una muestra representativa de los trabajadores de la empresa. La encuesta incluyó preguntas sobre los factores de riesgo psicosocial identificados en la Resolución 2764 de 2022.

Las entrevistas se realizaron a los directivos de la empresa para obtener información sobre la organización del trabajo, las condiciones laborales y las relaciones laborales.

### Etapla de evaluación

En la etapa de evaluación, se utilizó la Batería de Instrumentos para la Evaluación de Factores de Riesgo Psicosocial, adoptada por la Resolución 2764 de 2022.

La Batería de Instrumentos incluye dos instrumentos:

Instrumento de evaluación de factores de riesgo psicosocial: Este instrumento permite evaluar la magnitud de los factores de riesgo psicosocial identificados en la etapa de identificación.

Instrumento de evaluación de efectos de los factores de riesgo psicosocial: Este instrumento permite evaluar los efectos de los factores de riesgo psicosocial en la salud de los trabajadores.

### Muestra

La muestra de trabajadores evaluados fue de 50 personas, que representan el 92.6% de la población trabajadora de la empresa, pues 4 personas no respondieron la encuesta. La muestra se dividió en dos grupos de trabajo:

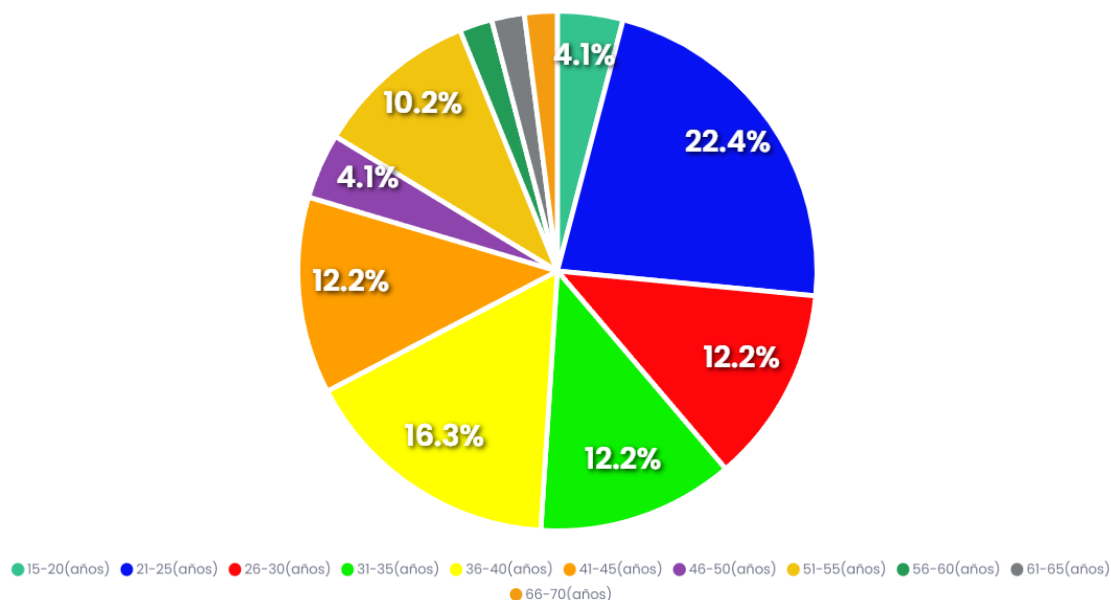
Grupo INTRALABORAL A: Trabajadores profesionales y directivos, con 6 personas.

Grupo INTRALABORAL B: Trabajadores operativos y/o asistenciales, con 44 personas.

Las áreas evaluadas fueron: administrativos (20 personas), Isleros (11 personas) y Taquilleros (19 personas)

### Resultados y discusión

La muestra de trabajadores que participaron en el estudio estuvo conformada por 50 personas, de las cuales el 41.7% eran mujeres y el 58.3% hombres. Las edades de los participantes oscilaron entre los 15 y 70 años, siendo los grupos etarios más representados el de 21 a 25 años (22.45%) y el de 26 a 30 años (12.24%). Ver figura 1.



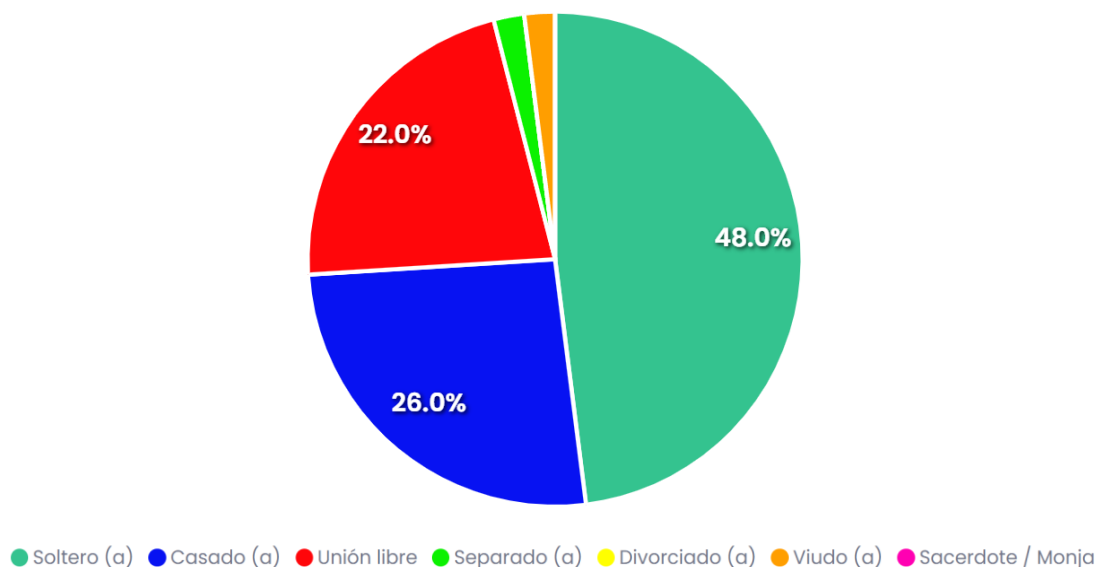
**Figura 1.** Cantidad de personas por edad (en años)



Esta distribución etaria coincide con el perfil joven de la fuerza laboral en el sector transporte terrestre hallada en otros estudios (Useche et al., 2017). La alta proporción de trabajadores menores de 35 años puede deberse a las prolongadas jornadas y las exigencias físicas de

la actividad de conducción, que dificultan la permanencia de los trabajadores de mayor edad.

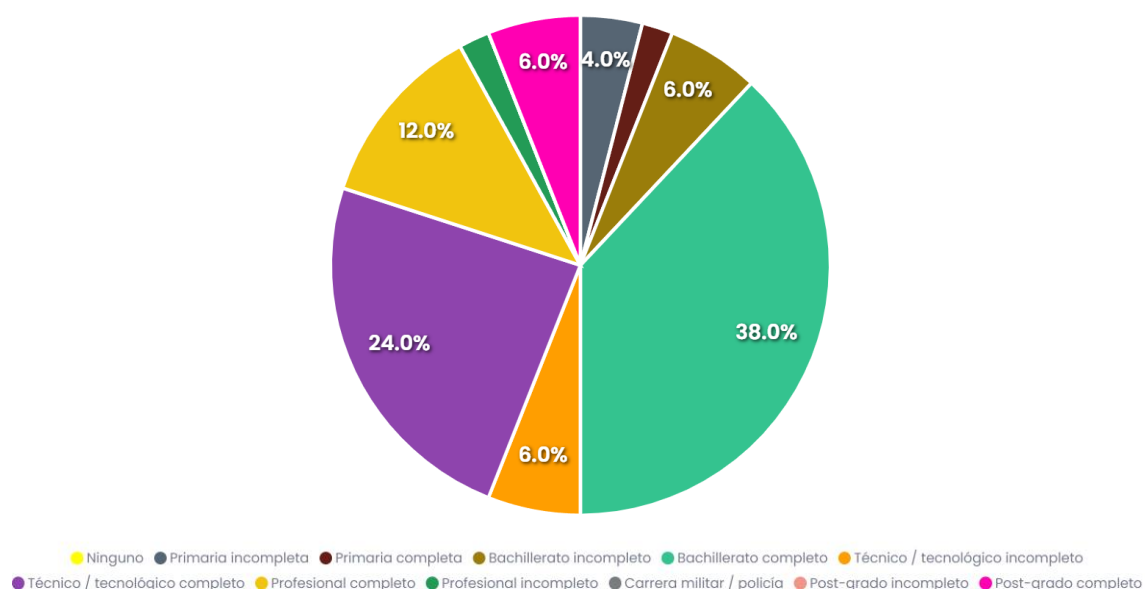
En cuanto al estado civil, la mitad de los participantes reportó ser soltero (50%), mientras que el 27.1% indicó estar casado o viviendo en unión libre. Ver figura 2.



**Figura 2.** Cantidad de personas por estado civil.

Este predominio de trabajadores solteros podría atribuirse a los extensos periodos lejos del hogar que caracterizan la actividad de transporte terrestre de carga y pasajeros.

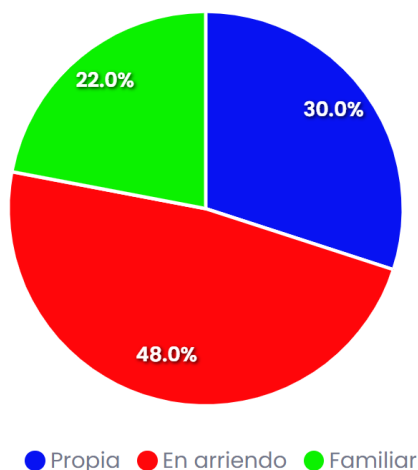
La mayoría de los participantes poseía como máximo nivel educativo alcanzado el bachillerato completo (35.4%), seguido por educación técnica completa (25%). Solo el 12.5% reportó tener educación profesional (Ver figura 3).



**Figura 3.** Cantidad de personas por nivel de educación.

Por otro lado, el 50% de los participantes indicó vivir en arriendo, el 29.2% en casa propia y el 20.8% en casa familiar. (Ver figura 4). La alta proporción de trabajadores que no cuenta con

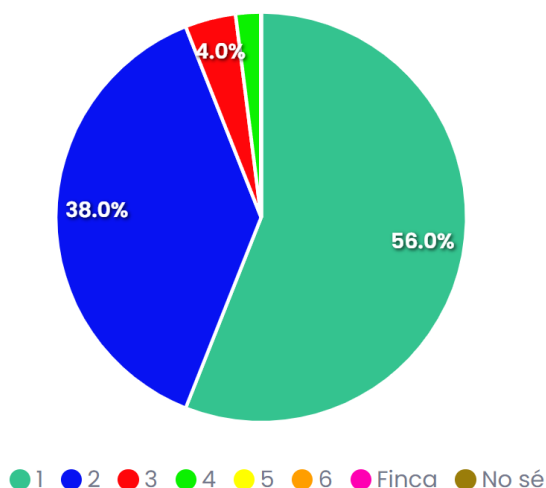
vivienda propia probablemente se encuentre relacionada con los bajos salarios y la informalidad laboral que afecta al sector (Chaparro & Guerrero, 2001)



**Figura 4.** Personas por tipo de vivienda

Asimismo, la cantidad de personas a cargo de los participantes fluctuó entre 1 (41.7% de los casos) y 5 (4.2%). En cuanto al estrato socioeconómico, la mitad se ubicó en el estrato 1, el 39.6% en el estrato 2 y apenas el 4.2% en estrato 3 o

superiores. (Ver figura 5). Estas características sociodemográficas evidencian las precarias condiciones socioeconómicas que enfrenta esta población trabajadora.



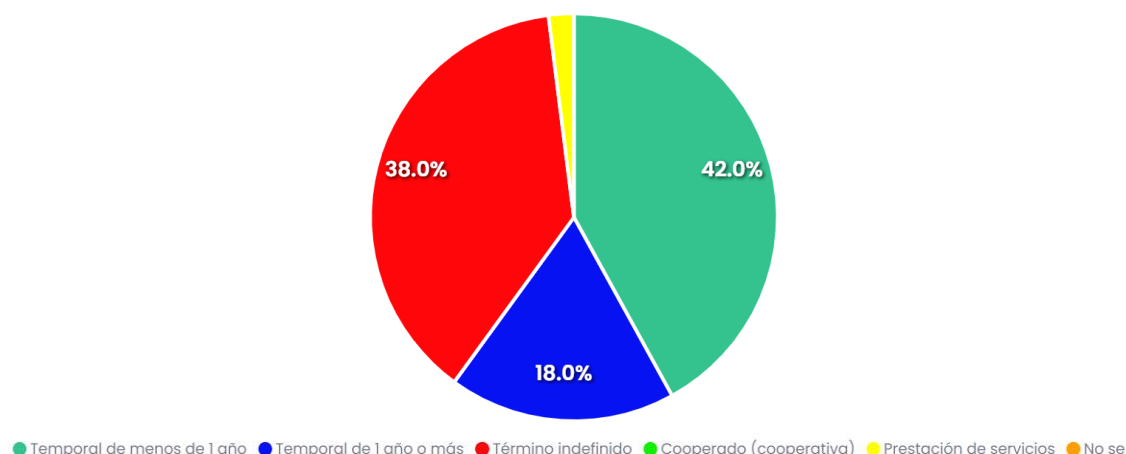
**Figura 5.** Cantidad de personas por estrato.

Respecto a las características laborales, la mayor parte de los trabajadores (61.1%) reportó una antigüedad en la empresa menor a 5 años. Esta corta permanencia en el empleo podría deberse a los riesgos e inestabilidad propios del sector transporte, especialmente entre las pequeñas y medianas empresas (Chaparro & Guerrero, 2001).

Según el tipo de cargo, el 41.7% de los participantes se desempeña como auxiliar o asistente, el 39.6% como operario, el 10.4% en

cargos de jefatura y el 8.3% en cargos profesionales.

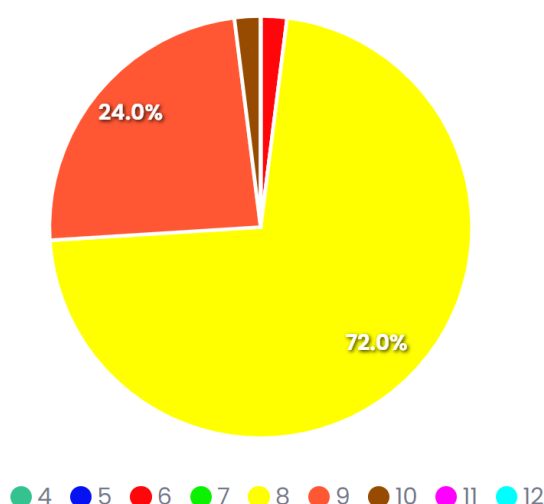
La mayoría de los participantes (63%) lleva menos de 5 años en su cargo actual. Asimismo, el 41.7% posee contrato laboral temporal menor a 1 año y el 29.2% indefinido. (ver figura 6). La alta rotación laboral probablemente se encuentre relacionada con la tercerización de servicios y la fluctuación en la demanda que afrontan muchas empresas de transporte terrestre (Chaparro & Guerrero, 2001).



**Figura 6.** Cantidad de personas por tipo de contrato.

El tipo de salario predominante es fijo, reportado por el 95.8% de los casos. La jornada laboral predominante entre los participantes es de 8

horas (70.8% de los casos); sin embargo, aproximadamente una cuarta parte (25%) declaró trabajar 9 horas diarias. (Ver figura 7).



**Figura 7.** Cantidad de personas según horas de trabajo.

Si bien la legislación laboral establece límites a la jornada de trabajo en el sector, estos datos evidencian extensas jornadas que superan las 8 horas diarias.

En síntesis, el perfil sociodemográfico y ocupacional de la muestra coincide con resultados descritos en la literatura sobre las precarias condiciones laborales que caracterizan el sector transporte terrestre en Colombia y la región, especialmente entre pequeñas y medianas empresas. Entre los principales problemas se destacan: bajo nivel educativo, empleo informal, altos niveles de rotación, extensas jornadas de trabajo, escasos periodos de descanso e inestabilidad laboral (Chaparro & Guerrero, 2001; Useche et al., 2017).

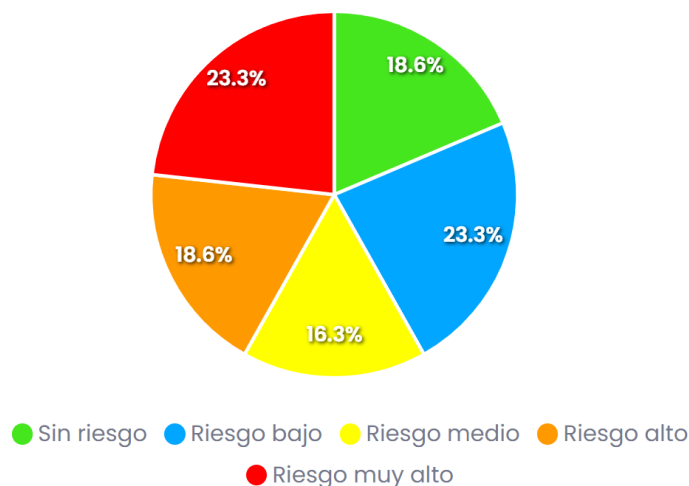
### **Análisis de prevalencia de riesgo psicosocial.**

Al analizar la prevalencia de riesgo psicosocial intralaboral por dominios en el grupo de trabajadores operativos y auxiliares (Grupo B), se encontró que las mayores prevalencias de riesgo alto y muy alto se presentaron en:

Control sobre el trabajo (riesgo muy alto 23.3%; alto 14%) (Figura 8)

Demandas del trabajo (riesgo muy alto 32.6%; alto 25.6%) (Figura 9)

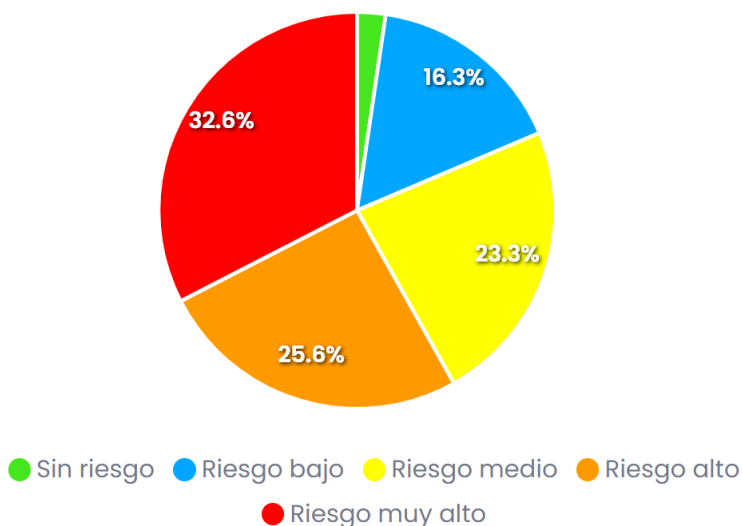
Control y autonomía sobre el trabajo (riesgo muy alto 23.3%; alto 7%) (Figura 11)



**Figura 8.** Dominio Control sobre el trabajo.

La alta prevalencia de riesgo asociada al escaso control y autonomía sobre el trabajo probablemente se encuentre relacionada con la naturaleza del trabajo operativo en el transporte

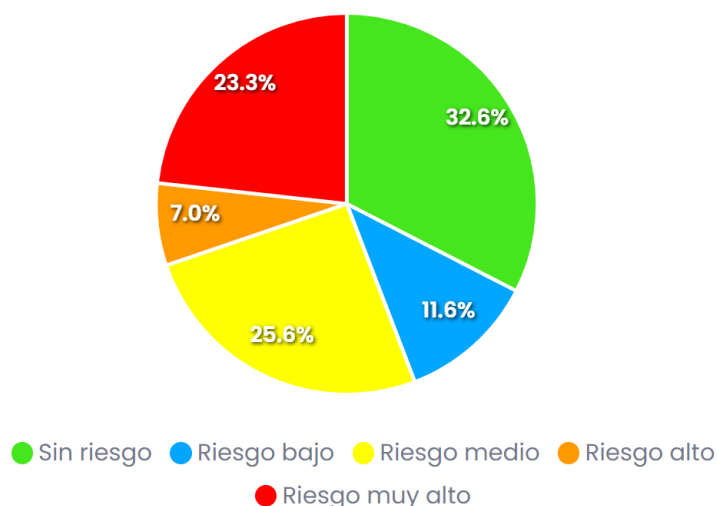
terrestre, generalmente caracterizado por tareas repetitivas, monótonas, con estrictos protocolos y mínima participación de los trabajadores en la toma de decisiones.



**Figura 9.** Dominio Demandas de trabajo.

Las extenuantes jornadas laborales con insuficientes pausas y descansos compensatorios explicarían, al menos parcialmente, el hallazgo de altas demandas cuantitativas y emocionales

del trabajo entre estos operarios y auxiliares. Estudios previos destacan este factor como uno de los principales problemas de salud ocupacional en el sector (Useche et al., 2017).



Factor de riesgo

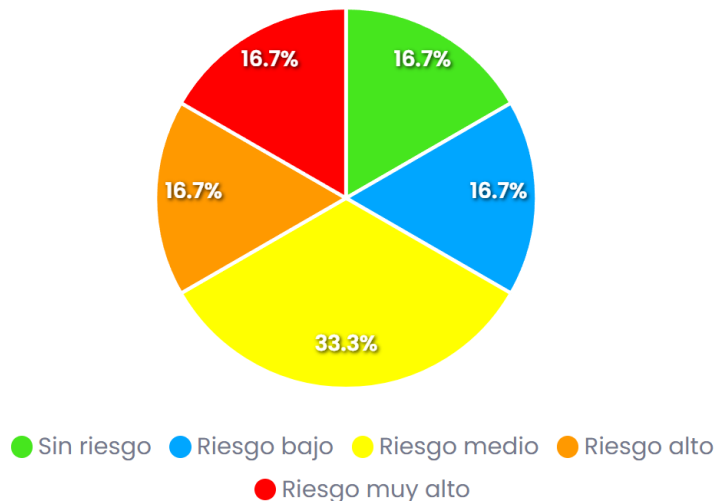
**Figura 10.** Dominio Control y autonomía sobre el trabajo.

Por su parte, los bajos niveles de claridad de rol hallados podrían deberse a deficiencias en los procesos de inducción y entrenamiento de los nuevos trabajadores, así como una limitada supervisión y retroalimentación por parte de los mandos medios, tal como se ha descrito en otros estudios (Chaparro & Guerrero, 2001).

Ahora bien, en el grupo de trabajadores profesionales y directivos (Grupo A), los principales dominios con prevalencia de riesgo alto fueron:

Demandas emocionales (riesgo alto 16.7%) (Ver figura 11).

Reconocimiento y compensación (riesgo alto 33.3%) (Ver figura 12).



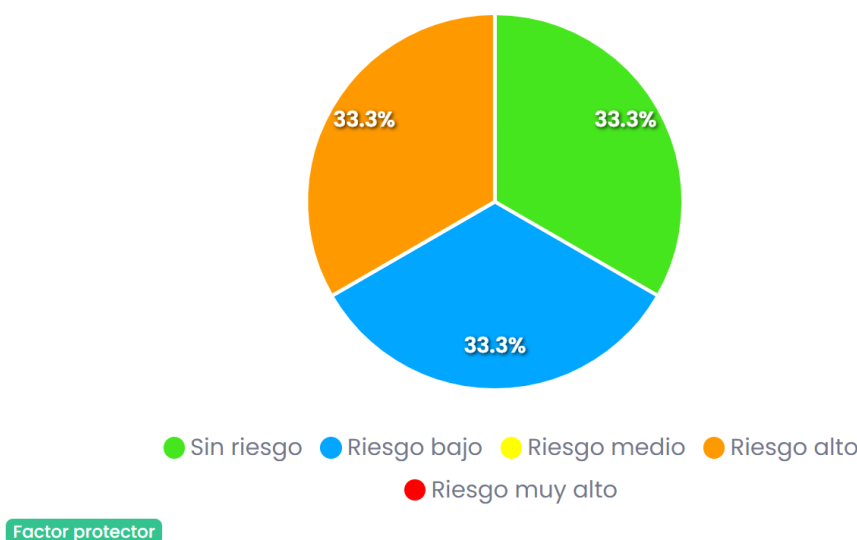
Factor de riesgo

**Figura 11.** Demandas emocionales.

La exposición a altas demandas emocionales probablemente se relacione con la responsabilidad por la seguridad de pasajeros y bienes, el cumplimiento de estrictos itinerarios,

el manejo de imprevistos, así como la gestión de equipos de trabajo bajo condiciones variables y estresantes que suelen afrontar supervisoras, jefes de operaciones y directivos del sector.





**Figura 12.** Reconocimiento y compensación.

Por su parte, la insuficiente compensación y reconocimiento percibidos podrían deberse a los bajos salarios que históricamente han afectado al sector transporte, el predominio de esquemas de remuneración fija que no retribuyen adecuadamente las horas extra, así como a sistemas de ascenso y progresión de carrera poco transparentes y meritocráticos.

Al evaluar la prevalencia de riesgo psicosocial extralaboral por dominios, se halló que en el grupo de operativos y auxiliares (Grupo B) los dominios críticos fueron:

Comunicación y relaciones interpersonales (riesgo muy alto 25.6%; alto 14%)  
 Características de la vivienda y su entorno (riesgo muy alto 25.6%; alto 32.6%)  
 Influencia del entorno extralaboral sobre el trabajo (riesgo muy alto 30.2%; alto 23.3%)

La precaria situación económica, las extensas jornadas y los continuos viajes que caracterizan la actividad del transporte terrestre inciden negativamente sobre las relaciones familiares y sociales de los trabajadores de este sector, generando conflicto de roles, estrés, problemas de pareja y baja calidad de las interacciones en el hogar, resultados que coinciden con lo descrito por García-Calvo, M., et. al (2007).

Las deficientes condiciones de las viviendas y del entorno habitacional también han sido previamente documentadas entre esta fuerza laboral, vinculadas a los bajos ingresos y la movilidad geográfica. Finalmente, la influencia negativa del contexto extra laboral sobre el trabajo probablemente se explique por el conflicto trabajo-familia ante las extensas

jornadas y periodos fuera del hogar ya descritos, así como la ausencia de redes de apoyo y problemas económicos y familiares que perturban el desempeño y concentración de los trabajadores.

Mientras que en el grupo de profesionales y directivos (Grupo A), el riesgo extralaboral alto se presentó en la situación económica del grupo familiar (50% de prevalencia). Si bien los directivos y profesionales cuentan con mejores condiciones laborales en términos de estabilidad e ingresos, aún enfrentan problemas económicos vinculados a los bajos salarios del sector, tal como ha sido previamente descrito (Chaparro & Guerrero, 2001).

Al evaluar conjuntamente el riesgo intralaboral y extralaboral, en los operativos y auxiliares el 30.2% presentaba riesgo muy alto y el 27.9% riesgo alto. Entre los profesionales y directivos, la mitad (50%) presentaba riesgo alto y un 33.3% riesgo medio.

Estos resultados coinciden con los hallazgos de Salas, C., & Meliá, J. L. (2004) en relación al predominio del riesgo psicosocial entre los trabajadores operativos, aunque también se identificó una importante prevalencia entre directivos, supervisores y profesionales. La exposición diferenciada por grupos ocupacionales probablemente refleje las distintas condiciones y medioambiente psicosocial al que se enfrentan estos perfiles de trabajadores en la empresa.

Los principales efectos sobre la salud derivados de la exposición a estos riesgos psicosociales incluyen problemas gastrointestinales,

cardiovasculares, respiratorios, endocrinos y mentales. Entre ellos se destaca la presencia de estrés, ansiedad, depresión, aislamiento social y conflictos familiares (Chaparro & Guerrero, 2001; Useche et al., 2017).

El estrés laboral crónico tiene implicaciones fisiológicas y emocionales sobre los trabajadores, aumenta la vulnerabilidad a adquirir enfermedades infecciosas y reduce la resistencia del organismo a diversas patologías (Useche et al., 2017).

Por su parte, la depresión y la ansiedad que suele derivarse del desequilibrio entre exigencias laborales y familiares tiene un impacto nocivo sobre el sistema cardiovascular e inmunológico, afectando de manera integral la salud de los trabajadores (Chaparro & Guerrero, 2001).

Los trastornos gastrointestinales también son frecuentes debido a los malos hábitos alimentarios que se ven obligados a seguir los trabajadores por las pocas opciones existentes durante los viajes. Finalmente, los conflictos en el entorno familiar suelen incrementar el

ausentismo laboral afectando la productividad de las empresas (Huamaní, 2021).

La identificación temprana y control de los factores de riesgo en este tipo de empresas cobra especial importancia dado el impacto sobre la accidentalidad y la seguridad vial ampliamente documentado en la literatura científica. Investigaciones previas han demostrado que la fatiga, alteraciones del sueño, depresión y ansiedad se asocian fuertemente a mayor ocurrencia de incidentes y accidentes de tránsito entre conductores profesionales (García et al., 2012; Morrow & Crum, 2004).

Los largos periodos de conducción y las deficientes condiciones laborales propician la aparición de la fatiga, que a su vez deteriora las funciones cognitivas y motoras de los conductores, aumentando la frecuencia de errores, fallos de atención y tiempos de reacción, con el consecuente incremento del riesgo de accidentalidad.

A nivel general de la empresa, el comparativo de niveles de riesgos por factores se evidencia en la tabla 1.

**Tabla 1.**  
*Comparativa de los niveles de riesgo.*

#	Factor Intralaboral	Factor Extralaboral	Factor Estrés
<b>General A</b>	Riesgo muy alto	Riesgo medio	Riesgo bajo
<b>General B</b>	Riesgo medio	Riesgo alto	Riesgo alto
<b>REPORTE AREA ADMINISTRATIVA</b>			
<b>Tipo evaluación A</b>	Riesgo muy alto	Riesgo medio	Riesgo bajo
<b>Tipo evaluación B</b>	Riesgo medio	Riesgo alto	Riesgo alto
<b>REPORTE AREA TAQUILLEROS</b>			
<b>Tipo evaluación B</b>	Riesgo medio	Riesgo alto	Riesgo alto
<b>REPORTE AREA ISLEROS</b>			
<b>Tipo evaluación B</b>	Riesgo alto	Riesgo alto	Riesgo alto

En la tabla se muestra una comparativa de los niveles de riesgo en 3 factores (intralaboral, extralaboral y estrés) para diferentes grupos de trabajadores. En el reporte general del Grupo A (profesionales y directivos), el factor intralaboral presenta riesgo muy alto, el extralaboral riesgo medio y el de estrés riesgo bajo. Esto indica que las principales fuentes de riesgo psicosocial para este grupo se ubican en el ámbito laboral interno.

Para el Grupo B (operarios y auxiliares) en el reporte general, el factor intralaboral está en riesgo medio, el extralaboral en alto y el de estrés también en alto. Es decir, que a diferencia del grupo anterior, en estos trabajadores operativos las mayores fuentes de riesgo están en las

condiciones externas al trabajo y en los niveles de estrés.

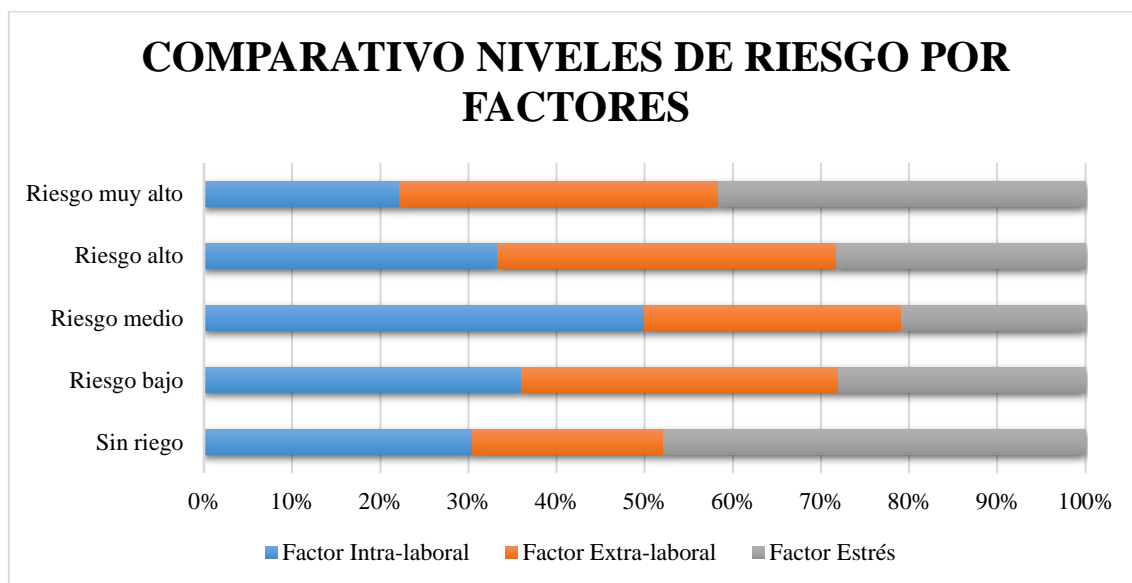
Comparando ambos grupos se concluye que: los directivos y profesionales presentan un mayor riesgo intralaboral, mientras que los operarios tienen más riesgo en factores extralaborales y estrés.

En las áreas específicas evaluadas (administrativa, taquilleros e isleros) se observa que el factor estrés resulta alto en todos los casos, demandando intervenciones en esta dimensión.

Finalmente, en el comparativo de niveles de riesgo por factores (ver figura 13), se puede evidenciar que los resultados sugieren que la

empresa tiene un problema importante con los riesgos psicosociales en el trabajo. El factor intralaboral es el factor con el mayor nivel de riesgo, lo que indica que la organización del

trabajo, las condiciones laborales y la cultura organizacional están contribuyendo a la exposición de los trabajadores a riesgos psicosociales.



**Figura 13.** Comparativo de niveles de riesgo por factores.

El factor estrés es el segundo factor con mayor nivel de riesgo. Esto puede estar relacionado con las exigencias laborales, las relaciones interpersonales en el trabajo y la carga de trabajo.

El factor extralaboral es el factor con el menor nivel de riesgo. Sin embargo, es importante tener en cuenta que los factores extralaborales también pueden contribuir a la exposición de los trabajadores a riesgos psicosociales.

Entre las principales estrategias de intervención orientadas a controlar los factores de riesgo psicosocial identificados y mitigar sus efectos sobre la salud y seguridad de los trabajadores, se recomiendan las siguientes medidas, coincidentes con las propuestas de estudios previos (Chaparro & Guerrero, 2001; Useche et al., 2017):

- Establecer pausas activas y descansos obligatorios durante los recorridos y la conducción.
- Implementar programas de vigilancia epidemiológica de accidentes de tránsito y factores de riesgo psicosocial asociados.
- Ofrecer capacitación en promoción de salud mental y prevención del estrés laboral dirigida a trabajadores, mandos medios y directivos.
- Facilitar actividades recreativas y de esparcimiento orientadas a mejorar las

relaciones interpersonales y el apoyo social entre compañeros.

- Proveer asistencia profesional para la resolución de conflictos y el mejoramiento de la dinámica familiar de los empleados.
- Promover sistemas de trabajo con mayor autonomía, participación en la toma de decisiones y oportunidades para el crecimiento de los operarios.
- Diseñar e implementar programas integrales de salud ocupacional, bienestar laboral y calidad de vida en el trabajo, acordes a las condiciones y necesidades específicas del sector transporte.

Por otra parte, dada su ubicación geográfica, las empresas y trabajadores del transporte terrestre en la región amazónica se enfrentan a una serie de factores ambientales y condiciones de trabajo diferenciadas que podrían incidir en su bienestar y salud ocupacional. Los largos recorridos a través de la selva, con escasa infraestructura vial, la presencia de grupos armados al margen de la ley y el difícil acceso a servicios de salud en amplias zonas del territorio configuran un contexto que exacerba los riesgos psicosociales para esta población trabajadora.

Si bien aún no se disponen de investigaciones locales que exploren en detalle esta problemática en la región amazónica colombiana, estudios en grupos étnicos y trabajadores del sector rural dispersos geográficamente permiten prever la

presencia de necesidades particulares. Entre ellas, cobran especial relevancia los bajos niveles educativos, las fragilidades económicas y relacionales derivadas del desarraigo familiar, el conflicto de roles, la baja calidad de vida y el limitado acceso a servicios de salud y saneamiento básico.

Las iniciativas de prevención e intervención de los factores psicosociales en las empresas de transporte terrestre de la región amazónica deben adaptarse cuidadosamente a las particularidades culturales, demográficas y laborales que caracterizan sus operaciones en esta área del país, evitando la simple extrapolación de medidas diseñadas para entornos urbanos.

Se requiere un trabajo coordinado entre las administraciones municipales, las autoridades indígenas y líderes comunitarios, las organizaciones no gubernamentales, las iglesias y agrupaciones sociales presentes en los territorios, y las propias empresas de transporte terrestre, para identificar prioridades, expectativas y propuestas de acción que permitan garantizar condiciones de trabajo más saludables, seguras y sostenibles.

También es clave articular con las entidades gubernamentales que financian y construyen las redes viales en áreas rurales dispersas, como es el caso del Inviás en Colombia, para incorporar la promoción de entornos psicosociales laborales saludables como un objetivo integral de estos macro-proyectos de infraestructura que expanden la conectividad en las regiones.

### Fortalezas y limitaciones

La principal fortaleza del estudio reside en la utilización de instrumentos estandarizados y en plena concordancia con los requerimientos normativos vigentes para la evaluación de factores de riesgo psicosocial en Colombia. El uso de una metodología cuantitativa, complementada con técnicas cualitativas, permite realizar una caracterización integral de las condiciones de salud ocupacional percibidas por los propios trabajadores de la empresa.

Asimismo, la comparación entre perfiles ocupacionales posibilita identificar necesidades diferenciadas y discutir los resultados a la luz de las especificidades del trabajo operativo en el sector transporte terrestre. Otra fortaleza radica en la discusión articulada de los hallazgos con la evidencia disponible en la literatura científica nacional e internacional.

La principal limitación se relaciona con el reducido tamaño muestral concentrado en una única empresa, que restringe la posibilidad de generalizar los resultados. Si bien la muestra evaluada representa la gran mayoría del personal de esta compañía, se requiere extender este tipo de estudios a nivel regional involucrando distintas empresas y una cantidad más amplia de trabajadores para obtener perfiles válidos de la población trabajadora en el sector.

No obstante, el presente estudio entrega antecedentes confiables sobre la presencia de factores psicosociales que afectan la calidad de vida y salud mental de los trabajadores del transporte terrestre en esta región de Colombia. Investigaciones en esta línea permitirán orientar de forma efectiva las políticas públicas y prácticas organizacionales tendientes a la promoción de entornos laborales más seguros, saludables y productivos.

### Conclusiones

- Se identificaron factores de riesgo psicosocial tanto a nivel intralaboral como extralaboral en los trabajadores de la empresa de transporte evaluada, coincidiendo con estudios previos que reportan una alta prevalencia de estos riesgos en el sector.
- Los principales factores intralaborales críticos fueron las altas demandas psicológicas del trabajo, la baja claridad de rol, el escaso control y autonomía sobre tareas, y las limitadas oportunidades de crecimiento.
- Los factores extralaborales más relevantes se relacionaron con precarias condiciones económicas y habitacionales, problemas en las relaciones interpersonales y conflicto entre las exigencias laborales y familiares.
- Se evidenció mayor prevalencia de riesgo psicosocial entre los trabajadores operativos en comparación a los directivos y profesionales, demandando intervenciones diferenciadas según perfiles ocupacionales.
- La exposición prolongada a estos riesgos psicosociales puede desencadenar problemas de salud mental, física e incrementar la accidentalidad de los trabajadores, repercutiendo en su seguridad y productividad.
- Resulta prioritario que la empresa implemente medidas integrales de promoción de entornos laborales saludables, bienestar y calidad de vida en el trabajo, acordes a las demandas y condiciones

específicas del sector transporte terrestre de pasajeros y carga.

### Referentes Bibliográficas

- Bigert, C., Gustavsson, P., Hallqvist, J., Hogstedt, C., Lewné, M., Plato, N., ... & Schéele, P. (2003). Myocardial infarction among professional drivers. *Epidemiology*, 333-339.  
<https://www.jstor.org/stable/3703855>
- Chaparro, P. E., & Guerrero, J. (2001). Condiciones de Trabajo y Salud en Conductores de una Empresa de Transporte Público Urbano. *Revista de Salud Pública*, 3(2), 171-187. Retrieved January 10, 2024, from <https://acortar.link/8ZEolm>
- Cendales, L. (2021). *Riesgo psicosocial y estrategias de afrontamiento en trabajadores operativos de una terminal de transportes*. (Tesis de maestría), Universidad Nacional Abierta y a Distancia. Repositorio Institucional UNAD.
- De Geus, B., De Bourdeaudhuij, I., Jannes, C., & Meeusen, R. (2008). Psychosocial and environmental factors associated with cycling for transport among a working population. *Health education research*, 23(4), 697-708.
- García-Calvo, M., García-Hermosa, A., & De la Fuente, M. (2007). Evaluación de riesgos psicosociales en conductores de autobús urbano. *Revista Española de Salud Pública*, 81(4), 415-423.
- García, A. M., Cabrera, R. I., Monsalve, Á., & Morillo, L. D. R. (2012). Seguridad vial: Un problema de salud pública en Colombia y Latinoamérica. *Revista CES Salud Pública*, 3(2), 162-173.  
<https://hdl.handle.net/10495/8012>
- Gutiérrez-Herrera, D. A. (2022). *Análisis de la relación entre los factores intralaborales y el estrés de los colaboradores de EM*. Manizales, Colombia: Universidad de Manizales.
- Giorgi, G., Lecca, L. I., Alessio, F., Finstad, G. L., Bondanini, G., Lulli, L. G., Arcangeli, G., & Mucci, N. (2020). COVID-19-Related Mental Health Effects in the Workplace: A Narrative Review. *International journal of environmental research and public health*, 17(21), 7857.  
<https://doi.org/10.3390/ijerph17217857>
- Huamaní, J. (2021). *Condiciones de trabajo y satisfacción laboral en conductores de una empresa de transporte de carga con base en juliaca 2020*. (Tesis de maestría). Universidad Peruana Cayetano Heredia.  
<https://acortar.link/ojMgoT>
- López-González, M. P. (2020). *Relación entre los factores intralaborales y la satisfacción laboral de los empleados de una empresa de servicios*. Medellín, Colombia: Universidad de Antioquia.
- López-Hernández, C. E. (2021). *Factores psicosociales intralaborales y su impacto en la productividad de los trabajadores*. Bogotá, Colombia: Universidad Nacional de Colombia.
- Martínez-Sánchez, J. J. (2019). *Factores de riesgo psicosocial intralaborales y su impacto en la salud mental de los trabajadores*. Cartagena, Colombia: Universidad de Cartagena.
- Ministerio del Trabajo. (2022). *Resolución 2764 de 2022. Por la cual se adopta la batería de instrumentos para la evaluación de factores de riesgo psicosocial y se dictan otras disposiciones*. Diario Oficial de Colombia, 52.112.  
<https://observapsicosocialcol.com/resolucion-2764-de-2022/>
- Morrow, P. C., & Crum, M. R. (2004). Antecedents of fatigue, close calls and crashes among commercial motor-vehicle drivers. *Journal of Safety Research*, 35(1), 59-69.  
<https://doi.org/10.1016/j.jsr.2003.07.004>
- Neffa, J. C. (2020). *Los riesgos psicosociales en el trabajo: contribución a su estudio*. La Plata: Universidad Nacional de La Plata.
- Organización Internacional del Trabajo. (2016). *Riesgos psicosociales en el mundo del trabajo: un marco conceptual*. Ginebra, Suiza: OIT.
- Rodríguez-Muñoz, A., Díaz-Ferrándiz, M., & Rodríguez-Carmona, M. (2022). Factores de riesgo psicosocial en el sector del transporte por carretera: una revisión sistemática. *Revista de Psicopatología y Salud Mental*, 25(3), 263-274.
- Salas, C., & Meliá, J. L. (2004). Evaluación de riesgos psicosociales y factores psicosociales que afectan a la probabilidad de accidente en una empresa de transporte urbano. *Revista de Psicología del Trabajo y las Organizaciones*, 20(2), 155-175.
- Siegrist, J., & Li, J. (2016). Associations of Extrinsic and Intrinsic Components of Work Stress with Health: A Systematic Review of Evidence on the Effort-Reward Imbalance Model. *International journal of environmental research and public health*, 13(4), 432.  
<https://doi.org/10.3390/ijerph13040432>



DOI: <https://doi.org/10.34069/AI/2023.71.11.3>

How to Cite:

Shumakova, S., Gordeev, S., Nabokov, R., Buhaiova, V., & Borysova, A. (2023). The concept of the pilot project for the dual format of training specialists: directorial education. *Amazonia Investiga*, 12(71), 40-53. <https://doi.org/10.34069/AI/2023.71.11.3>

## The concept of the pilot project for the dual format of training specialists: directorial education

Режисерська освіта: концепція пілотного проєкту дуального формату підготовки фахівців

Received: September 16, 2023

Accepted: November 10, 2023

Written by:

**Svitlana Shumakova<sup>1</sup>** <https://orcid.org/0000-0002-2269-3149>**Sergey Gordeev<sup>2</sup>** <https://orcid.org/0000-0002-5654-0837>**Roman Nabokov<sup>3</sup>** <https://orcid.org/0000-0001-7276-3478>**Viktoriia Buhaiova<sup>4</sup>** <https://orcid.org/0000-0002-2534-5430>**Alina Borysova<sup>5</sup>** <https://orcid.org/0000-0003-3323-4463>


### Abstract


Considering global educational trends and strategies, the specialists of the Department of Directing at Kharkiv State Academy of Culture (KhSAC) are inspired by the experimental implementation of a dual-format professional training program in the field of Performing Arts (speciality 026). Such a precedent has not previously existed in directorial education in Ukraine. The introduction of the first educational-professional program in Ukraine, "Directing for Show and Art Projects", in 2023 is an innovative strategy for preparing professionals initiated by the Department of Directing at KhSAC, which can be considered the foundation for research and analysis of the possibility for implementing a pilot project for practice-oriented directorial education.


The research methodology is based on student-centered and competency-based approaches, principles of pedagogy concerning the determinism of theory and practice in the educational process, all directed within a systemic approach. The conceptualization of the pilot project involves a dual form of education alongside the analysis of the

### Анотація

З огляду на загальноосвітні освітні тренди і стратегії реформування освітнього середовища, фахівцями кафедри режисури Харківської державної академії культури (ХДАК) (професіоналами в царині мистецтва режисури) інспірується експериментальна організація дуального формату професійної освіти за спеціальністю 026 «Сценічне мистецтво» у фаховій режисерській підготовці. Прецеденту запровадження дуальної форми здобуття освіти за названою спеціальністю в Україні ще не було. Введення та затвердження в 2023 р. першої в Україні освітньо-професійної програми «Режисура шоу та артпроєктів» — інноваційної стратегії підготовки фахівців галузі сценічного мистецтва, започаткованої випускаючою кафедрою режисури ХДАК (однією з найстаріших творчих кафедр країни), можна вважати підґрунтям дослідницької аналітики можливості втілення пілотного проєкту практико-орієнтованої режисерської освіти. Методологічну основу дослідження складають студенто-орієнтований, компетентнісний підходи,

<sup>1</sup> PhD in Art Studies, Associate Professor, Kharkov State Academy of Culture, Kharkov, Ukraine.  WoS Researcher ID: HWQ-8023-2023

<sup>2</sup> PhD in Art Studies, Professor, Honored Artist of Ukraine, Head of the Department of Directing at the Academy of Arts, Kharkov State Academy of Culture, Kharkov, Ukraine.  WoS Researcher ID: HLP-5160-2023

<sup>3</sup> PhD in Art Studies, Associate Professor, Kharkov State Academy of Culture, Kharkov, Ukraine.  WoS Researcher ID: HKW-2713-2023

<sup>4</sup> PhD in Art Studies, Honored Cultural Worker of Ukraine Associate Professor, Kharkov State Academy of Culture, Kharkov, Ukraine.  WoS Researcher ID: JVO-4403-2024

<sup>5</sup> PhD in Pedagogical Sciences, Associate Professor, Kharkov State Academy of Culture, Kharkov, Ukraine.  WoS Researcher ID: AAI-4677-2020

standardization principles in training that envisages achievement of a new level of professional competence for competitive specialists. Methodological approaches and pedagogical modeling have been reproduced with the purpose of further development of educational standards and competency requirements that align with the descriptors of the National Qualifications Framework.

**Keywords:** innovation, concept, dual, form, education, labour market, pilot project, conceptualization, organizational structure, director, training of professionals, specialists, performing arts, professional training, standardization.

## Introduction

The new education paradigm in the context of contemporary socio-cultural challenges anticipates modernization of foundational principles for the achievement of a qualitatively new level of professional training, enhancing the level of competence for new era professionals able to meet the demands of the labour market and trends of the global educational system.

Today, reforming of the educational sphere in Ukraine has entered its most active phase, which can, without exaggeration, be considered a national achievement. From the inception of educational reforms, dual education (from Latin *dualis* — *double*) has emerged within the unified educational structure as a subject of particular attention — an educational approach that combines academic training with the acquisition of specific qualifications (on-the-job training at workplaces in institutions, organizations, enterprises of the professional sphere). The introduction of dual education naturally bridges theory with practice and is one of the most progressive forms of acquiring professional competence and educational development of learners, respectively preparing future competitive specialists for the labour market with its contemporary demands (Kharkiv State Academy of Culture, 2023; Buchynska et al., 2021; Buchynska et al., 2020; Ministry of Science and Education of Ukraine, 2021).

положення педагогічної науки про детермінізм теорії та практики в освітньому процесі, що скеровує представлений аналіз в руслі системного підходу. Концептуалізовано організаційні основи пілотного проєкту впровадження дуального формату в режисерську освіту та здійснено аналіз засад стандартизації підготовки фахівців за спеціальністю 026 «Сценічне мистецтво», що передбачає новий рівень професійної підготовки та фахової компетентності конкурентоспроможних режисерів, здатних відповідати сучасним запитам мистецького простору та ринку праці. Означено методологічні підходи і відтворено педагогічне моделювання з метою подальшої розробки освітнього стандарту й вимог до компетентностей і результатів навчання, що має узгоджуватися та відповідати дескрипторам Національної рамки кваліфікацій.

**Ключові слова:** нова освітня парадигма, дуальний формат освіти, вимоги ринку праці, пілотний проєкт, концептуалізація організаційних основ режисерської освіти, підготовка фахівців зі спеціальності 026 «Сценічне мистецтво», стандартизація фахової підготовки.

According to the National Doctrine for the Development of Education in Ukraine in the 21st century, the Strategy for the Development of Higher Education in Ukraine for 2023–2032, (Order No. 286, 2022), (Law of Ukraine 2145-VIII/2017, 2017), (Law of Ukraine 1556-VII, 2014), and other legislative documents, the enhancement of professional culture in the dimensions of professional competencies' mastery constitutes a substantial vector for the evolution of contemporary education. In the medium-term perspective, the dual model of education in Ukraine, poised to occupy a significant position, is perceived as a precondition for a considerable enhancement in the quality of labour resources' professional training that is demanded by a society.

The Ministry of Education and Science of Ukraine, in partnership with the Representation of the Friedrich Ebert Foundation, State Institution "Scientific-Methodological Centre for Higher and Vocational Pre-Higher Education", Ukrainian Marketing Association, and the Federation of Employers of Ukraine, is creating conditions for the proliferation of the dual form of education.

Within the framework of the system for training qualified personnel, initiatives to introduce the dual form of education in institutions of

vocational higher and pre-higher education have become relevant as an experiment conducted by the Ministry of Education and Science of Ukraine since (2019). By the decree of the MESU (Order No. 991, 2019), the composition of the participants in the experiment was altered, significantly expanding the list of educational institutions, specialties, and enterprise partners involved.

The objective of the experiment in Ukraine for the years 2019–2023 is the development of methodological approaches to the organization of dual system of education, which is constructively beneficial for both the educational system and professional prospects of students. The national context requires adaptation of the existing international experience to Ukrainian realities, precluding the creation of a unified approach to the organization of dual education system for all specialties (Ministry of Education and Science of Ukraine, 2022; Pieshkova, 2018).

The focus of the author's research interest is concentrated on the issues of professional training in the specialty 026 "Performing Arts" within the context of the increasing relevance of dual education. This approach identifies powerful motivational potential, increasing the employment prospects for future specialists by minimizing inconsistencies and bridging the gap between the production and educational sectors in the training of professional personnel.

In the professional training by specialty 026 "Performing Arts", within the context of the discussed theme of dual education, there are certain contradictions between:

- the objective societal need for modern professional adaptation of future specialists and the actual state of complete absence of any development in this aspect of the problem pertaining to the professionally-focused dual format of education in the training of specialists for the field of performing arts;
- the potential possibilities of the educational process for professional adaptation of future specialists in the field of performing arts within the framework of dual education through the joint interaction of higher educational institutions and cultural-artistic organizations and institutions, and the current absence of effective methods for their implementation.

Consequently, at present, the full implementation of a dual form of education in the professional

training of future specialists in the field of performing arts is complicated by a series of circumstances.

Firstly, the issue concerns the lack of development in the organizational and methodological foundations for implementing practical part of professional training (i.e., on the basis of the educational institution); secondly, it involves the ambiguity in defining the proportional parameters of theoretical and practical components in professional training; thirdly, identified causes for the difficulties in implementing the dual education system are absent; and fourthly, there is uncertainty in the mechanisms of its implementation, which overall unfolds the integrity of the problem field components.

The purpose of the presented scientific exploration is to analyse and forecast the strategies for implementing a dual education system (defined by the Verkhovna Rada of Ukraine as one of the main forms and a priority direction for the development of higher education in the country) to the professional training of personnel in the field of performing arts that enables perpetual renewal of the content of professional education, adaptation to changes in labour market, enhancement of professional level of specialists with contemporary thinking, motivated to attain their own creative and business goals.

## Literature Review

The analysis of contemporary scientific research indicates that the proposed theme of dual-format professional training in the specialty 026 "Performing Arts" remains completely unexplored in the scientific discourse — there has not even been an attempt to formulate a similar problem, necessitating its comprehensive study. Dual education, as a complexly structured scientific problem, predominantly resides in the focus of foreign scientific research explorations, only beginning to gain attention in domestic theoretical developments. Among the relevant scientific publications that do not expand the thematic research horizon of dual education issues, it is important to distinguish works that interpret the dual format both in terms of its significant advantages and certain drawbacks, as well as those that substantiate the specifics of its implementation.

In the study "Ready? Steady? Grow! Readiness for Participating in Learning in Dual Education" by J. De Groof, E. Daniels, D. Gijbels, E. Kyndt,

B. Wille, and P. Van den Bossche, it is emphasized that workplace learning within the framework of dual education should attract heightened attention, as this form of education actualizes the issue of youth unemployment and enhances the individual employment of young professionals. The work accentuates the problem of learners' readiness to make a decision regarding dual learning, and it is determined that readiness to participate in workplace learning remains practically minimal. The research is aimed at distinguishing criteria for assessing: readiness to participate in dual education; current approaches to the introduction of dual education in the context of "maturity and readiness to participate in workplace learning", "motivation for readiness for workplace learning", and "clusters of competencies related to workplace learning" (De Groof et al., 2022).

The rationale for the orientation of dual education is found in the work "The dual training, a new approach to vocational education and training" by I. Molina, which posits that long-term youth unemployment in our country currently remains at a high level, as does the overall unemployment rate. Despite efforts in accordance with the recommendations of the European Union to create a system of vocational education with an integrative approach to learning, this goal's achievement is still in the future. The problem is concluded in the inefficiency of the vocational education system and integrative learning. A crucial prerequisite for the effectiveness of vocational education and the employment of young specialists is that the vocational training system must originate from the labour market itself. Companies can identify the real needs in training and the competencies that future specialists need to acquire (Molina, 2016).

In the work "Dual education – Pupils enforcement in the Slovak Practice" by F. Olsavsky and S. Trel'ova, a range of problems associated with the implementation of dual learning in the educational process is illuminated. It is proved that many organisations emphasize the lack of suitable candidates for open positions amid a relatively high level of unemployment. The authors identify the needs of employer companies and reveal the issue of certain enforced employment involvement present in the dual education system (with coercion considered from various perspectives). The authors comprehensively highlight a series of limitations caused by dual education, as well as its advantages (Olsavsky & Trel'ova, 2016).

In the publication "Implementation of Dual Education Elements into Electrical Engineers Training" by S. Soshenko, K. Sizova, and A. Shmeleva, the ways of implementing dual education, its advantages for both the enterprise and the educational institution are studied. The authors of the work characterize the elements of dual training for learners; argue for the implementation of current technologies in dual education, which positively influences the development of the educational process and ultimately contributes to enhancing the prestige of the educational institution; justify the necessity of pedagogical support for participants in the dual program. Concurrently, the authors emphasize that the implementation of a dual program presupposes the creation of a new teaching position—student consultant. A prerequisite for its effectiveness is that the consultant is attuned to the needs of companies, originating from the labour market itself, as interested companies define the real training needs and competencies required by future specialists (Soshenko et al., 2019).

### Methodology

The methodological foundation of the research involves student-centered and competency-based approaches, principles of pedagogical science about the determinism of theory and practice in the educational process, guiding the analysis of the investigated dual form of training in the specialty 026 "Performing Arts" within the framework of a systematic approach. This enables the theoretical substantiation of the subject of study as a dynamically developing structure that is integrated into a unified educational system.

The system approach enables the realization of analytical perspectives concerning the innovative idea of simultaneous forming in learners an integration of theoretical knowledge with practical professional competencies of the basics of the executed professional operations. In this context, a significant process is the formation in future specialists of a spectrum of certain actions with broad vocational orientation, facilitating rapid adaptation of graduates in a production environment.

An integrated system of interrelated empirical research methods (source analysis method, analysis of the internal correlation structure of dual education, problem-analytical method, and synthesis of descriptive method with the generalization of scientific-analytical recordings) facilitates the definition of



conceptual foundations of the dual form of professional education in the specialty 026 “Performing Arts”. This system also enables the identification of typical and distinctly expressed characteristics of the subject under study as something that evolves infinitely according to its inherent laws within the context of global educational trends.

Research Stages:

**First stage.** Comprehension of the sources and theoretical-methodological foundations of the research. Analysis of statistics and normative materials on the investigated issue of the potential dual form of professional training in the specialty 026 “Performing Arts”.

**Second stage.** Systematization and generalization of research materials (with the implementation of a survey method for learners at a certain stage) aimed at identifying structural characteristics and conceptual foundations of the dual form of professional education in the specialty 026 “Performing Arts”, and adapting the theoretical component of learners’ training to the practical component of the profession.

**Third stage.** Pedagogical modelling of the duality of the educational process within the Graduating Department of Directing at Kharkiv State Academy of Culture in the professional training of future directors, with the aim of further development of the educational standard and requirements for competencies and learning outcomes, aligned in accordance with the descriptors of the National Qualifications Framework.

## Results and Discussion

Contemporary education, motivated by the modern progress of society, necessitates openness to innovative processes. In turn, the continuous development of the production environment imposes cutting-edge demands on the labour market, leading to the demand for modernization of the educational environment (Prystaia & Kabatsii, 2021).

Despite Ukraine holding globally the fourth position in the number of citizens with higher education degrees, the quality of future personnel training often does not meet the expectations of stakeholder structures, which present specific professional requirements to job applicants (a fairly high percentage of graduates find their diplomas “collecting dust”). Employers complain that even master’s degree holders are

not ready for professional activities within the necessary scope of their chosen specialty, necessitating the retraining of learners to master professional competencies in practice (Order No. 286, 2022).

It is dual education that conquers this problem. It aligns with the development of labour potential and labour market demands for highly qualified specialists (even as an experiment, within which businesses can improve the quality of education).

The mismatch between the education system and the real demands of the production sector and labour market plays a fundamentally adverse role, as it is the production sector that sets the requirements for the knowledge and professional competencies of graduates and demands the competitiveness of the workforce (*in the “formula of educational interrelations”: education → labour market → production*, it is production that plays a decisive role against the backdrop of the need for specialists).

Even despite excellent education and high professional competence, young specialists typically have an insufficient understanding of labour market behaviour strategies and the implicit nuances of its operation, in the opinion of employers.

The strategic tasks of education regarding the reorganization of the existing system, the introduction of innovative forms of professional competence acquisition by learners into the educational process, and the transformation of requirements for the training of competitive qualified professionals (Resolution 1341/2011, 2011), (Resolution 266/2015, 2015), (Ministry of Culture and Arts of Ukraine, 2020; Ministry of Education and Science of Ukraine, 2017), intensify the urge to engage dual education (Ministry of Education and Science of Ukraine, 2019). This is in view of the experiment initiated by the Ministry of Education and Science of Ukraine to implement a dual form of education aimed at the significantly improving interaction between educational institutions and employers — as a prerogative of practice-oriented learning.

The experience of Germany, the birthplace of dual education, demonstrates that such a format of collaboration between companies and educational institutions is a guarantee for the preparation of specialists in demand in the labour market. It contributes to reducing the unemployment level among recent graduates and is considered a “bridge” that eases the transition from education to work. Although the benefits



for employers from implementing training in companies under the dual education system are quite apparent, not all Ukrainian employers are ready for it (Hritchenko et al., 2023).

The contemporary labour market in Ukraine demands highly skilled professionals capable of engaging in innovative activities. Under these circumstances, the issue of reorganizing the system for training future specialists becomes more crucial. This includes the integration of new educational models into the teaching process and the perfecting of mechanisms for interaction between education and the labour market. The resolution of this outlined problem relies on the variability of the implemented models of dual education for acquiring higher education.

The dual form of obtaining professional education is based on the full-time mode and can be combined with other types of institutional form of education. The implementation of duality can enhance the competitive edge of domestic educational institutions. Studying the educational experience of leading European countries unveils the opportunities for incorporating relevant pedagogical innovations into the national education system, particularly the experience of integrating certain elements of duality into the educational process with the aim of elevating the quality of professionally oriented education to new levels. The exportation of the German model (as the progenitor of the duality concept) was implemented in seven European countries (Switzerland, the United Kingdom, Luxembourg, Denmark, the Netherlands, Norway, Austria), with a considered, rational approach to adapting certain components of it, but not duplication of the German format of the system or its components. In the Ukrainian educational space, the dual form of training has so far been realized only in the spectrum of management, technical and economic specialties, remaining, as of current moment, outside the realm of professional training in artistic specialties (Martseniuk, 2020).

According to legislative documents, the dual form of learning, as previously mentioned, envisages a combination of theoretical training in educational institutions with practical application of knowledge directly at the workplace, aimed at acquiring the desired qualification level. This approach is implemented on the basis of a contract concluded with a stakeholder (employer).

Dual learning, based on a contract with a stakeholder's structure, includes: the order of

employment and corresponding payment for the work of a student (as per normative documents, training at the workplace involves performing job responsibilities according to the labour contract); the scope and expected results of the student's learning at the workplace (possibility of career growth); the obligations of the higher education institution and the employer in terms of executing an individual educational plan at the enterprise (the possibility of choosing educational disciplines and forming a flexible individual schedule of classes); the procedure for assessing the learning results obtained at the workplace (the results of practical work are included in the student's assessment and rating).

The concluded contract is the foundation for training under the dual program, which does not envisage short-term periods of staying in different structures, but systematic training according to plans developed by the chosen structure, which is responsible for the professional training of the student from admission to graduation, whose status is an intern. Ukrainian legislation prohibits the stay of an intern at the enterprise for more than three months, in other words, it is a student's in-depth integration into the production processes.

From the side of the educational institution, the establishment of continuous interconnections between the educational structure and relevant institutions is facilitated. This includes involvement of the qualified personnel from production in the development of regulatory documentation for the educational process and teaching of specialized disciplines. Additionally, it enhances the rating of the educational institution among potential applicants, which collectively contributes to the realization of the educational environment functioning at the level of the best European standards.

"The European educational space combines national peculiarities with the primary task in ensuring the quality of higher education – the modernization of methods for assessing the preparation of students, monitoring their achievements, where the main assessors are the client and the labour market" (Hritchenko et al., 2023).

The dual form of education, as a professionally and practically oriented mode of learning, is primarily based on the foundation of social partnership, which is directed towards a new model of professional training of specialists.

he dual form of education is organized in an educational institution in accordance with the programs/standards of professional education in specialties/qualifications and working curricula, which are developed jointly with stakeholders and approved in accordance with the procedure established by law by the indispensable agreement of stakeholders.

There has been no precedent in Ukraine for the introduction of the dual form of education in the specialty 026 “Performing Arts”. The introduction of the first educational-professional program in Ukraine, “Directing Shows and Art Projects”, as an innovative strategy for training specialists in the field of performing arts, initiated by the Directing Department of Kharkiv State Academy of Culture, in our view, can be considered as the background for research analytics on the possibility of implementing a pilot project of *the prerogative of practically-oriented training of a professionally competent specialist*, forming high mastery in directing and technologies of staging thinking as improvisational-constructive creation.

The Directing Department plays the role of a unique creative matrix that defines the integral system of scientific interests and pedagogical preferences of a unified research, educational-methodological, and organizational centre for the artistic-aesthetic education of future professionals in stage directing and cultural-artistic projects (show programs, large-scale city-level celebrations, international theatre forums, carnivals, and performances of spectacular art).

The challenges of the present encourage the Directing Department to plan transformations in pedagogical reality with the aim of enhancing standards in the field of education and technologies for professional training in accordance with the European requirements.

In view of the recent emphasis on strategies for reforming and enhancing the educational environment, the specialists of the Department of Directing at Kharkiv State Academy of Culture — both theoreticians and practical educators, who are professionals in the field of art of directing and laureates of international and national competitions — are inspired by the challenges of experimentally organizing a dual format for acquiring professional education in the field of “Performing Arts” (Speciality 026) within the educational-professional program “Directing of Shows and Art Projects”.

This educational initiative encounters several challenges, primarily the inconsistency of professional education standards, educational-professional programs, curricula, syllabus content, and discipline programs with the specific types of practical activities undertaken by students as a part of the practical component of their training aimed at adapting future directors to professional activities. The curricula of the Department of Directing at Kharkiv State Academy of Culture should be formed integrally, with all aspects customized to the practical training at the student’s workplace.

Based on the analysis of this problematic educational field, from the authors’ point of view, the primary necessity of implementing a range of effective positions is emphasized:

- monitoring of the labour market (identifying stakeholders, multi-directional exploration of the varying spectrum of interests and demands of potential employers in the sphere of performing arts) with the aim of *defining a set of requirements for the content and outcomes of educational activities within the specialty. This involves marking the requirements of qualification standards for the competencies (learning outcomes) of graduates*, ensuring the achievement of an appropriate quality level of the professional preparation for creatively thinking directors;
- implementation of innovations in the content and technologies of education in the context of specifying learning objectives and outcomes. This includes updating the curricula and programs of the Department of Directing at Kharkiv State Academy of Culture, taking into account the demands of potential employers, adjusting the content of educational components to meet modern requirements, refining forms of control, updating the educational process schedule, and redistributing credits among different content components;
- identification of competencies for future specialists in the educational-professional program, aligned with the demands of the labour market, according to the framework of qualifications and the curriculum;
- implementation and execution of the educational program through close collaboration with employers, whose suggestions are correlated with its content; monitoring of the effectiveness of the program’s components with all groups of stakeholders, and accordingly, updating the programmatic competencies and learning outcomes;

- considering the interests and proposals of students in the framework of forming individual educational trajectories, manifesting in the decision regarding attendance of elective courses (adding courses upon graduates' requests, aimed at forming comprehensive professional knowledge and competencies — the introduction of relevant disciplines into the educational process is based on verbal surveys followed by discussions at the department meetings, where the educational program is approved;
- introducing ongoing round-table discussions as meetings with stakeholders for the purpose of gaining experience in professional interaction with experienced specialists in directing;
- concluding bilateral agreements in accordance with the current legislation in the framework of dual education (with the management of state and public cultural and artistic institutions/organizations, creative associations/unions and collectives, business structures, event agencies, etc.) (with the aim of further concluding tripartite agreements with students);
- fostering cooperation between the Department of Directing of Kharkiv State Academy of Culture and profile organizations (within the framework of various professional-oriented events — from organizing master classes, series of trainings, long-term courses to the introduction of advanced training and internship programs);
- assistance of the specialists of the Department of Directing in involving higher education students in directorial projects of various levels — staging of show programs, city art projects, fashion shows, performances, presentations, theatricalized concerts, various genre and form festivals and rituals, carnivals-parades, folkloric shows, city creative art projects, television projects.

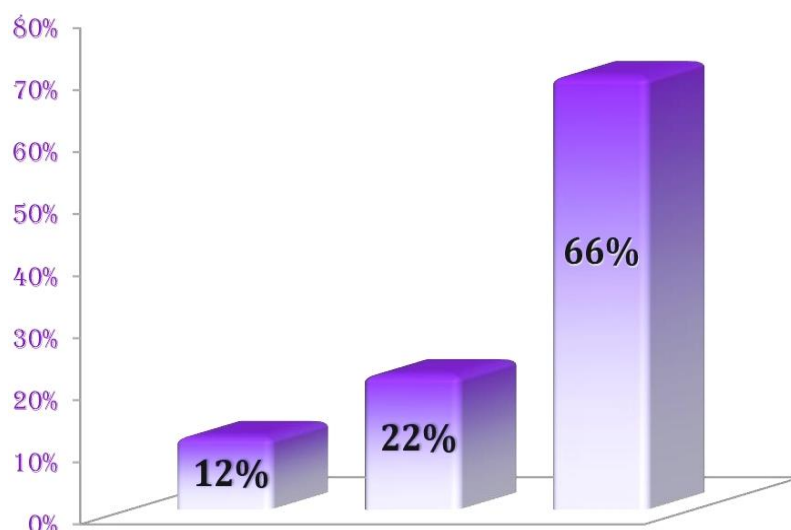
The paradigm of training for educational and professional program “Directing Shows and Art Projects” enables the goal achievement: to prepare specialists who possess comprehensive knowledge, basic and professional competencies in the field of performing arts and contemporary

event technologies. This approach is aimed at enabling students to acquire skills in scientific research, applied and innovative aspects within their professional field, and the ability to solve complex professional tasks in specialized production activities. The definition of competencies and program outcomes for academic disciplines is implemented in compliance with the matrices of educational program correspondence.

*The sequence of acquiring competencies and program results of training is determined by the structural and logical scheme of training specialists in the field of directing: the program outcomes of learning are defined by the Higher Education Standard through:*

- *establishing the optimal volume of all types of educational work (with the prevalence of individual over lecture-based activities, including mandatory professional course work involving the development of the student's own artistic project and qualification works);*
- *choosing effective teaching methods and forms of assessing students' educational achievements, applying appropriate methodologies, technologies, and tools (involving students in cultural and artistic projects at city and international levels through the Department of Directing);*
- *compliance with the requirements of the standard regarding the functioning of the quality assurance system for educational activities.*

Discussions on the content and quality of teaching academic disciplines occur in the form of semester surveys and written questionnaires for students from the Department of Directing. The remarks, suggestions, and wishes expressed by the students are taken into account in the process of improving the curriculum, forming syllabi, and working programs of academic disciplines (see the scheme). Monitoring students' opinions on the quality of the learning process allows to adjust curricula and syllabi with the aim of acquiring competencies inherent to the specialty, which in turn updates and enhances the educational process itself (Aliksieienko, 2023; Buchynska et al., 2021; Prystaia & Kabatsii, 2021).



**Fig. 1.** Survey of students from the Department of Directing, KhSAC concerning the modification of educational and professional programs to enhance their competitiveness in the labour market.

Do we have to conduct training in your program in a dual form of education?

- Yes – 66%
- No – 12%
- Difficult to answer – 22%

**Consequently, there should be an expansion of the list of specialties and professional training programs.**

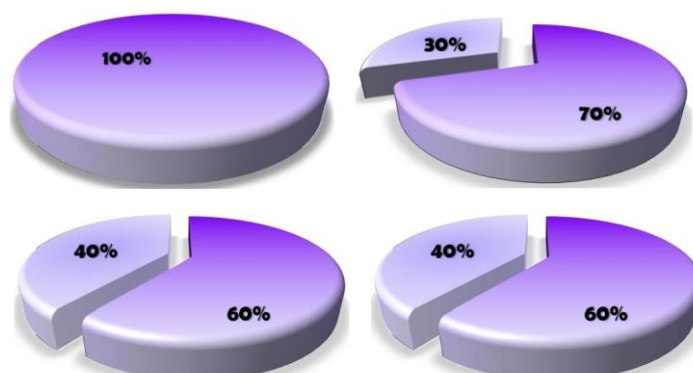
*In the process of creating a dual educational program, a key position is assigned to the schedule of the educational process.*

*We propose to introduce a dual program from the second year, with a phased block system of education:*

- one month of practical professional work followed by one month of classroom learning;
- (aligned with the thematic-disciplinary content blocks of the courses).

*Accordingly, we propose to distribute practical and theoretical components in the ratio of training hours:*

- 1st year: 100% theoretical-practical components taught at KhSAC;
- 2nd year: 70% theoretical, 30% practical at production from the 4th semester;
- 3rd year: 40% theoretical, 60% practical at production;
- 4th year: 40% theoretical components, 60% practical at production.



**Fig. 2.** The Ratio of Theoretical Training to Practical Training for Educational Program Students by Academic Courses.

It should be emphasized that the organization of a dual educational program as a certain

educational experiment involves the corrective diagnosis of such components of professional



competence as motivational, active, reflective, cognitive, and value-based, upon which the process of mastering a profession is based.

These components, from our perspective, can be considered systemic in forming competence — *the ability to think professionally and systematically.*

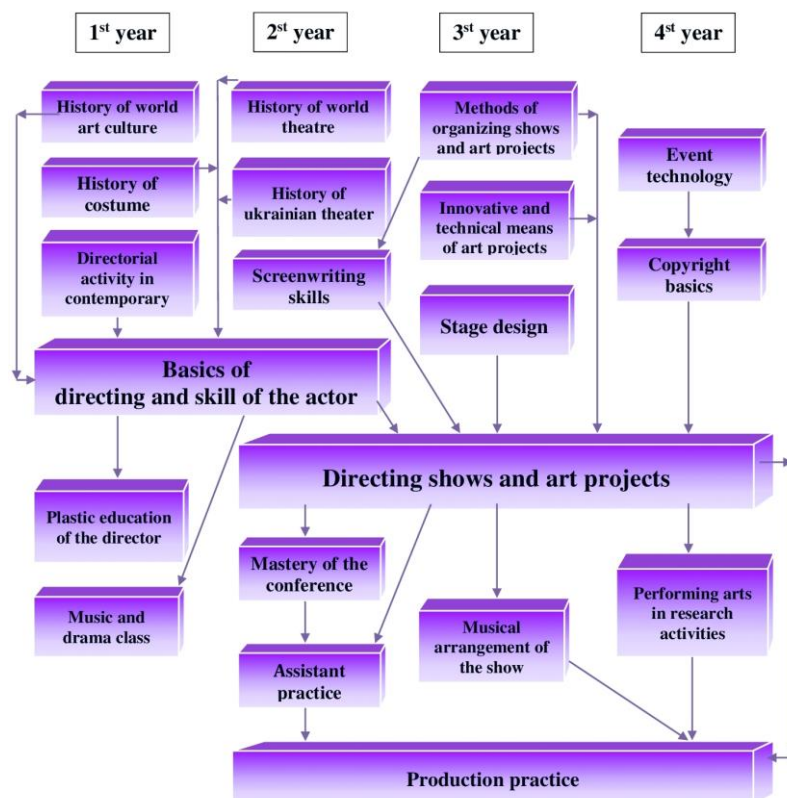
*Professional “capability”, accordingly, is associated with the rationalization of educational components and pedagogical-educational framework based on them, which should sensitively respond to internal and external changes in the professional sphere.*

Dynamic transformations of the labour market stimulate significant changes and the emergence of the latest methodological approaches to academic disciplines. These disciplines shape integral, general, and specialized professional competencies in professional training for the specialty 026 “Performing Arts”. Specifically, the disciplines of the regulatory training cycle develop general skills of critical thinking and the using modern communication platforms. The

professional disciplines’ goal is to enable the learner to acquire abilities and tools for creative professional activities, event technologies, with the objective of achieving planned staging purposes and organizational results. The disciplines of free choice are aimed at training specialists with a broad outlook for the further practical implementation of the acquired knowledge in professional activities. The design of educational components’ content is carried out in accordance with the requirements of the modern labour market and the provisions of relevant program documents regulating the training of specialists in the field.

Within the professional training in the educational-professional program “Directing Shows and Art Projects”, we suggest the following set of theoretical disciplines.

Let’s emphasize the primary necessity of mastering practical skills in forming and realizing a directorial concept, acquired through studying educational components such as “Fundamentals of Directing and Acting Skills” and Directing Shows and Art Projects’.



**Fig. 3.** The logical scheme of educational components in the dual form of training of the educational program “Directing shows and art projects” of the Department of Directing Kharkiv State Academy of Culture (project)



The theoretical block includes courses aimed at mastering knowledge of the professional sphere and assimilating the required cultural, historical, pedagogical, psychological, and other aspects of the activities of a director-producer, which we regard as fundamental: "History of the World Artistic Culture", "History of the World Theatre", "History of Ukrainian Theatre", "History of Costume", "Directorial Activities in Contemporary Theatrical Art", "Scriptwriting Mastery", "Event Technologies", "Methods of Organizing Shows and Art Projects", "Mastery of the Presenter", "Innovative Technical Means in Art Projects", "Plastic Education of the Director", "Music and Drama Class", "Scenography", "Musical Arrangement of Shows", "Director's and Assistant Practice", "Production Practice", "Fundamentals of Copyright", "Stage Art in Research Activities".

The practical training block for acquiring professional competencies (the ability to effectively develop innovative art projects, conduct performing and staging activities in the field of concert and spectacular genres, artistic-sporting spectacles, show programs, and other forms of stage culture, according to the educational-professional program — takes place directly at workplaces. Among these, we can consider such art institutions as theatres (both state and private), philharmonics, culture palaces, concert and entertainment institutions, event agencies, schools of arts and aesthetic education, cultural-recreational centres, research and creative institutions of culture and arts.

It should be emphasized that relying on the old content of the existing courses, even as supplements to new program disciplines, is not advisable (students should receive up-to-date theoretical material, relevant to real-life scenarios). Undoubtedly, it is necessary to create a new curriculum in response to employer demands, incorporating new academic disciplines as its components. A portion of the existing disciplines should be modernized; however, they must be restructured not only to meet the demanded competencies but also to align with contemporary educational conditions and methods.

These positions necessitate both synergy of academic principles and the realities of the artistic environment, as well as the opportunity for educators to work with the most relevant content within the confines of academic disciplines. Thus, a model that allows learners to understand the professional background of the field, master the programmatic outcomes of their

education at the level of ingrained skills, and, indeed, the set objectives, is created.

*We propose to introduce the "teacher-expert" model, in which the teacher is responsible for theoretical and organizational parts of the discipline, while the expert from the structure where practical training is conducted ensures the relevant professional and practical activity of the student. It is crucial that, at the system level, solutions should be found for adjusting programs and ensuring their permanent relevance.*

During the implementation of dual education, the university and the employer become equal partners, as the latter influences the development and can significantly participate in the elaboration of working and individual study plans, assesses the results of each learner. Therefore, mentor — a director/expert in the event industry, structure where practical training is conducted — plays a crucial role in the organization of such training process. He transfers the acquired experience and knowledge to the students during practical training and facilitates professional adaptation of directors in the profession.

The development and updating of disciplines based on the principle of dual education is the substantive work of teachers of the educational institution. When updating the content of disciplines, it is important to maintain a balance between academic (scientific) goals and practical application of training. The purpose of education is to prepare specialists who are genuinely ready to work, can effectively build their careers, and deepen their knowledge throughout their lives. A working group should be formed around each individual discipline from the lecturer of the discipline and the director/experts of the company, whose expertise is substantively correlated with the content of the course. Such a process is multi-stage, each worked out stage must be jointly agreed.

A working group should be formed around each individual discipline from the lecturer of the discipline and the director/experts of the company, whose expertise is substantively correlated with the content of the course. This process is multi-staged, each developed stage must be jointly agreed upon.

*The first step in developing a discipline is to work out the expected learning outcomes, which are formed as skills. They consist of examples of professional tasks (or their elements) that learners will be able to perform by the results of*

*the course, and a correlation with professional competencies and knowledge sections is added.*

It is an important conceptual step that enables understanding between both environments — the professional (through the formation of practical expected outcomes) and the academic (through understanding how activities within the course contribute to shaping the future specialist). At this stage, collaboration between experts in directing and teachers should occur.

The subsequent steps of the work are more traditional and involve the development of the thematic plan for the course. Each teacher in the working group must present and discuss the proposed plan and its correspondence with the formed learning outcomes.

Subsequently, experts are expected to assist in selecting the most relevant materials and literature for the courses, and additionally, to present practice-oriented tasks which the teachers are afterwards encouraged to integrate into the program.

*The consequence of such collaboration is the updating of working programs and course materials by the teachers, as well as the formation of a certain unity of skills and knowledge, which further develops into a detailed profile of the program's graduate.*

One of the key objectives pursued by the program is to minimize the barrier and enhance mutual understanding between the artistic industry (with directing projects) and the academy, i.e., *to strengthen the relationship of scientific and production developments.*

The result of such collaboration extends far beyond updated materials and working programs: it lies in the systematic building of trust and synchronization of two very different and demanding environments to form a powerful cohort of future professional directors.

Among the drawbacks, we can identify:

- students who choose this form of education do not have holidays in the traditional sense of the educational institution, only the standard leave granted at the enterprise where the practical training is conducted;
- the choice of specialization is made immediately (by the traditional format of education, students can ultimately choose their professional specialization in the 4th or

5th semester, whereas in dual education, a decision must be made immediately).

Overall, the implementation of dual education is a guarantee of enhancing the quality of training for contemporary creating directors, taking into account employer requirements. Employers' interest includes their desire to acquire highly qualified workers who are maximally motivated to work immediately after graduation, with an immediate understanding of the principles of staging and the realization of a directorial concept. In turn, learners of the dual education form have a greater chance of obtaining their desired job.

Therefore, dual form of obtaining directorial education in the educational-professional program "Directing Shows and Art Projects" is the implementation of competence and student-centered approaches, against the background of a focus on meeting the expectations of education applicants — future directors of stage projects for successful professional work. It involves forming in them modern practical knowledge in the field of directing, skills and abilities for professional activity and teamwork in real workplaces and the production environment, enhancing readiness, facilitating and accelerating the transition of directing department graduates from the educational sphere to the labour environment. In other words, *it increases their overall competitiveness in the artistic space and the labour market.*

## Conclusions

Today's new reality in the educational and scientific sphere, both globally and in Ukraine, is confronted with the challenge of combining different training practices (through the lens of coordinated interaction between theory and practice) aimed at achieving the training of competitive specialists at a global level, integrating into the European educational and scientific space to introduce a new innovative level of educational quality in a European dimension of learning.

The dual directorial education, we are interested in, ensures a close interconnection between the educational and production spheres; coordination of pedagogical conditions for professional training in directing in educational and production environments. A graduate-director acquires the ability for contemporary managerial thinking and a system of specialized theoretical and practical knowledge of the fundamentals of the event industry and event technologies,

mastering skills in professional planning, organizing events in official, public, and private life, particularly in developing concepts and programs, forming and controlling budgets, coordinating the work of subcontractors, and evaluating the effectiveness of the conducted event. Undoubtedly, dual education, as a “single organizational whole”, is a form of education that emerges as a product of social partnership against the background of mechanisms of theoretical and practical interactions directed towards preparing highly qualified directors according to labour market demands. The dual system ensures a balance between the demand and supply of professionals in the labour market and activates the student’s business independence in the directing profession.

The current scientific research suggests that due to effective combination of theoretical and practical training the level of preparation of today’s graduates, who, in terms of their professional qualities would meet the demands of contemporary stage art and acquire professional competencies defined by the educational program/standard of professional education, should increase. It is important to emphasize, without any doubt, that practical training at a stakeholder’s base will provide students with an understanding of the details and nuances of the directing profession, about which it is hardly possible to learn from theoretical courses. However, it is precisely the theoretical component of education that should facilitate the acquisition of such fundamental professional competencies as the ability to think systematically and creatively in the context of independent authorial directorial work in the field of various innovative forms of stage art, as determined by the educational program/standard of professional education.

As a result, the graduate will have the opportunity to be employed in either public or private sectors of various fields of activity, choose the direction for further professional growth that best matches their personal abilities and expectations — their individual educational trajectory — the personal path to realizing the future director’s personal potential, taking into account their interests, abilities, needs, motivation, opportunities, and experience. For this reason, future directors, within the framework of education offered by the Department of Directing of Kharkiv State Academy of Culture, are provided with conceptual, ideological, and specialized professional support from teachers and the academic community.

## Bibliographic references

- Buchynska, O., Davlikanova, O., Ishchenko, T., Lylyk, I., Chaikovska, A., & Yashkina, O. (2021). *Analytical Report on the Results of the Second Year of the Pilot Project in Institutions of Vocational Pre-Higher and Higher Education for the Training of Specialists in Dual Education Form*. Friedrich Ebert Foundation Representation in Ukraine. <https://library.fes.de/pdf-files/bueros/ukraine/18545-20211213.pdf>
- Buchynska, O., Davlikanova, O., Lylyk, I., & Yashkina, O. (2020). *Analytical Report "Employers' Views on Dual Education" based on the Study of Employer Awareness of Dual Education and Experience in Participating in the Pilot Project for its Implementation at the Level of Vocational Pre-Higher and Higher Education in Ukraine*. Friedrich Ebert Foundation Representation in Ukraine. <https://acortar.link/DE1ep0>
- De Groof, J., Daniels, E., Gijbels, D., Kyndt, E., Wille, B., & Van den Bossche, P. (2022). Ready? Steady? Grow! Readiness for Participating in Learning in Dual Education. *Vocations and Learning*, 15(3), 477-496. <https://doi.org/10.1007/s12186-022-09297-5>
- Hritchenko, T., Dobosh, O., Shynkaruk, O., Yushchysyna, O., & Rokosovyyk, N. (2023). The role of the European educational area in ensuring the quality of higher education. *Amazonia Investiga*, 12(66), 105-115. <https://doi.org/10.34069/AI/2023.66.06.11>
- Kharkiv State Academy of Culture. (2023). *Assessment of the Application of Relevant Procedures and Measures of the Internal Quality Assurance System (Education Quality Monitoring) at Kharkiv State Academy of Culture as of 01.07.2023*. <https://acortar.link/fXOL7N>
- Law of Ukraine 1556-VII. On Higher Education, *Vedomosti Verkhovna Rada* of July 1, 2014. Retrieved from: [https://zakononline.com.ua/documents/show/357262\\_\\_\\_552664](https://zakononline.com.ua/documents/show/357262___552664)
- Law of Ukraine 2145-VIII/2017. On Education, *Vedomosti Verkhovna Rada* of September 5, 2017. Retrieved from: <https://zakon.rada.gov.ua/laws/show/2145-19>
- Martseniuk, L. V. (2020). Dual Education as a Means of Effective Combination of Theory and Practice. *Review of Transport Economics and Management*, 4(20), 154-164. <https://doi.org/10.15802/rtem2020/228876>
- Ministry of Culture and Arts of Ukraine. (2020). *Directory of Qualification Characteristics of*

- Workers' Professions. Issue 84. Activities in the Field of Dramatic Arts and Other Entertainment Activities.* (No. 32). <https://zakon.rada.gov.ua/rada/show/v0032280-00#Text>
- Ministry of Education and Science of Ukraine. (2017). *Methodological Recommendations for the Development of Higher Education Standards: Order.* (No. 600). <https://acortar.link/oOj6hu>
- Ministry of Education and Science of Ukraine. (2019). *Regarding the Implementation of the Pilot Project in Institutions of Vocational Pre-Higher and Higher Education for the Training of Specialists in a Dual Form of Education: Order.* (No. 1296). <https://acortar.link/HUUNPC>
- Ministry of Education and Science of Ukraine. (2022). *Projects of Higher Education Standards of Ukraine.* <https://acortar.link/mX6HPL>
- Ministry of Science and Education of Ukraine. (2021). *Dual Form of Education: Results of the Second Year of the Pilot Project.* <https://acortar.link/UxKsMN>
- Molina, I. (2016). The Dual Training, A New Approach to Vocational Education and Training. *Revista Internacional de Organizaciones*, 17, 129–139. <https://doi.org/10.17345/rio17.129-139>
- Olsavsky, F., & Trel'ova, S. (2016). Dual Education – Pupils Enforcement in the Slovak Practice. *EDULEARN16. Proceedings of the 8th International Conference on Education and New Learning Technologies*, Barcelona, 5762-5768. <https://library.iated.org/view/OLSAVSKY2016DUA>
- Order No. 286. Strategy for the development of higher education in Ukraine for 2023–2032 of the Cabinet of Ministers of Ukraine. *Verkhovna Rada of Ukraine*, from February 23, 2022. <https://zakon.rada.gov.ua/laws/show/286-2022-%D1%80#Text>
- Order of the Ministry of Education and Culture of Ukraine dated September 15, 2021 No. 991 “On Amendments to the Order of the Ministry of Education and Science of Ukraine dated October 15, 2019 No. 1296” <https://acortar.link/GmS4BP>
- Pieshkova, H. (2018). *Learning on the Job: How Dual Education Will Work in Ukraine.* Ukrainian Interest. <https://acortar.link/5YSECD>
- Prystaia, O., & Kabatsii, V. (2021). *Dual Education: “Well Forgotten Old” or Step Towards the Advanced Experience of European Educational Technologies.* Mukachevo State University. <https://acortar.link/JovRdr>
- Resolution 266/2015. On Approval of the List of Knowledge Fields and Specialties for the Training of Higher Education Seekers. *Cabinet of Ministers of Ukraine* of April 29, 2015. Retrieved from <https://zakon.rada.gov.ua/laws/show/266-2015-%D0%BF#Text>
- Resolution 1341/2011. On Approval of the National Qualifications Framework. *Cabinet of Ministers of Ukraine* of November 23, 2011. Retrieved from <http://zakon4.rada.gov.ua/laws/show/1341-2011-п>
- Soshenko, S., Sizova, K., & Shmeleva, A. (2019). Implementation of Dual Education Elements Into Electrical Engineers Training. *International Conference on Modern Electrical and Energy Systems (MEES: Proceedings)*, 23-25 Sept. 410-413. <https://ieeexplore.ieee.org/document/8896519>



DOI: <https://doi.org/10.34069/AI/2023.71.11.4>

How to Cite:

Antonyuk, V., Kalashnyk, M., Stakhevych, O., Rudenko, O., & Lihus, V. (2023). Ukrainian vocal paradigm of Boleslav Yavorsky. *Amazonia Investiga*, 12(71), 54-60. <https://doi.org/10.34069/AI/2023.71.11.4>

## Ukrainian vocal paradigm of Boleslav Yavorsky

### Українська вокальна парадигма Болеслава Яворського

Received: September 11, 2023

Accepted: November 10, 2023

Written by:

**Valentina Antonyuk<sup>1</sup>** <https://orcid.org/0000-0003-1821-1933>**Mariya Kalashnyk<sup>2</sup>** <https://orcid.org/0000-0002-6432-2776>**Oleksandr Stakhevych<sup>3</sup>** <https://orcid.org/0000-0002-5195-6753>**Oleksandr Rudenko<sup>4</sup>** <https://orcid.org/0000-0002-0368-6445>**Valentyn Lihus<sup>5</sup>** <https://orcid.org/0000-0003-2430-0166>

#### Abstract

The paradigmatic approach in the study of vocal phenomena art offers new approaches and produces non-traditional standards of scientific thinking, making significant corrections to the general scientific picture of the world. This is precisely what is connected with the growth of scientific interest in the multidimensional personality phenomenon of music theorist, composer, pianist-concertmaster Boleslav Yavorsky (1877–1942) and his influence on the formation of the vocal paradigm of music education in Ukraine.

Historical musicology, exploring different areas of artistic life, has lost track of an important topic such as the concertmaster activity of pianists-composers who traditionally accompanied the performance of not only their but also other's compositions, resulting in the unique creative act when one author was becoming the interpreter of other master's compositions – his predecessor or contemporary. In the cognition of music history, such artistic events are of notable significance, as they reflect not just the performing evolution but

#### Анотація

Парадигмальний підхід у вивченні вокальних явищ мистецтва пропонує нові підходи та продукує нетрадиційні стандарти наукового мислення, вносячи суттєві корективи в загальнонаукову картину світу. Саме з цим пов'язане зростання наукового інтересу до багатовимірного феномену особистості теоретика музики, композитора, піаніста-концертмейстера Болеслава Яворського (1877–1942) та його впливу на формування вокальної парадигми музичної освіти в Україні.

Історичне музикознавство, досліджуючи різні сфери мистецького життя, випустило з поля зору таку важливу тему, як концертмейстерська діяльність піаністів-композиторів, які традиційно супроводжували виконання не лише своїх, а й чужих творів, внаслідок чого відбувався унікальний творчий акт, коли один автор ставав інтерпретатором творів іншого майстра - свого попередника чи сучасника. Для пізнання історії музики такі мистецькі події мають неабияке значення, оскільки відображають не лише виконавську

<sup>1</sup> Doctor of Cultural Studies, Professor, Head of the Department of Chamber Singing Ukrainian National Tchaikovsky Academy of Music, Kyiv, Ukraine.

<sup>2</sup> Doctor of Arts, Professor, Professor at the Department of Music Art, H.S. Skovoroda Kharkiv National Pedagogical University, Kharkiv, Ukraine.

<sup>3</sup> Teacher at the Department of Choreography and Musical Art, Sumy State Pedagogical University named after A.S. Makarenko, Sumy, Ukraine.

<sup>4</sup> Doctor of Philosophy (PhD), Senior Lecturer at the Department of Choreography and Musical Art, Sumy State Pedagogical University named after A.S. Makarenko, Sumy, Ukraine.

<sup>5</sup> Assistant Professor at the Department of Musical Art of Kyiv National University of Culture and Arts, Kyiv, Ukraine.



also the process of creative reframing of the musical material.

The main benefits of Yavorsky's theory consist in analyzing the structure of mode formation and the internal modal organization of musical composition and musical-historical processes as well as drawing analogies in the development of various kinds of arts.

**Keywords:** Yavorsky's Ukrainian vocal paradigm, musical education, music-historical process, paradigmatic approach, synergy.

## Introduction

The statement of the problem and its relevance is to study the experience of outstanding masters, our teachers, who worked on the creation of a vocal paradigm of higher musical education. Among them is Ivan Kotliarevsky (Kotliarevsky, 1937), an outstanding theoretician-musicologist, professor, doctor of art history, vice-rector for science and head of the Department of Music Theory of the Kyiv State Conservatory in 1984–1995. At the time, he advised to turn to the works of Boleslav Yavorsky (Yavorsky, 2008), which reveal bold results in the field of synergy.

Boleslav Yavorsky (born in 1877 in Kharkiv, died in 1942 in Saratov), Doctor of Art, pianist, composer, teacher, musical and public figure. In 1894–1898, he was a student of the Kyiv Music School. In 1916–1921 he was a professor at the Kyiv Conservatory, from 1917 he was the founder and first director of the People's Conservatory; from 1918, he was a professor at the Mykola Lysenko Music and Drama Institute. Boleslav Yavorsky is the author of the operas "Pelléas and Mélisande", "October Tower"; ballet "Jane Valmore"; orchestral piece, piano works, more than 30 romances, as well as several solo opus and choral arrangements of Ukrainian folk songs.

Note that the relevance of synergetic was obvious for Kotliarevsky at the turn of the XX–XXI centuries. Kotliarevsky boldly encouraged the creation and study of a new synergistic model of creators and researchers of the boundless world of musical art. One of the dominant features of this new and synergistic stage of vocal education is interdisciplinarity and further implementation of the principle of evolutionism. This is precisely what is related to the growth of scientific interest in the multidimensional phenomenon of the personality of Yavorsky (doctor of art history, pianist, and accompanist of vocalists, composer, teacher, music and social activist, one of the first

еволюцію, а й процес творчого переосмислення музичного матеріалу.

Основні переваги теорії Яворського полягають в аналізі структури ладоутворення і внутрішньої ладової організації музичної композиції та музично-історичних процесів, а також у проведенні аналогій у розвитку різних видів мистецтв.

**Ключові слова:** українська вокальна парадигма Яворського, музична освіта, музично-історичний процес, парадигмальний підхід, синергетика.

professors of the Kyiv Conservatory) and his influence on the further Ukrainian vocal paradigms development of music education.

This study aims to determine the influence of Yavorsky' performing, pedagogical and scientific work on the vocal paradigm development of higher musical education of Ukraine.

The main task of the study is to find and fulfill with content the lacunae of vocal content in the creative and scientific heritage of this outstanding Ukrainian musician, the author of the concept of the eponymous "Yavorsky's theory".

## Literature Review

Note that Yavorsky attracts the attention of researchers, who focused mostly on the biographical and theoretical achievements of the artist (Antonyuk, 2001; Antonyuk, 2015; Antonyuk, 2021; Komenda, 2020; Kuzomina, 2003). The foundations of Yavorsky's theory were developed in the early years of the XXth century, and its most used name "concept of lad" was introduced in 1912, but from 1908 the concept had the name: "the structure of musical language", and from 1918 "the theory of auditory gravitation". Yavorsky's research work lasted almost half a century and covered all areas of musicology: theoretical harmony, music history, musical aesthetics, and sociology. According to the theory of musical thinking developed by him, the content of musical art, the basis of its influence on a person is the presence of mental and psychological principles as a reflection of the scheme of the social process of the corresponding era (Yavorsky, 2008).

By combining the laws of musical thinking with the phenomena of the historical, general cultural, aesthetic order, the scientist sought to

comprehend the holistic perception of not only the musical work itself, but also the conditions of its existence. The main merits of Yavorsky's theory include the analysis of the structure of patterns, the internal pattern organization of musical work and the musical-historical process, as well as in making analogies in the development of various types of art. This context was hidden from the eyes of his contemporaries and appreciated only a decade later.

The scientific fate of Yavorsky was complex and dramatic, mainly due to his constant occupation with the duties of a civil servant responsible for the formation of a new educational paradigm in the USSR, and he managed to publicize only a small part of his legacy, namely: "The structure of musical speech" (parts 1–3, 1908), "Exercises in the formation of melodic rhythm" (part 1, 1915), "Structure of melody" (1929) (Yavorsky, 2008). The most important results were recorded in his oral lecturing, teaching and epistolary activities (his correspondence with composers contained meaningful educational tasks and was in fact an extramural consultation), a few articles and teaching aids, manuscripts (the archive of Yavorsky is kept in the funds of the Hlinka museum) and is mostly reflected in the studies of his students and followers. He influenced the creativity of Asafiev B., Bagadurov V., Blumenfeld F., Braudo I., Glier R. (who has friendly and professional relations with Yavorsky from 1892 to 1942), Gnesin M., Zernov D., Konen V., Kulakovsky L., Kurt E., Mesian O., Miaskovsky M. (their professional correspondence lasted for 27 years), Neihaus G., Protopopov C., Shostakovich D., Yudina M., as well as music theorists and composers of the following generations: Goriukhina N., Zaderatsky V., Zolochovsky V., Kotliarevsky I., Korykhalova N., Liashenko G., Maslenkova L., Medushevsky V., Moskalenko V., Nazaikinsky E., Orlova O., Protopopov V., Piaskovskiy I., Skoryk M., Sokol O., Kholopov Yu., etc. (Yavorsky, 2008).

Note that the basics of Yavorsky's theory, in particular, his ethnological results, were used in the construction of the concept of the education of a solo singer regarding the significance of the "energy of musical formation" for the harmonic nature of musical art (Antonyuk, 2001). His works such as "Psychological study-characteristics of the behavior and facial expressions of a singer under moral oppression and under energetic passion" (1901), "About a folk song" (1917), "Breathing" (1924), "Singing and singers" (1932), "Chamber Singing" (1935) recorded the main principles of works as a

pianist-concertmaster of vocalists (1895–1898) in the professor's of the Kyiv Music School Kamillo Everardi and developed in the process of independent performing practice (Yavorsky, 2008).

Note that Yavorsky, along with the following terms introduced into musicology: "intonation", "internal auditory tuning", "rhythmic edge", "synergy", "comparison of tonalities", "theory of musical thinking", etc., also invented the classification of singing styles into "chamber-miniature", "chamber-stand", "fresco-concert" and "opera-decorative" (Yavorsky, 2008). B. Yavorsky's productive activity as a concertmaster with Ukrainian singers became an important basis for his scientific results, defining the vocal paradigm as dominant in the artist's compositional and performing work.

First, the name of Yavorsky is associated with the concept of *lad* (the term means the unfolding of the chord in time), which had a great influence on the further development of musicology: "this is what the conservatory calls the science of "musical thinking", which I am working on" (Yavorsky, 2008). The law of auditory gravitation discovered by Yavorsky became the basis of his hypothesis, which later grew into a theory of musical thinking with its features in relation to different eras. Starting with the study of "biological foundations of behavior – from the energy of its types and connections, he took the principles of studying the role of the joint action of auditory and visual world perception as one of the starting points of his theory long before the discovery of analyzers by physiologists and the formation of the science of "musical psychology"" (Antonyuk, 2021). Yavorsky's restoration of the hidden content of Bach's masterpiece – 48 preludes and fugues "HTK", which actually turned out to be a musical interpretation of the images of the Old and New Testaments, their predictions and prophecies, the Life of Christ, etc., was also sensational.

## Methodology

The research methodology is rooted in the theoretical framework of national artistic culture, encompassing various dimensions such as the systematic approach to understanding culture-creating professional and pedagogical phenomena, phenomenological aspects of creativity theory, epistemology of culture, structural typology, personality theory, and migration theory. This comprehensive approach forms the methodological foundation for the study, offering a robust framework for

investigating linguistic and cultural phenomena in vocal art.

The paradigmatic approach employed in this research introduces innovative perspectives and challenges traditional standards of scientific thinking. Within the study of linguistic and cultural phenomena of vocal art, this paradigmatic approach reshapes the scientific worldview by introducing new models for posing problems and their solutions. Over time, these models become recognized as scientific achievements, influencing methods, problem situations, and standards for their resolution during the evolution of scientific knowledge.

In the context of ethnocultural discourse, paradigmaticity serves as the methodological cornerstone, particularly evident in the linguistic and cultural specificity of vocal art. This approach goes beyond conventional methodologies, providing a deeper understanding of the intricate interplay between culture and language within the realm of vocal artistic expression. The methodological section details the sources, review processes, and analysis techniques employed, ensuring a thorough and rigorous evaluation of these diverse theoretical perspectives.

The theoretical base for our study was research works of national and international researches (Aranovsky, 2012; Champigny, 2006; McQuere, 1983; Slonimsky, 1978) and the works by Boleslav Yavorsky (1908; 1913; 1915; 1923; 1925; 1929; 1972; 2008).

## Results and Discussion

Historical musicology, researching various spheres of artistic life, has overlooked such an important topic as the concertmaster activity of pianist-composers, who traditionally accompanied the performance of not only their own, but also other people's works, resulting in a unique creative act, when one author became an interpreter of the works of another master, his predecessor or contemporary. For learning the history of music, such artistic events are of unique importance, as they reflect not just performance evolution, but also the process of creative (composer's) reinterpretation of musical material. Yavorsky, apart from his scientific, pedagogical, composer, solo pianist and music-organizational activities, was widely known precisely as the concertmaster of vocalists, who demanded from them "hard work on combining the musical image with the verbal one... To achieve this goal, Yavorsky offered many

technical exercises for clear and expressive work on the verbal text," recalled People's Artist of the USSR K. Derzhynska (Moskalets, 2005). Telling about Yavorsky's work with vocalists on the image, O. Butomo-Nazvanova noted his "inexhaustible well of knowledge, interests, versatile coverage of life, erudition in the field of art, exceptional gift ... creativity of life", and, although he himself never sang and did not possess the specific complex described by M. Deisha-Zionytska in the work "Singing in Feelings" (1926), his "versatile giftedness, attention, desire to always penetrate the essence of the study phenomenon sometimes gave him an advantage over specialists in this area as well." (Yavorsky, 2008).

Yavorsky developed and used a unique set of analytical methods in his work with vocalists, aimed at reproducing the artistic images of each performed work, in accordance with the genre, style, and composer's intention. Yavorsky demanded special attention from the singers to the plastic arts, asked them to move to the rhythm of vocal music, looking for plasticity and the convenience of melody in plastic movements of the body (the methods of synthesizing stage language of Les Kurbas and the eurythmy of the dancer by Isadora Duncan were in common). He developed in the vocalists the skills of "logical analysis and learning the text by heart ... reading the text with conducting (unaccompanied), after which it was possible to move on to the performance of the melody (music and verbal text) with conducting, and only then – to singing romance with accompaniment piano" (Yavorsky, 2008).

Having trained as a concertmaster in Kyiv, under the guidance of the famous maestro Everardi K., Yavorsky never stopped working with Ukrainian singers. In the various periods of his life, he prepared detailed concert programs with Oleksiy Askochensky, Maria Baratova, Olga Blagovydova, Oleksandr Bogdanovych, Olga Butomo-Nazvanova, Lyudmila Vasnetsova, Olena Geitsig, Olympiada Horoshchenko, Ksenia Derzhynska, Maria Deysha-Zionytska, Lidia Zviagina, Nina Koshyts, Volodymyr Losky, Olga Okuneva, Nazar Raisky, Yevgenia Romanova, Serafima Senytsyna, Mykola Filimonov, Olena Hriennikova, Maria Tsybuschenko, Tamara Sheneikh, Oleksandra Shperling, Anna Yan-Ruban, and others (Yavorsky, 2008). In 1907–1911, with the M. Deisha-Sionytska, Yavorsky organized 15 free evenings: "Musical Exhibitions," which occurred in the hall of the Moscow Synodal College. Some of them were entirely devoted to chamber works by contemporary authors, including his romantic

music. In 1928, he held a cycle of concerts with O. Butomo-Nazvanova, performing also as a pianist-concertmaster and lecturer.

Having accepted the proposal of the director of the Kyiv Conservatory, R. Glier, Yavorsky has been working here as a professor at the piano and composition department since September 1916. Despite his considerable teaching load (he taught 39 pianists and 12 composers), he continues to actively perform as a pianist and concertmaster in Kyiv and Moscow. Concerts occur almost every day, the program includes classical and newly written works: by himself and fellow composers. Conducts numerous master classes – creative meetings of his students with outstanding musicians and composers F. Blumenfeld, F. Hartman, O. Glazunov, R. Glier, M. Gnesin, H. Neuhaus, S. Prokofiev, and others (Yavorsky, 2008).

In the fall of 1917, Yavorsky created a plan for the future musicological faculty of the Kyiv Conservatory, which included such disciplines as philosophy, aesthetics, art, and musical styles. A separate aspect of his activity was musical education aimed at young people and children: this work was carried out in the People's Conservatory, founded by him in 1917 in Kyiv under the Society of People's Theater and Arts, of which he was the first director. In 1918, at the invitation of F. Blumenfeld, Yavorsky worked as a professor of music theory at the Kyiv Secondary Specialized Music Boarding School named after M. V. Lysenko, and in 1920 he taught "Introduction to the science of music", "History of music", "Fundamentals teaching about modal rhythm" to musicology students at Kyiv University.

Note that the musical life of St. Volodymyr Kyiv University since its foundation in 1834 had two levels: educational and professional and amateur, and Yavorsky himself, being a student of the mathematics faculty of this university in 1897–1898, attended lectures here on history and theory of music, which was soon transferred to the Kyiv Conservatory largely thanks to his organizational efforts. Yavorsky stood at the origins of the reorganization of the Kyiv Conservatory and the Music and Drama Institute into a new educational institution, took a direct part in the formation of a new musical and educational paradigm, contributed to the development of curricula for theorists and historians of music, who at that time were not yet taught at the Kyiv Conservatory.

Working in Kyiv during the bright and tragic four years of Ukrainian statehood (1918 – 1922), Yavorsky not only performed a lot as a pianist, ensemble player and accompanist for vocalists but also conducted seminars and lectures, wrote scientific articles in which his future theory of musical thinking crystallized. The result of powerful work at the end of the 1919–1920 academic years was a memorandum of Kyiv scientists, where Yavorsky was recommended to the Ukrainian Academy of Sciences with a request to be awarded the title of academician.

Yavorsky did not stand aside from the political life of Ukraine, and at the beginning of 1921 he joined the Committee in memory of his student M. Leontovych – Ukrainian composer, choir conductor, public figure, teacher, author of arrangements of Ukrainian folk songs for the choir "Dudaryk", "Cossack carry", "Shchedryk" (known worldwide as the Christmas carol "Carol of the Bells"). Student of B. Yavorsky, author of a practical course of teaching singing, the methodological concept of which consists in the development and education of tonal hearing and thinking, considers the attention to the conscious pitch representation on specific melodic examples (Kuzyk, 1996). Soon almost all members of this organization were repressed. Yavorsky survived, only thanks to the forced urgent departure of the People's Commissar of Education. He never returned to Ukraine, working in 1921–1930 in the People's Commissariat as the head of the music department of the Main Directorate of Vocational Education of the USSR.

Under his leadership, the idea of continuous musical education was put into practice, namely, the establishment of its three levels: lower (music school), secondary (music technical school) and higher (conservatory) and a unified curriculum was created. Simultaneously, he continued his teaching activities, was in charge of the educational department at the First State Music College, gave brilliant scientific lectures, in particular, at the conservatories of Kyiv, etc., where he conducted permanent seminars (the most notable ones being "Bach's" and "History of Performance Styles").

During 1921–1931, Yavorsky was an active member (academician) of the State Academy of Arts. But his ties with Ukraine were not interrupted. On February 5, 1930, an All-Union scientific conference dedicated to the theory of harmonic rhythm was held. Among the numerous speakers were students of Yavorsky from the Kyiv Conservatory: H. Veryovka (with a report



"On musical work based on modal rhythm in Ukraine"), N. Goldenberg, S. Protopopov, I. RabyNovych. After the debate, Yavorsky answered questions for five hours. However, Yavorsky's theory was soon recognized as "non-Marxist," and some weak-minded students betrayed him. The tolls of the artist began.

Excluded from the educational process, since 1932 he worked as a senior editor of the state music publishing house ("Muzgiz"), and only in the fall of 1938 he received an invitation from the Moscow Conservatory to teach the author's course "History of Performing Styles" to graduate students of all faculties, as well as to implement creative projects. One of them was the student production of S. Taneev's opera "Orestea", performed by Yavorsky together with A. Dolivo at the department of chamber singing in 1939. The pianist M. Yudina recalls it as follows: "The participation of Boleslav Leopoldovich in the creation of Taneev's production of Orestea was also very vividly expressed in the lecture he gave (for all teaching staff and students) about Taneev, his work and his meetings with the great composer. The impression was strong, notes were written, questions were asked, as always, around Yavorsky "life abounds" ... As in all his successful and inspired statements, Boleslav Leopoldovich managed to find the Eternal in the fleeting, to unite the distant and the opposite, finding the main core of the tragic conflict" (Yavorsky, 2008).

At the beginning of 1941, Yavorsky was awarded the scientific degree of doctor of art history (based on a collection of works and without a thesis defense). And the very next year, he died suddenly while working at his desk. His last addressee was D. Shostakovich (correspondence with whom began in 1925), who shortly before that helped Professor Yavorsky improve living conditions in Saratov, where he was evacuated.

A special mention should be made of the diplomatic mission of Yavorsky, whom the USSR government repeatedly sent to Italy, Germany, France, and England to study the state of music education, organize tours, and to establish relations with outstanding musicians-emigrants from the USSR, in particular S. Prokofiev, who in 1936 returned to his homeland. In 1926, Yavorsky promoted the performances of a native of Kyiv, soloists of the Bolshoi Theater K. Derzhynska in Germany, where he toured together with O. Butomo-Nazvanova. Simultaneously, during a one-and-a-half-month business trip to Germany, Austria, and France

("to get acquainted with the staging of the musical-educational business"), Yavorsky visited the Ukrainian singer N. Koshyts, whom he had previously accompanied in Kyiv, and here – in her Paris salon, he met with one more of their compatriots, – V. Horovyts (Yavorsky, 2008; Leontovych, 1989).

As we can see, the dimensions of the personality of the outstanding musician and theoretician, professor, doctor of art history Yavorsky impress with their harmonious combination and perfect development of each of his talents. He invented his own theory in musicology; carried out a structural and semiotic description of the creative process; wrote and performed his own and other people's music; taught and reorganized the educational process; researched musical terms and introduced new ones; translated significant musical and theoretical works and poetry from German, French, Polish into Russian and vice versa and even created ballet librettos. Contemporaries unanimously noted the "demonic" tirelessness of Yavorsky, his ability to unyieldingly lead the interlocutor along the course of his thoughts and, as it were, program him for further creative activity, outlining its stages and immediate goals.

The focus of the article is on such an understudied aspect of Yavorsky's activity as the work as a concertmaster of vocalists. It is quite possible that in the case of studying his vague ensemble and solo pianistic activity, the specific weight of the coverage of the instrumental sphere of the performing amplitude of this artist would be higher. However, the topic of research into aspects of Yavorsky's personality was deliberately limited to his accompaniment of vocalists, as a special phenomenon of musical performance. Such vocal "hegemony" is extrapolated to the attention that composers paid to vocal genres, which inevitably contributed to the fact that it was vocal music that occupied too important a place in their work, and therefore in accompanying activities (as an example of eidos vocality of in composer's creativity) (Antonyuk, 2001). Yavorsky was no exception, whose active concertmaster practice with vocalists became an integral part of the pianist's solo performance, and indirectly influenced the formation of new concert forms and means of artistic expression.

Finally, we should note that Yavorsky also possessed bright talent as a manager of musical art, which he fully embodied in various positions. It is interesting that he himself never differentiated his multi-faceted activity, which once again proves the synergistic model of the



personality of an artist, which ideally accumulates in himself different sides of the general musical-historical process.

### Conclusions

The paradigmatic approach used by us in the study of vocal art updates the standards of scientific thinking, making significant corrections to the general scientific picture of the world. The synergistic direction of scientific research, within the framework of which the general regularities of the transition from chaos to order and back (processes of self-organization and spontaneous disorganization) are studied, is an interdisciplinary phenomenon. Comprehensive further understanding of the presented multidimensional personality phenomenon of Yavorsky (doctor of art history, pianist, accompanist for vocalists, composer, teacher, music and public figure, one of the first professors of the Kyiv Conservatory) and determining its influence on the further formation of the Ukrainian vocal paradigm of music education is especially growing in our time, when the theory of synergetic as self-organization offers an original understanding of the world and its ways out of the crisis of scientific rationality. The paradigmatic research standards proposed by us outline the contours of the postmodern image of scientific thinking and make significant corrections to the general scientific picture of the world.

### Bibliographic references

- Antonyuk, V. G. (2001). *Ukrainian vocal school: ethnocultural aspect*: monograph. Kyiv: Ukrainian idea.
- Antonyuk, V. G. (2015). Boleslav Leopoldovich Yavorsky: Planes of Personality. *Scientific herald of Tchaikovsky National music academy of Ukraine*, 113, 109-127.  
[http://nbuv.gov.ua/UJRN/Nvnmaw\\_2015\\_11\\_3\\_11](http://nbuv.gov.ua/UJRN/Nvnmaw_2015_11_3_11)
- Antonyuk, V. G. (2021). Synergetic and vocal content of B. L. Yavorsky theory. *Literature and culture of Polessie*, 103(18), 113-127.  
<https://doi.org/10.31654/2520-6966-2021-18f-103-113-127>
- Aranovsky, M. (2012). The theoretical conception of Boleslav Yavorsky. *The art of music: Theory and history*, 6, 39-58.
- Champigny, R. (2006). One hundred years of research on octotonism, part 1: from Yavorsky to van den Toorn. *Musurgia*, 13(2), 33-49.
- Komenda, O. I. (2020). *Universal creative personality in Ukrainian musical culture* (Doctoral dissertation), National Academy of Music of Ukraine named after P. I. Tchaikovsky of the Ministry of Culture, Youth and Sports of Ukraine, Kyiv (in Ukrainian).
- Kotliarevsky, I. (1937) *Selected works*, 2<sup>nd</sup> edition. Kharkiv: State Literary Publishing House.  
<https://elib.nlu.org.ua/view.html?id=11132>
- Kuzomina, L. A. (2003). Peculiarities of the development of performance technique (from the heritage of B. L. Yavorsky). *Bulletin of Kharkiv state academy of design and arts*, 2, 22-30 in Ukraine.
- Kuzyk, V. V. (1996). *Society named after M. Leontovych – 75 years old*. Kyiv: Music Information. Center of the Union of Composers of Ukraine.  
<https://acortar.link/MKySMM>
- Leontovych, M. D. (1989). *Practical course of teaching singing in secondary schools of Ukraine*. Kyiv: Muzychna Ukraina.
- McQuere, G. (1983). The Theories of Boleslav Yavorsky. In McQuere, Gordon (ed.). *Russian Theoretical Thought in Music. Russian Music Studies*, Vol. 10. UMI Research Press.
- Moskalets, O. (2005). Ksenia Derzhynska. Fame and oblivion of the "golden soprano". *ZN*, 2(530).  
[https://zn.ua/ukr/ART/slava\\_i\\_zabuttya\\_zoloto\\_soprano.html](https://zn.ua/ukr/ART/slava_i_zabuttya_zoloto_soprano.html)
- Slonimsky, N. (1978). "Yavorsky, Boleslav". Baker's Biographical dictionary of musicians (6th ed.). New York: Schirmer Books.
- Yavorsky, B. (1972). *Articles, remembrances, correspondence*. Edited by Isaac Rabinovich and Dmitri Shostakovich. Moscow: Soviet composer.
- Yavorsky, B. (1925). "Bach seminar". Notes by S. Riazanovy and L. Averbukh, with oversight by Yavorsky. <https://acortar.link/PVVJxZ>
- Yavorsky, B. (1915). *Exercises in the formation of lādovy rhythm*. Jurgenson.
- Yavorsky, B. (1913). *Exercises in voice leading*. Jurgenson.
- Yavorsky, B. (2008). *Favorites: Letters, recollections*. Moscow: Composer.  
<https://acortar.link/XCsYjL>
- Yavorsky, B. (1923). *The basic elements of music*. Moscow.
- Yavorsky, B., & Beliaeva-Eksemplarskaiia, S. (1929). *The perception of lādovy melodic structures*. Moscow.
- Yavorsky, B. (1908). *The structure of musical speech*. Moscow: Compositor Editorial.



DOI: <https://doi.org/10.34069/AI/2023.71.11.5>

How to Cite:

Alkhannani, B. (2023). The impact of blended learning on undergraduate english language learners: A case study at Ha'il University, Saudi Arabia. *Amazonia Investiga*, 12(71), 61-76. <https://doi.org/10.34069/AI/2023.71.11.5>


## The impact of blended learning on undergraduate english language learners: a case study at Ha'il University, Saudi Arabia

أثر التعلم المدمج على متعلمي اللغة الإنجليزية الجامعيين: دراسة حالة في جامعة حائل بالمملكة العربية السعودية

Received: October 27, 2023

Accepted: November 30, 2023

Written by:

Badriah Alkhannani<sup>1</sup> <https://orcid.org/0000-0003-0560-2062>

### Abstract

In current times, blended learning has emerged as one of the most noteworthy trends in the educational sector. Blended learning approach is a group of various learning approaches and elements that may be integrated to assist learners in fulfilling their instructional goals more efficaciously than learning in traditional learning environments and combines the best aspects of online and instructor-led learning and is delivered in a 'small-group' or 'one-on-one' format. The present study was designed to explore, how blended learning may be utilized in an effective manner for developing the English language expertise of undergrad students at the University of Ha'il, Saudi Arabia. Blended learning by incorporating adaptive learning platforms that tailor content based on individual student achievements. The outcomes report that the blended learning approach can be exploited for enhancing the environment of English learning for motivating the students toward the learning English language. The study at Ha'il University concluded that the integration of technology provides access to diverse digital resources, such as online lectures and interactive simulations, enhancing the overall educational experience. Thus, the teaching English at the undergraduate level through a mixed learning approach will be sufficient to support all facets of learning and teaching.

**Keywords:** Blended Learning, Computer Assisted Learning, Educational System, Information and Communication Technology, Online Learning, Students.

ملخص: في العصور الحالية، ظهر التعلم المدمج كواحد من أبرز الاتجاهات في القطاع التعليمي. البحث في نهج التعلم المدمج نسبياً جديد ويمكن ربطه بعدة مجالات أكاديمية، مثل أساليب تدريس اللغة الإنجليزية، وتقنيات التعليم المتنوعة، وتعلم اللغة بمساعدة الحاسوب وغيرها الكثير. بشكل عام، يعد نهج التعلم المدمج مجموعة من النهج والعناصر التعليمية المتنوعة التي يمكن دمجها لمساعدة المتعلمين في تحقيق أهدافهم التعليمية بكفاءة أكبر من التعلم في البيئات التعليمية التقليدية. إنه يجمع بين أفضل جوانب التعلم عبر الإنترنت والتعلم بإشراف المدرس ويتم تقديمه في تنسيق "مجموعة صغيرة" أو "فردية". يؤكد نهج التعلم المدمج أنه نظراً للحالة الحالية لأنظمة التعليم الحديثة يمكن مزج النهج التعليمي التقليدي مع المزايا الرئيسية للتقنيات. بناءً على الاتجاه الحالي لنهج التعليم القائم على التكنولوجيا، تم تصميم الدراسة الحالية لاستكشاف كيفية استخدام التعلم المدمج بفعالية لتطوير خبرة الطلاب الجامعيين في اللغة الإنجليزية في جامعة حائل بالمملكة العربية السعودية. تشير النتائج إلى أن نهج التعلم المدمج يمكن استغلاله لتحسين بيئة تعلم اللغة الإنجليزية وتحفيز الطلاب على تعلم اللغة الإنجليزية كما سيمهد هذا النهج الطريق لاختباره وتطبيقه في تدريس وتعلم لغات ومواد أخرى.

التعلم والاتصالات المعلومات تكنولوجيا، التعليم النظام، الحاسوب بمساعدة التعلم، المدمج التعلم: الرئيسية الكلمات الطلاب، الإنترنت عبر

### Introduction

The English language occupies an indispensable role in the global arena. Its influence permeates almost every facet of human activity, encompassing areas such as academia, business, administration, information technology, and

more. In Saudi Arabia, English is a key component of the educational curriculum, being a mandatory subject from the 6th grade through to university level. Currently, the Saudi Ministry of Higher Education is considering introducing

<sup>1</sup> Assistant Professor, Department of English, College of Arts, University of Hail, Saudi Arabia.

English language instruction starting from the 4th grade to achieve more effective outcomes.

English is the most widely used language worldwide, driven by its global demand. It is not only a key language in technology but is also employed extensively in various fields, including commerce and international business, as noted by McCarthy and Murphy (2010). Moreover, the ambitious Saudi Vision 2030 includes significant reform proposals for the nation's education system and policies, to be implemented in stages (Al-Seghayer, 2021). Key strategic objectives of Saudi Vision 2030 for the education sector include bridging the gap between post-secondary educational outcomes and labor market needs, enhancing the quality of higher education in the kingdom, positioning at least five Saudi universities among the world's top 200, and improving the academic performance of Saudi students (Al-Seghayer, 2021).

Given the English language's status as a repository of global information and practical communication, it is a primary medium of instruction in higher education worldwide, including in other Gulf countries including Saudi Arabia. Despite its widespread acceptance, there remains a need to enhance the proficiency of learners to meet the requirements of various professional sectors.

Blended learning is an educational approach that combines face-to-face teaching with online teaching. This approach has become a growing trend in higher education, as it offers students greater flexibility and control over their own learning. Blended learning, a mix of diverse instructional methods, supports students in achieving their educational objectives more effectively compared to traditional settings (Hartman et al., 2007; Teeter, 1997). This approach combines online and in-person instruction, tailored to individual or small group settings (Dziuban et al., 2004). Blended learning's strength lies in its personalized content design, enabling learners to engage with the material at their preferred pace and time. It allows students to focus intensively on new or challenging content and proceed at their own speed. In face-to-face sessions, instructors can directly address students' questions and guide them towards their goals. This method enhances learning by allocating more effective and authentic time for student engagement in both online and offline environments. Learners are more motivated as they can track their progress and receive immediate feedback. Blended learning employs strategies that integrate online

learning techniques with traditional methods focused on group activities. The utilization of blended learning in studying English and practice-based learning significantly enhances students' performance and skills.

Saudi Arabia's educational system is currently undergoing significant transformation, striving to meet new challenges and fulfill students' educational needs. This transition involves embracing innovative technological tools and exploring fresh approaches to ensure quality education for all. Factors such as the COVID-19 pandemic, socio-economic constraints, limited budgets, and lack of facilities have hindered a full transition away from traditional educational methods.

A report revealed that when undergraduate students were asked about their preferred mode of instruction, they were almost evenly split between favoring traditional classroom teaching and ICT (Information and Communication Technology)-based methods (Nuzhat et al., 2013). Traditional teaching methods, despite their limitations, provide essential human interaction in the learning process. The personality and behavior of teachers greatly influence the development of students' characters. However, this approach alone may not fully prepare students for the demands of the modern job market and professional requirements, as face-to-face interaction alone may not impart sufficient knowledge and skills.

Conversely, ICT-based teaching is emerging as a powerful alternative, aligning education with technological advancements and globalization. It minimizes errors in instruction, enhances quality, and broadens students' exposure. ICT-assisted teaching introduces a new dimension to learning, granting access to a vast array of knowledge and offering diverse learning opportunities. This method is inclusive, benefiting all types of learners, including undergraduates, postgraduates, and even in-service employees, particularly those who are physically challenged. The COVID-19 pandemic highlighted its effectiveness in reaching a wide range of students.

Considering these facts and identified research gaps, the current study aims to evaluate the feasibility of adopting 'blended learning' in teaching and learning the English language at the undergraduate level at Ha'il University. The present study explores the impact of blended learning on undergraduate English students at Ha'il University, Saudi Arabia. The major

objective of the present study was to evaluate students' perceptions of blended learning in the context of the English learning and identify the benefits and challenges of blended learning for undergraduate English learners of Saudi Arabia. The study was based on a survey of undergraduate students who had participated in at least one English course with a blended approach. This investigation is particularly relevant in the current context, as blended learning aligns with learners' expectations of integrating technology into their language studies. It offers the flexibility needed for learners to manage their busy schedules and aligns with the Saudi government's policies promoting technologically aided learning. Overall, the findings of the current study prove that blended learning can be an effective tool in improving English learning in higher education. However, it is important to address the challenges associated with blended learning to ensure its success.

### Literature Review

In a recent action research by Zhang (2023) reported enhanced oral production in integrated English blended teaching through a production-oriented approach. This study highlights the effectiveness of a production-oriented approach in blended learning environments for improving students' oral English skills. Zhang's research aligns with current educational trends that emphasize active learning and student-centered approaches, providing empirical support for incorporating such methods in language teaching (Zhang, 2023). Likewise, Xueshan's (2023) work on blended learning approach in English teaching addresses both the effectiveness and challenges of this method. His study underscored the benefits of blended learning, such as increased student engagement and improved learning outcomes, while also acknowledged the technological and infrastructural challenges that can impede its implementation. The dual focus work offers a balanced view of blended learning, highlighting the need for careful planning and resource allocation to overcome potential obstacles (Xueshan, 2023).

In another study, the effect of small private online course and Flipped-Classroom"-based blended teaching strategy on first-year English-major students' achievements was studied by Zheng & Lee (2023). Their research demonstrates how blended teaching strategies can enhance academic performance, particularly in language learning. This approach combined online self-learning with classroom interactions

and offered a promising avenue for language educators looking to optimize learning experiences for students (Zheng & Lee, 2023).

Lillian et al., (2023) explored teachers' perceptions of blended learning and its impact on language skills acquisition in Kenya. Their research reveals that teachers' view of blended learning is as a vital tool for improving language education, although they also note challenges related to resources and training. This study highlights the importance of teacher perspectives in the successful implementation of blended learning strategies (Lillian et al., 2023). The recent study of Melnyk (2023) discussed the formal, non-formal, and informal content domains of blended learning for prospective English university teachers. Melnyk study provides insights into how blended learning can be structured to cater to the diverse needs of future educators, emphasizing the importance of a comprehensive approach that includes various forms of content and interaction (Melnik, 2023). Whereas Xiangze & Abdullah (2023) investigated the use of station rotation with a gamification approach to increase student engagement in learning English online. Their research suggests that gamification can significantly enhance student motivation and engagement in blended learning environments, providing a novel approach to making online learning more dynamic and interactive (Xiangze & Abdullah, 2023). Lately, a report published on students' perceptions of blended learning application in enhancing English oral competence at Ton Duc Thang University and emphasizes the positive views of students towards blended learning, particularly its impact on improving oral language skills, thereby highlighting the learner's perspective in evaluating the effectiveness of blended learning methods (Thy & Nhân, 2022).

Earlier, Millimouno et al., (2021) explored scanty evidence suggesting that digital education is comparably effective to traditional learning for enhancing communication skills in medical students and reported blended digital education appears to be at least as effective, if not more so, than traditional learning in fostering communication skills and knowledge. Also, they observed no discernable difference in post-intervention skills between more and less interactive forms of digital education (Millimouno et al., 2021). Likewise, Nong et al., (2023) summarized his findings on blended learning as positive effects were observed between academic self-efficacy and learning engagement, but a negative association was



noted with cognitive load; Cognitive load did not show a significant influence on learning engagement; Learning engagement positively contributed to increased academic self-confidence; and Cognitive load exhibited a negative effect on the enhancement of academic self-confidence.

Similarly, while working on learning techniques, Ng & Yip (2019) found that the flipped classroom strategy positively impacts learning by diminishing cognitive load, increasing engagement, improving accuracy, boosting motivation, enhancing attitudes, and increasing satisfaction with both the course and self-efficacy in higher education. However, a notable challenge of the flipped classroom is students' unfamiliarity and the need for proper adaptation. The inversion method also results in an elevated workload for teachers. Despite these challenges, the analysis of the research findings suggests that higher education can effectively employ the flipped classroom approach.

The findings of Li & Yu (2022) suggest that environments with higher immersion levels result in increased presence and improved learning outcomes. While working on metaverse, they report that metaverse-based education can play crucial roles in blended learning contexts. Metaverse platforms not only offer more than just online games but also facilitate self-directed learning experiences. Additionally, the metaverse opens avenues for expanding the scope of English education, with the potential to enhance academic performance and grant learners' more freedom to explore inquiries (Li & Yu, 2022).

Considering the progress of learning process, introducing innovation and making the process more effective by including novel pedagogical techniques, resources, and ICT techniques are welcomed and based on published research, it is proven that these innovation in teaching techniques are completely adjustable and are getting wider acceptance. Based on research gaps identified, the present research offers a theoretical implication and practical recommendation for educators and researchers aiming to enhance the development of blended English learning.

## Methodology

The present study employed a cross-sectional descriptive analytic method and utilized a quantitative approach by employing a scale as a means of gathering data. The objective of the

study was to investigate the learning strategies utilized by students, irrespective of their familiarity or intentional use of these strategies.

## Participants & Study Design

In this study, there is designed a set of questionnaires based on a self-administered web-rooted Google form for dataset collection for the cross-sectional investigations. The participants were undergraduate students of the Department of English, College of Arts, University of Ha'il, Saudi Arabia. The participating students are studying at the university for more than a year and come from various social, educational, economic, and geographic backgrounds. All of the participant's students were made attentive regarding the objective of the study well. This study has been carried out between February 2022- July 2022. The subjects' involvement in the present research investigation has been entirely voluntary, as well as participant identities were kept confidential throughout the study.

## Data collection tools

There has been prepared a set of distinct questionnaires containing overall 10 questions for this study. These prepared questions were distributed to 100 people and then updated to match the needs of the people who took part. The reliability and Kaiser–Meyer–Olkin (KMO) tests were performed to validate further the questionnaire. The KMO test is a type of statistical assessment to check, if the data is adequate for factor analysis. Thus, KMO test calculates 'sampling adequacy for each variable in the model and the complete model.

The survey was divided into two parts, with the first component containing questions about the participants' demographic features. The second component of the survey included questions about the many characteristics of traditional and virtual learning modes and teaching and their ramifications. The research questionnaire was carefully constructed with the study's objectives in mind.

## Statistical analysis

The data received from the questionnaire was processed and arranged in the MS excel file as needed. The findings were also displayed using a range of pie charts and graphs to offer a clear image of the facts for a better and more comprehensive understanding. The study utilized descriptive and inferential statistics, to examine the survey responses quantitatively. Also,



thematic analysis performed to qualitatively explore patterns and themes. This qualitative aspect seeks to capture the nuanced aspects of participants' experiences and perceptions.

### ***Study limitations***

It is essential to transparently acknowledge potential limitations, such as the challenge of generalizing findings beyond Ha'il University, Saudi Arabia ensuring the study's context-specific nature is recognized. Furthermore, potential biases in the data collection or participant responses acknowledged and discussed to maintain the research's integrity and reliability.

### ***Ethical consideration***

This study has been permitted through the University of Ha'il Research Ethics Committee in Saudi Arabia under approval letter no. H-2022-134. Moreover, this study's research procedures followed the university's official norms and rules.

### ***Results***

The concept of blended learning initially emerged in the business and corporate training sectors (Somers & Sikorova, 2002) before being adopted in the educational field (Hoy et al., 2000) and eventually in the specific context of teaching and learning (Brown, 1993). Earlier, Chan & Koh (2008) pointed out that in the English Language Teaching (ELT) context, the understanding of blended learning differs from its usage in corporate and general educational settings. The focus in ELT is not just on what blended learning is, but why it is beneficial for language learners and how it can best support and enhance learning outcomes, must be addressed.

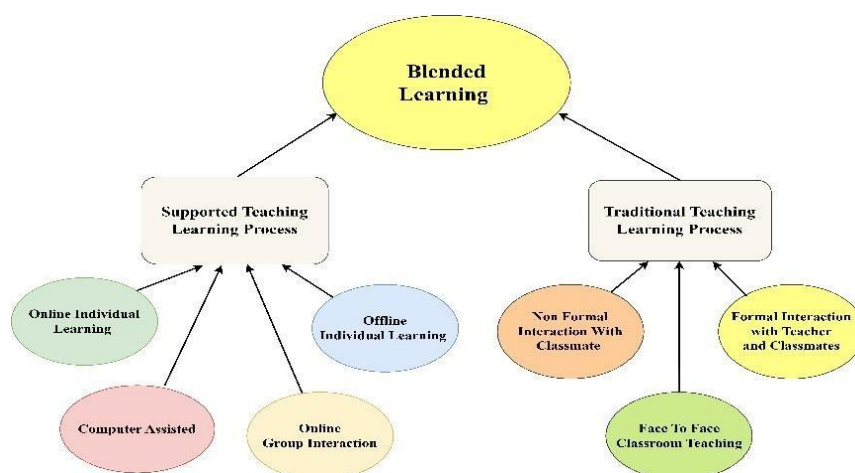
In the past, Eleonora Villegas-Reimers (2003) defined blended learning as the combination of different media (such as print, audio, and video) with classroom interaction to maximize authentic

input, thereby promoting learners' output and skill development. This approach has been evaluated in various studies. For instance, Sands (2002) assessed the impact of mobile technologies on reading comprehension skills and found that most participants in the experimental group used mobile devices for English language learning.

Later, Alnoori et al., (2017), who applied a blended learning strategy for teaching English reading skills to secondary school students in Iraq, reporting significant improvements in keyword confidence, pronunciation, and meaning comprehension. Gamage et al., (2022) investigated the effects of Moodle-enhanced education on students learning English as a foreign language, targeting skills such as skimming, scanning, and vocabulary building. The study showed that the experimental group made significant progress in reading comprehension.

Amare et al., (2006) explored the impact of blended learning on the reading skills of Ethiopian EFL learners, noting a statistical improvement in the experimental group compared to those receiving traditional classroom teaching. Similarly, Anderson (2002) studied the effects of hypermedia on ESL learners' reading comprehension, finding that incorporating various multimedia elements like graphics, audio, and hyperlinks was beneficial.

According to Krieg et al., (2019), an effective blend of online and in-person learning can enrich the learning environment, making the process more effective and enjoyable. The optimal mix should cater to the learners' needs and enhance the effectiveness of teaching methods. The concept of blended learning, as Whittaker (2014) discusses, referring to Smith and Kurthen (2007) and Hinkelman (2013), encompasses a range of interpretations and definitions, indicating its evolving nature and application in different educational contexts.



**Figure 1.** Blended learning approach comprising various tools and techniques of teaching and learning (Author self-created diagram)

Blended learning is a concept that entails defining the overall teaching as well as learning procedure involving both face-to-face (in person) as well as ICT-based instructions. Direct instruction, various indirect instruction, collaborative teaching, as well as personalized computing-based learning involving blended learning (Sukirman et al., 2022) and (Whitelock & Jefts, 2003). Figure 1 depicts a blended learning approach comprising various tools and techniques of teaching as well as learning.

- a) *Face-to-face teaching:* Blended learning allows students to connect with their teachers in a regular classroom setting, allowing them to be influenced by their personalities, behaviors, and value systems. In-person face-to-face contact aids in more synchronous communication. Both the teachers as well as students can receive quick feedback, which benefits the teaching-learning process. Face-to-face interaction motivates faculty and learners and offers human involvement in the adopted procedure.
- b) *Interaction of students with course content:* ICT-mediated learning engages students with their course topic in a variable and interesting, diversified method. In contrast, the traditional teaching model as well as the school environment offer them time for interaction directly along with corresponding course subjects using printed materials. However, informative videos provide the content with the needed believability, and sharing it over blogs as well as visiting diverse e-books gives it a novel and updated viewpoints.
- c) *Peer group interaction:* Students learn formally and informally at the school

campus while interacting with respective peer groups. Numerous essential life skills as well as social values can be learned through informal interactions with peers. The school campus offers numerous playground activities and social exchange options during their leisure time.

- d) Classroom teaching allows students to connect with teachers. Still, well-designed tactics also enable students to get connected in discussions with their classmates about various areas of the course as well as exchange views. It assists pupils to gain self-confidence, overcome their fears, and develop the ability to communicate effectively including active listening skills.
- e) Using an e-library is a part of blended learning's ICT-assisted teaching as well as learning. Typical school libraries restrict access for students, whereas digital libraries give access to them to a wide range of literature on a variety of subjects. It increases their knowledge and horizons, which helps them in achieving their cognitive objectives.
- f) The virtual classroom allows students to study from anybody, anywhere. Students can participate in virtual classroom meetings with their classmates and teacher in cyberspace, regardless of their geographic location. The school may also make provisions for it such that the overall system becomes more flexible as well as pupils, those who cannot attend their respective classes regularly may be benefitted from it. In addition, students can connect with other specialists and expand their expertise. As today's world is becoming a globalized village, pupils who use this style would be at par with their groups in various other

countries and can easily obtain experience of diverse cultures.

- g) Online assessment: Instant response is one of the critical components of the learning process since this encourages students and is rooted in readiness concepts. Online evaluation makes the evaluation process more formative, transparent, and efficient. It has become more reliable too.
- h) Students require numerous types of e-tuitions. Some students failed to get optimal benefits from classroom instructions and they opt for personal coaching and undivided attention. Such students may opt for e-tuition, which entails meeting a private instructor and receiving personalized advice via video conferencing in cyberspace.
- i) Students have less opportunity to nurture their creativity in traditional classrooms due to rigid timetables and pressure from classwork, assignments, and coping with the stress of regular exams. Still, educational blogs give pupils a good platform for demonstrating their creativity as well as receiving feedback. Furthermore, educational blogs provide an excellent forum for discussing essential themes not covered in schools, such as social concerns, political issues, and other issues affecting youngsters, such as drug addiction, delinquency, and population education.
- j) Webinars are another component of blended learning that uses an ICT-based structure. Students participate in lectures on many topics that are important to them over the Internet. All participants are generally connected via various programs such as Skype, Zoom, or GoogleTalk and then use video conferencing to present their work and participate in educational conversations.
- k) To view lectures on YouTube: Blended learning-based model allows students to benefit from the expertise of experts in the entire course subject pupils are studying by allowing them to quickly access lectures from recognized experts in various fields available on YouTube. Furthermore, the institution can post a video of its instructors' lectures such that pupils who failed to join college may take benefit of this as well as get the benefit of it.
- l) Videos and audio use in online learning: Educational video recordings as well as various animated films are accessible to explain multiple scientific/non-scientific ideas and engage. They are founded on the principles of reality and live connection. Consequently, students can experience real

life while studying, making complex concepts and phenomena concrete.

### ***Observational findings***

The current study focuses on evaluating the impact of blended learning on the knowledge, skills, and competency in English language learning among undergraduate students at Ha'il University, comparing it with traditional learning methods. This research also aims to assess and compare students' attitudes towards blended learning and to explore the relationship between their knowledge, skills, competence, and attitudes in both blended and traditional learning contexts.

For this study, the data were collected from 100 voluntary participants who shared their insights through a structured survey questionnaire. The questionnaire targeted undergraduate English language students at the University of Ha'il in Saudi Arabia, seeking their opinions on the blended learning approach. The study also aimed to understand the students' interest and suitability regarding English language learning, especially focusing on online versus traditional learning modes.

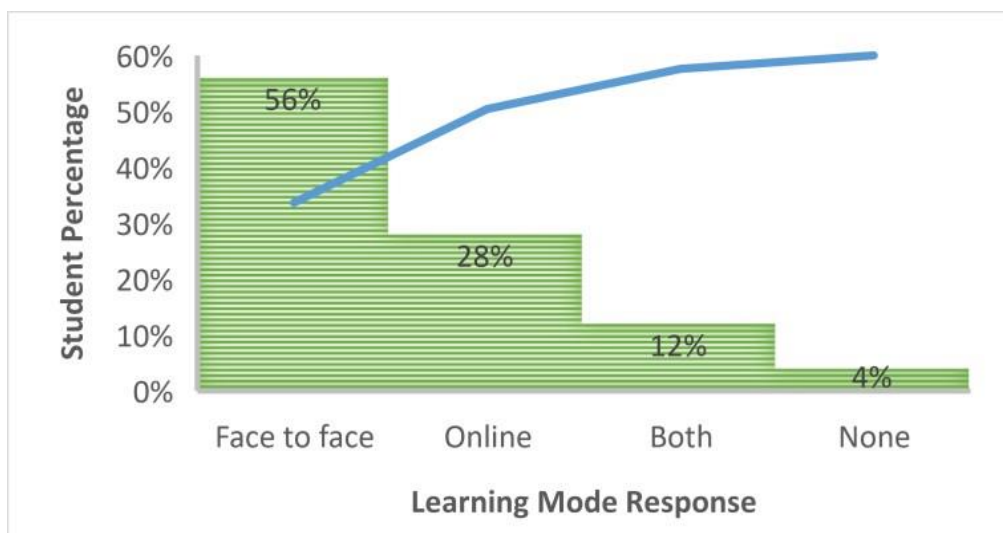
The findings were based on the perceptions of the respondents, reflecting their views and experiences. Demographic analysis of the respondents revealed that out of the 100 participants who completed the questionnaire, 76% were male and 24% were female. Age-wise, 24% of the respondents were between 15 to 20 years old, 56% fell into the 20 to 25 age group, and approximately 20% were aged between 25 to 30 years.

This demographic breakdown is significant as it provides a context for interpreting the data, helping to understand how different age groups and genders perceive and interact with blended learning environments. The responses from this diverse group offer valuable insights into the effectiveness and reception of blended learning in higher education, specifically in the context of English language learning at Ha'il University.

### ***Findings from the survey questionnaire***

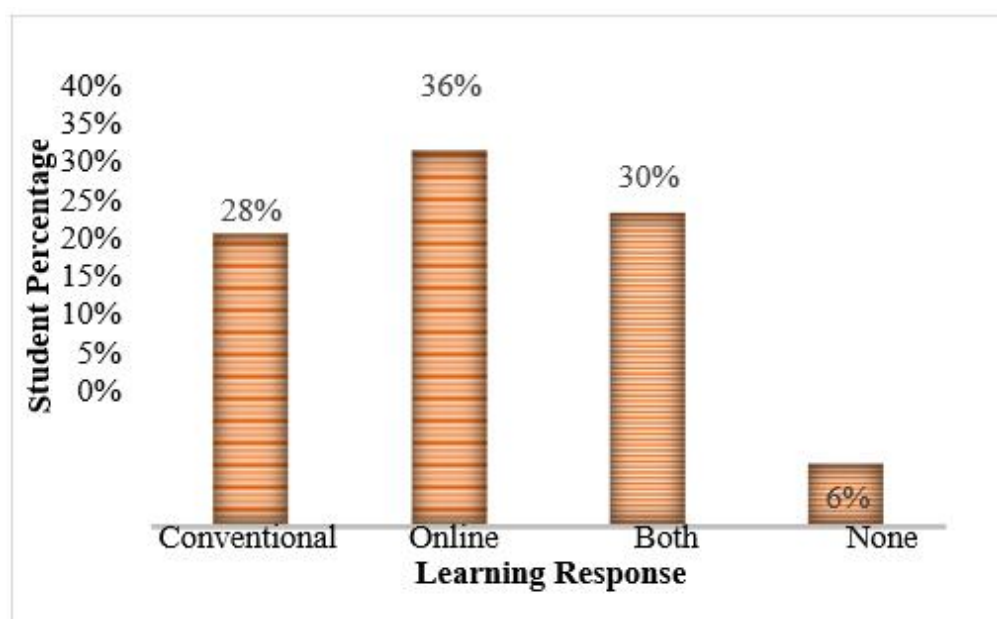
The following graphical representation depicts the results obtained via this study (Figure 2-11). Each question item's response has been discussed below:

1. *Which mode of learning do you feel better, online or face-to-face?*



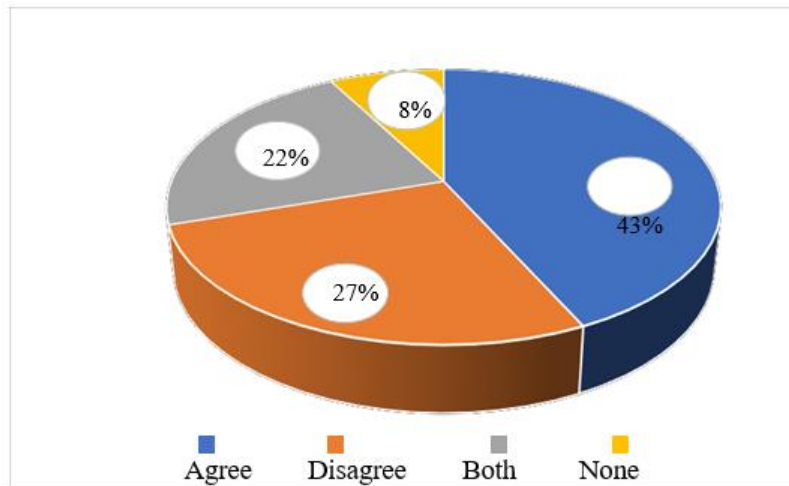
**Figure 2.** This graph shows students' views over learning styles as they responded to the above-said specific questions. The graph representing Student Response on X-axis and Percentage of Students on Y-axis. As per their responses, 56% of students believe that face-to-face learning is much better, and 28% opined that online education is acceptable. In the same instance, 12% of the pupils found both modes of learning okay. Only 4% of the respondents viewed face-to-face and online learning negatively. (Author self-created graph).

2. Where do you find more interest in online or offline classes?



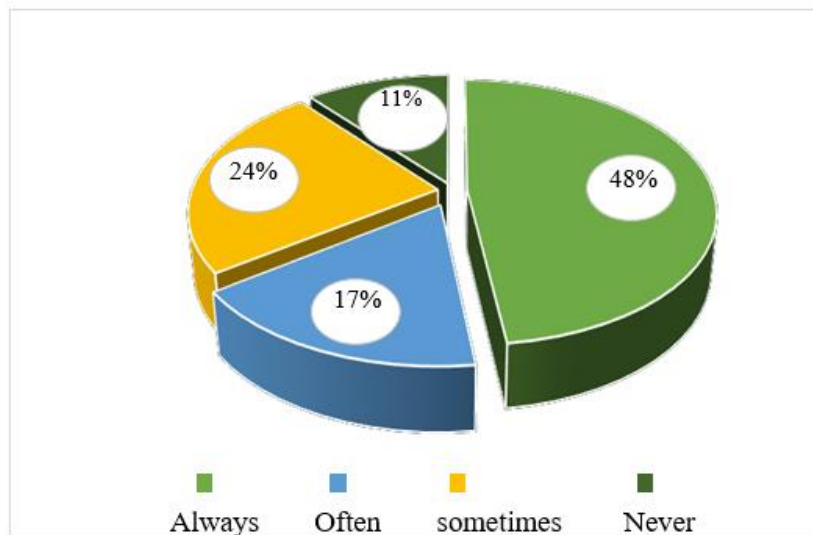
**Figure 3.** Only 28% of students find conventional classes interesting, whereas 36% of respondents believe online learning is quite interesting. Whereas the remaining 30% opined both offline classes and online classes are equally interesting. Around 6% of the students disagreed with any one mode of learning. (Author self-created graph)

3. Which mode of learning improves your English language skills, Traditional or Online?



**Figure 4.** It shows that 43% of students agreed that the traditional mode of learning helps them to improve their English language skills which is an appealing result to grab the attention of prospective teachers of the English language. However, 27% disagreed with the traditional mode and believe that online classes help in improving their English language skills. On the contrary, 22% of students think both systems help in enriching their English skills, while 8% consented to none. (Author self-created graph).

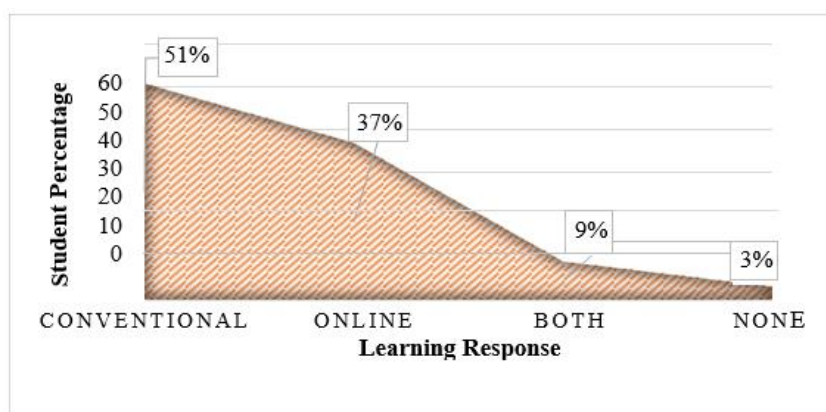
4. Do you think Information Communication and Technology (ICT) assists your learning?



**Figure 5.** It shows that 48% of students agreed that ICT always assist in their learning, and 17% feel ICT often helps in understanding. The rest, 24%, sometimes believes ICT assists their respective education, and only 11% of the students never find such assistance through ICT. (Author self-created graph)

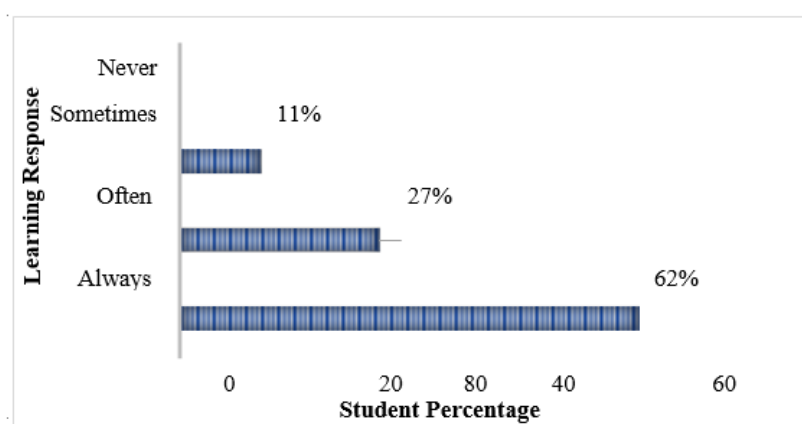
5. Which mode of learning makes you increase your knowledge?





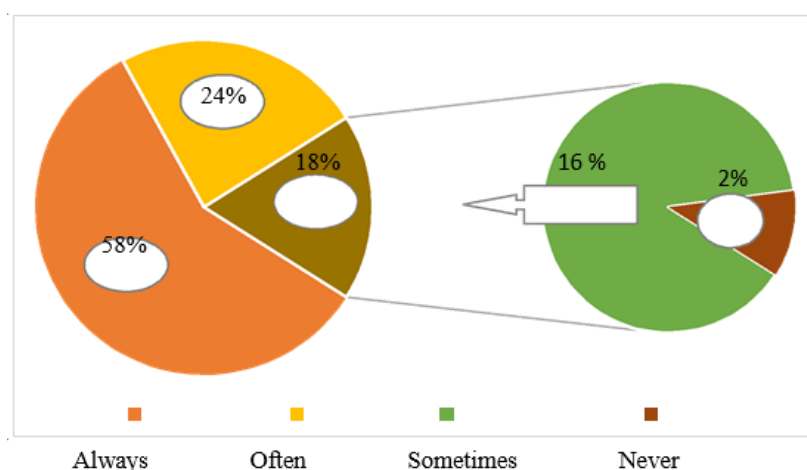
**Figure 6.** It shows, 51% of the students reveal that the conventional mode of learning increases their knowledge, while 37% of respondents feel online mode help in expanding their knowledge. 9% agreed that both modes will enhance their knowledge. While only 3% of them opined none of these options. (Author self-created graph)

6. Do you have adequate infrastructure to study in blended learning mode?



**Figure 7.** This shows that 62% of undergraduate students believe they have adequate infrastructure to study in a mixed-learning environment. Whereas 27% of respondents often feel that they have proper infrastructural facilities. (Author self-created graph)

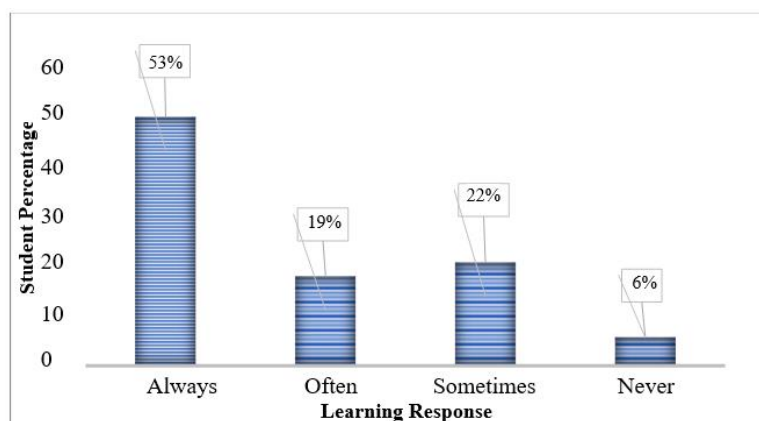
7. Do you have a computer laboratory in your institution?



**Figure 8.** According to this, 58% of students believe that they always have a computer laboratory in their organization. Moreover, 24% of respondents agreed that they often feel that they have such facilities. And

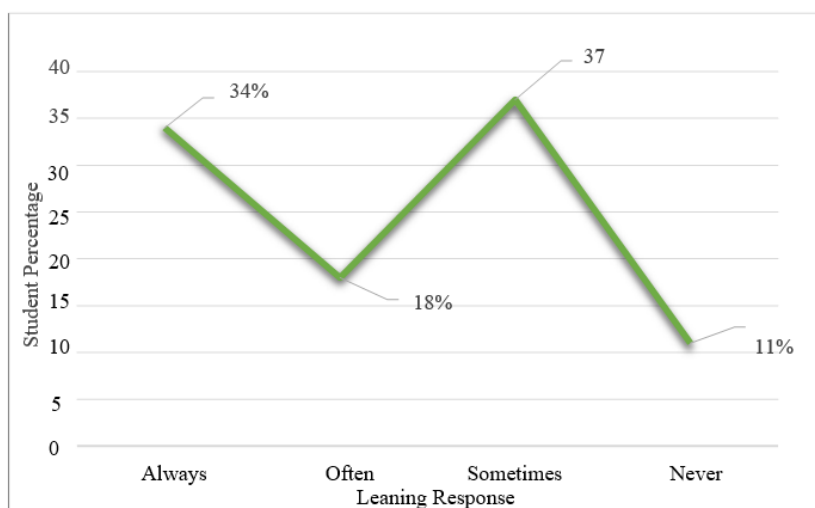
16% of them sometimes find computer laboratories, and the remaining 2% gave unfavorable views about the same. (Author self-created graph)

8. *Is the blended mode of learning easy and flexible for students?*



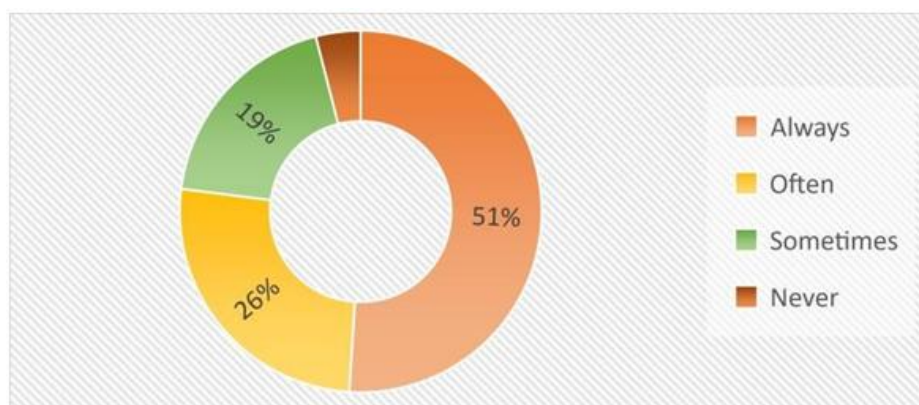
**Figure 9.** According to this, 53% of respondents believe that the blended learning mode is always easy as well as flexible because they can attend classes anywhere. Further, 19% of the students often find blended learning accessible and comfortable. On the contrary, 22% sometimes believe that it's an easy and flexible mode of knowledge, and the rest of the 6% viewed it negatively. (Author self-created graph).

9. *Are you ready to accept e-learning for teaching and learning activities?*



**Figure 10.** It illustrates that only 34% of undergraduates have given their opinion in favor of e-learning activities, as they are always ready to accept and learn through e-learning and teaching activities. Unexpectedly, 18% of the respondents often get prepared for e-learning activities. Surprisingly, 37% sometimes accept e-learning for teaching and learning activities, while 11% are never ready for such activities. (Author self-created graph)

10. *Will ICT enhance learning outcomes using a blended learning design compared to a traditional teaching stance?*



**Figure 11.** As per this, 51% of students agreed that ICT always enhances learning outcomes using a blended learning design. 26% of them often believe that ICT makes learning more comfortable and entertaining. While 19% of the respondents sometimes find ICT to enhance learning outcomes through the use of blended design and the remaining 4% consented quite negatively about it. (Author self-created graph)

The study indicates that students appreciate blended learning for several reasons. Primarily, it enhances their English language competence and transforms learning into a more collaborative, engaging, and enjoyable experience. Blended learning fosters interaction between instructors and students, giving them adequate time to complete tasks and encouraging students to take responsibility for their education, deciding when and how to utilize available resources. This approach is seen as more effective than limiting learning to solely online or traditional methods. However, the study also acknowledges challenges, such as difficulties faced by students with slow internet connections, which can make the learning experience disruptive and isolating.

Students' perspectives highlight that blended learning aids in understanding subject matter, especially in English classes, through the use of online videos featuring various speakers and the integration of personal devices and social networking sites like Facebook and Instagram. Blended learning environments, enriched with various computer applications, are attractive to students, though they require training to adapt to new modes of teaching. The students perceive blended learning as more suitable than traditional face-to-face learning and find it motivating in achieving their educational goals. It also allows for greater interaction and exchange of ideas among peers through forums or online platforms like Blackboard.

The benefits of blended learning at the undergraduate level are numerous. A significant advantage, as Blazar & Pollard (2023) and Kavanagh et al., (2022) suggest, is that the online component allows for a broader dissemination of learning than possible with face-to-face instruction alone. Teachers can devote more time

to developing and integrating study content and experimenting with different approaches in classrooms, gaining valuable first-hand experiences. Additionally, the use of social networking and community-building tools in online phases fosters a sense of familiarity among students even before they meet face-to-face.

## Discussion

The findings of the current study at Ha'il University, explore the impact of blended learning on undergraduate English language students, and offer valuable insights into the evolving landscape of education. These insights resonate with the growing body of research advocating for the integration of technology in learning environments to enhance student engagement and learning outcomes.

### *Enhancing Language Competence and Engagement*

The students' preference for blended learning due to its role in enhancing English language competence aligns with the assertions of Graham (2019), who emphasizes the effectiveness of blended environments in fostering language acquisition. As the study reveals, students find blended learning more collaborative and engaging. This observation echoes the findings of Means et al., (2013), who argue that blended learning environments can significantly improve student engagement and learning outcomes compared to traditional methods. The interactive nature of blended learning, which combines online and face-to-face interactions, arguably enriches the learning experience, making it more dynamic and responsive to student needs.

To provide a more holistic understanding of the implications of this study, it is imperative to delve into the challenges identified in the research. Notably, the lack of internet access and the inherent difficulties in building relationships online emerged as prominent barriers during the course of our investigation. These challenges were crucial to consider as they shape the landscape within which the mixed approach was implemented. Furthermore, to enhance the comprehensiveness of this study, I acknowledge the need for a more detailed discussion on the specific study conducted at Ha'il University. The intricacies of the results obtained from this study hold significant weight in contributing to the overall findings.

#### ***Student Accountability and Resource Utilization***

The study highlights the importance of student accountability in blended learning environments. This aspect is crucial, as pointed out by Garrison and Kanuka (2004), who argue that blended learning encourages learners to take charge of their learning process, thereby fostering a deeper level of engagement and understanding. The flexibility to choose when and how to use available tools, as indicated by the students, reflects a self-directed approach to learning that is central to the philosophy of blended learning (Hofmann, 2006).

#### ***Challenges of Blended Learning***

Despite the advantages, the study acknowledges the challenges faced by students, particularly those with slow internet connections. This finding is consistent with the concerns raised by Zhao et al. (2005), who note that technological barriers can hinder the effectiveness of blended learning. Addressing these challenges is crucial for ensuring equitable access to education and the benefits of blended learning.

#### ***Blended Learning in Comprehending English***

The use of various media and social networking sites as part of the blended learning approach is particularly effective in language learning. Warschauer (2004) highlights the potential of digital media in enhancing language comprehension and acquisition. The integration of personal gadgets and social networking platforms, as observed in this study, aligns with the perspectives of Greenhow et al. (2009), who underscore the role of social media in creating engaging and interactive learning experiences.

#### ***Teacher Role and Content Development***

The increased time for teachers to develop and assimilate study content in blended learning environments is another significant benefit. This aspect is in line with the views of Graham (2006), who notes that blended learning allows educators more flexibility and creativity in curriculum design and delivery. The opportunity for teachers to experiment and reflect on their teaching practices is essential for continuous improvement and innovation in education, as suggested by Koehler and Mishra (2009).

#### ***Social Networking and Community Building***

The use of social networking and community-building tools in online phases of blended learning, as reported in the study, enhances the sense of community among learners. Rovai and Jordan (2004) assert that the development of a strong learning community is critical for student success in online environments. The face-to-face component of blended learning, therefore becomes more meaningful when students already have established connections through online interactions.

#### ***Conclusion***

Overall, this study explicates the impact of blended learning on undergraduate English students at Ha'il University, Saudi Arabia with major to assess students' perceptions of blended learning in the context of English learning and explore the benefits and challenges. It was found that students generally have a positive opinion about blended learning as it is more collaborative and engaging. The results also show that students identify a number of benefits it as improves proficiency, greater participation, responsibility, flexibility and control. Students also shared some major challenges of blended learning as infrastructure, tech barriers, difficulties in establishing relationships between students etc. Teaching English language at the undergraduate level utilizing a blended learning technique might be beneficial in all aspects of learning and teaching. As a result, using a blended learning strategy to teach English at the undergraduate level shall be adequate in assisting all aspects of learning and teaching. Blended learning is still in the developmental stage globally including at Ha'il University, Saudi Arabia. However, more research and developmental activities are needed to address other dimensions of blended learning namely proper infrastructure as well as training of both pupils and instructors with effective teaching as well as learning skills. Furthermore,

research studies in the area of blended learning as a modern or novel method of teaching as well as learning in the context of EFL/ESL/ or other degree courses of various Saudi universities are warranted. Our findings underscore the significant impact of integrating both traditional and online methods in our research methodology. The amalgamation of these approaches not only facilitated a more comprehensive data collection process but also contributed to a nuanced understanding of the subject matter. The mixed approach allowed us to triangulate information, cross-verify results, and capture a broader spectrum of perspectives. The effectiveness of this mixed methodology is particularly evident in the current research. This hybrid model not only enhanced the reliability of our results but also provided a more holistic view of the research context.

#### Conflict of interest:

None

#### Acknowledgment:

The researcher sincerely acknowledges all the respondents who participated in this study voluntarily. The researcher is also grateful to the respective stakeholders of Ha'il University for providing the necessary assistance for completing the research work.

#### Funding

No financial support was available for this study.

#### Bibliographic references

- Alnoori, B. S. M., & Obaid, S.A. (2017). The Effectiveness of 50-50 Blended Learning Method on Teaching Reading Skills in ESL Classroom. *International Journal of Language Academy*, 5(8), pp. 288-303.
- Al-Seghayer, K. (2021). Characteristics of Saudi EFL learners' learning styles. *English Language Teaching*, 14(7), 82-94.
- Amare, A., Daniel, D., Derebssa, D., & Wanna, L. (2006). *Ethiopia Pilot Study of Teacher Professional Development. Quality in education, teaching, and learning: perceptions and Practices*. Institute of Educational Research: Addis Ababa University.  
[https://pdf.usaid.gov/pdf\\_docs/pdacw338.pdf](https://pdf.usaid.gov/pdf_docs/pdacw338.pdf)
- Anderson, S. E. (2002). *Improving Schools through Teacher Development: Case Studies of the Aga Khan Foundation Projects in East Africa*. London: Routledge.  
<https://doi.org/10.1201/9780203751213>
- Blazar, D., & Pollard, C. (2023). Challenges and Tradeoffs of "Good" Teaching: The Pursuit of Multiple Educational Outcomes. *Journal of Teacher Education*, 74(3), 229-244.  
<https://doi.org/10.1177/00224871231155830>
- Brown, A. F. (1993). People about people: What the administrative environment does for professional development. In L.K. Hayon, H.C. Vonk & R. Fessler (eds.), *Teacher Professional Development: A multiple perspective approach Amsterdam: Swets & Zeitlinger B.V.*, pp.59-73.
- Chan, C. T., & Koh, Y. Y. (2008). Different Degrees of blending benefit students differently: A Pilot Study. *Proceedings of the EDU-COM 2008 International Conference, 19-21 November 2008*. Retrieved from <http://ro.ecu.edu.au/ceducom/7>
- Dziuban, C. D., Hartman, J. L., & Moskal, P. D. (2004). Blended learning. *Educause Research Bulletin*, 7, 2-12.
- Gamage, S.H.P.W., Ayres, J.R., & Behrend, M.B. (2022). A systematic review on trends in using Moodle for teaching and learning. *IJ STEM Ed.*, 9, 9  
<https://doi.org/10.1186/s40594-021-00323-x>
- Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The internet and higher education*, 7(2), 95-105.
- Greenhow, C., Robelia, B., & Hughes, J. E. (2009). Learning, teaching, and scholarship in a digital age: Web 2.0 and classroom research: What path should we take now? *Educational researcher*, 38(4), 246-259.
- Graham, C. R. (2006). Blended learning systems. *The handbook of blended learning: Global perspectives, local designs*, 1, 3-21.
- Graham, S. (2019). Changing How Writing Is Taught. *Review of Research in Education*, 43(1), 277-303.  
<https://doi.org/10.3102/0091732X18821125>
- Hartman, J., Dziuban, C., & Moskal, P. (2007). Strategic initiatives in the online environment. *Opportunities and challenges*, 15(3), 157-168.
- Hinkelman, D. (2013). *Blending technologies in extensive reading: Moodle Reader in a Japanese university EFL program*. In Extensive reading world congress proceedings (pp. 91-100).
- Hofmann, J. (2006). Why blended learning hasn't (yet) fulfilled its promises: Answers to those questions that keep you up at night. In C.J. Bonk & C.R. Graham (Eds.). *Handbook of Blended Learning: Global Perspectives*,





- Local Designs* (pp. 27-40). San Francisco, CA: Pfeiffer.
- Hoy, C., Bayne-Jardine, C. C., & Wood, M. (2000). *Improving Quality in Education*. United Kingdom: Falmer Press.
- Koehler, M., & Mishra, P. (2009). What is technological pedagogical content knowledge (TPACK)? *Contemporary issues in technology and teacher education*, 9(1), 60-70.
- Kavanagh, S. S., Feiman-Nemser, S., Hammerness, K., Matsko, K. K., & Wallace, J. (2022). Stepping in or Stepping On: Mentor Teachers' Preferences for Mentoring Inside and Outside of Interactive Teaching. *Journal of Teacher Education*, 74(3). <https://doi.org/10.1177/00224871221142843>
- Krieg, J. M., Goldhaber, D., & Theobald, R. (2019). Teacher Candidate Apprenticeships: Assessing the Who and Where of Student Teaching. *Journal of Teacher Education*, 71(2). <https://doi.org/10.1177/0022487119858983>
- Lillian, W., Mutsotso, S., & Wasike, D. (2023). Teachers' Perceptions of Blended Learning and the Acquisition of Language Skills in National and Extra-County Schools in Western Region, Kenya. *International Journal of Research and Scientific Innovation*, X, 314-322. <https://doi.org/10.51244/IJRSI.2023.10929>
- Li, M., & Yu, Z. (2022). A systematic review on the metaverse-based blended English learning. *Front Psychol*, 13, 1087508. <https://doi.org/10.3389/fpsyg.2022.1087508>
- Means, B., Toyama, Y., Murphy, R., & Baki, M. (2013). The effectiveness of online and blended learning: A meta-analysis of the empirical literature. *Teachers college record*, 115(3), 1-47.
- McCarthy, M. A., & Murphy, E. A. (2010). Blended learning: Beyond initial uses to helping to solve real-world academic problems. *Journal of College Education & Learning*, 7(6), 67-70.
- Melnyk, A. (2023). Formal, non-formal and informal content domain of blended learning for prospective english university teachers. *Education. Innovation. Practice*, 11, 71-79. <https://doi.org/10.31110/2616-650X-vol11i7-010>
- Millimouno, T.M., Delamou, A., Kourouma, K., Kolié, J.M., Béavogui, A.H., Roegiers, S., Garcia, M., Tsunami, C.K., Van Bastelaere, S., Van Damme, W., & Delvaux, T. (2021). Outcomes of blended learning for capacity strengthening of health professionals in Guinea. *BMC Med Educ*, 21(1), 406. Doi: 10.1186/s12909-021-02847-w
- Ng, Y.M., & Yip, C.W. A (2019). 3-step teaching approach for a blended learning of 'understanding and avoiding unintentional plagiarism'. *Nurse Educ Pract*, 41, 102643. Doi: 10.1016/j.nepr.2019.102643
- Nong, W., Ye, J.H, Chen, P., & Lee, Y.S. (2023). A study on the blended learning effects on students majoring in preschool education in the post-pandemic era: An example of a research-method course in a Chinese university. *Front Psychol*, 13, 962707. Doi: 10.3389/fpsyg.2022.962707
- Nuzhat, A., Salem, R. O., Al-Hamdan, N., & Ashour, N. (2013). Gender differences in learning styles and academic performance of medical students in Saudi Arabia. *Medical Teacher*, 35, 78-82. Doi: 10.3109/0142159X.2013.765545
- Rovai, A. P., & Jordan, H. M. (2004). Blended learning and sense of community: A comparative analysis with traditional and fully online graduate courses. *International Review of Research in Open and Distributed Learning*, 5(2), 1-13.
- Sands, P. (2002). Inside Outside, Upside Downside, Strategies for Connecting Online and Face-to-Face Instruction in Hybrid Courses. *Teaching with Technology Today*, 8(6). Retrieved April 9th, 2009, from <http://www.uwsa.edu/ttt/articles/sands2.htm>
- Smith, G. G., & Kurthen, H. (2007). Front-stage and back-stage in hybrid e-learning face-to-face courses. *International Journal on E-Learning*, 6(3), 455-474.
- Somers, J., & Sikorova, E. (2002). The effectiveness of one in-service education of teachers' course for influencing teachers' practice. *Journal of In-service Education*, 28(1), 95-114.
- Sukirman, S., Masduki, Y., Suyono, S., Hidayati, D., Kistoro, H. C. A., & Ru'iyah, S. (2022). Effectiveness of blended learning in the new normal era. *International Journal of Evaluation and Research in Education*, 11(2), 628-638.
- Teeter, T. (1997). *Teaching on the internet. Meeting the challenge of electronic earning*. ERIC.
- Thy, N., & Nhân, N. (2022). Students' Perceptions on Blended Learning Application in Enhancing English Oral Competence at Ton Duc Thang University. *Science magazine*, 19(10). <https://vjol.info.vn/index.php/sphcm/article/view/75937>

- Villegas-Reimers, E. (2003). *Teacher Professional Development: An International Review of Literature*. Paris: UNESCO.
- Warschauer, M. (2004). *Technology and social inclusion: Rethinking the digital divide*. MIT Press.
- Whitlock, D., & Jefts, A. (2003). Editorial. Journal of Educational Media special issue on blended learning. *Journal of Educational Media*, 28(1-2), 99-100. <http://dx.doi.org/10.1080/1358165032000177407>
- Whittaker, C. (2014). Blended learning in EFL: Adopting a principled approach to integrating technology. *Using technology in foreign language teaching*, 8-24.
- Xueshan, Z. (2023). *Blended Learning Approach in English Teaching: Effectiveness and Challenges*. In *International Conference on Web-Based Learning* (pp. 412-417). Cham: Springer International Publishing. [https://doi.org/10.1007/978-3-031-33023-0\\_39](https://doi.org/10.1007/978-3-031-33023-0_39)
- Zhao, H., Seibert, S. E., & Hills, G. E. (2005). The mediating role of self-efficacy in the development of entrepreneurial intentions. *Journal of applied psychology*, 90(6), 1265.
- Xiangze, Z., & Abdullah, Z. (2023). Station Rotation with Gamification Approach to Increase Students' Engagement in Learning English. *Arab World English Journal (AWEJ)*, Special Issue on CALL, 9. <http://dx.doi.org/10.2139/ssrn.4534571>
- Zhang, Y. (2023). Enhancing Oral Production in Integrated English Blended Teaching through a Production-Oriented Approach: An Action Research Study. *International Journal of Emerging Technologies in Learning (iJET)*, 18, 61-71. <https://doi.org/10.3991/ijet.v18i19.42477>
- Zheng, L., & Lee, K. (2023). Examining the Effects of "Small Private Online Course and Flipped-Classroom"-Based Blended Teaching Strategy on First-Year English-Major Students' Achievements. *Sustainability*, 15, 15349. <https://doi.org/10.3390/su152115349>



DOI: <https://doi.org/10.34069/AI/2023.71.11.6>

How to Cite:

Lebedeva, S.E., Vakku, G.V., Solovey, L.B., & Goncharov, D.K. (2023). Historical evolution of legislative regulation of the media in the west. *Amazonia Investiga*, 12(71), 77-82. <https://doi.org/10.34069/AI/2023.71.11.6>




## Historical evolution of legislative regulation of the media in the west

### ЭВОЛЮЦИЯ ЗАКОНОДАТЕЛЬНОГО РЕГУЛИРОВАНИЯ СМИ НА ЗАПАДЕ

Received: September 15, 2023

Accepted: November 28, 2023

Written by:

**Lebedeva Simona Ernestovna<sup>1</sup>** <https://orcid.org/0000-0002-0238-7531>**Vakku Grigory Vladislavovich<sup>2</sup>** <https://orcid.org/0000-0001-7676-8962>**Solovey Larisa Boleslavovna<sup>3</sup>** <https://orcid.org/0000-0001-7973-4696>**Goncharov Dmitry Konstantinovich<sup>4</sup>** <https://orcid.org/0000-0002-3408-5036>

#### Abstract

The objective of this study is to analyze the legal regulation of the media in Western countries. The study is based on universal scientific methods, such as observation, deduction, analysis, comparative and historical analysis of different legislatures and the practices of their implementation. The countries chosen for the analysis are the so-called "old Europe" countries. The study concludes that the legal regulation of the media is a complex issue that must be addressed with a holistic approach. The law is important, but it is not enough to guarantee freedom of expression and information pluralism. There is also a need for effective law enforcement and media monitoring systems.

**Keywords:** media, legislative regulation, Western Europe, Media Law, censorship.

#### Аннотация

Целью данного исследования является анализ правового регулирования СМИ в западных странах. Исследование основано на универсальных научных методах, таких как наблюдение, дедукция, анализ, сравнительно-исторический анализ различных законодательных актов и практики их применения. Страны, выбранные для анализа, являются так называемыми странами "старой Европы". В исследовании делается вывод о том, что правовое регулирование средств массовой информации является сложным вопросом, который необходимо решать с использованием целостного подхода. Законодательная база очень важна, однако только ее недостаточно для гарантии свободы выражения мнений и информационного плюрализма. Существует также потребность в эффективных системах правоприменения и мониторинга СМИ.

**Ключевые слова:** СМИ, законодательное регулирование, Западная Европа, Закон о СМИ, цензура, демократическая журналистика.

<sup>1</sup> Candidate of Philological Sciences, Associate Professor of the Department "Journalism and Mass Communications named after M.F. Nenashev"; Associate Professor of the Project Activity Center of Moscow Polytechnic University, Russian Federation.

<sup>2</sup> Candidate of Philological Sciences, Associate Professor of the Department "Journalism and Mass Communications named after M.F. Nenashev"; Associate Professor of the Project Activity Center of Moscow Polytechnic University, Russian Federation.

<sup>3</sup> Candidate of Psychological Sciences, Associate Professor of the Project Activity Center of Moscow Polytechnic University, Russian Federation.

<sup>4</sup> Candidate of Sociological Sciences, Associate Professor of the Department of Infocognitive Technologies of Moscow Polytechnic University, Russian Federation.

## Introduction

Legal mass media regulation is a cardinal matter in Western countries. The viral spread of fake and destructive content in mass media in the recent years has caused an utterly negative response of audience and overwhelming distrust to the mass media in question. The proportion of mass media legal rights and obligations in this respect differs significantly in the legislations of different countries. The very need for such regulation has been caused by the deep understanding of the fact that clear and accurately articulated rules in this sphere inspire the development of social institutes protecting both civil rights and freedom of speech and communication. This balance of rights and obligations is observed differently in different countries.

In some Western states the activity of mass media is regulated within the frame of the universal civil code or some other legislations. In this case, some important norms for journalism are contained in different legal statutes and codes such as the Law on Civil Liability, the Law on Data Protection, the Law on Competition, the Law on Broadcasting and many other laws.

In other countries mass media are regulated by a special law on mass media. Such a law usually constitutes the rules of organizing, functioning and control of mass media. Sometimes these laws may include the norms for the freedom of speech and civil rights protection.

The level of mass media legal regulation varies from country to country from very strict to a soft and flexible grade. In general, mass media regulation must provide a sustainable balance between the freedom of speech and personal civil rights protection (Nguyen et al., 2023).

The main objective of this scientific research is the profound analysis of mass media legal regulation in the Western countries. In particular, the following aspects of the matter will be under a thorough scrutiny:

- different forms of mass media legal regulation in Western countries;
- rights and liabilities proportion in different countries;
- relations between media and authorities.

The article is structured as follows:

In the first section of the article, the historical analysis of mass media legal regulation emerging and developing is presented.

In the second section, the specific ways of different countries' movement towards the freedom of speech will be traced.

In the third section the current level of relations between mass media and politicians in the old European countries will be analyzed, alongside with the specific national mass media regulation legislatures features in different countries.

In the fourth section, the main principles of modern mass media regulation and legal practice problems will be considered.

The analysis ends that it's not just the law itself, which regulates the relations between mass media and the state, between mass media and society but, first and foremost, the system of its proper implementation. That's why it's just the independent mass media watch-dog organizations and, subsequently, courts of all levels that play a key role in the effective functioning of mass media legal system.

## Theoretical framework or literature review

The theoretical basis of this research is made up of works by Anikeev B.E., Beglov S.I., Bykov A.Y., Prutskov, G.V., Rassolova I.M. and other authors. Some articles from The Law Reviews (TLR), the world's leading journal on antitrust and competition law, were used. In her work Skorik N.V emphasises that the freedom of speech doesn't mean permissiveness, but should be strictly limited by law (Rubtsova, & Devdariani, 2022). Levkina L.I. believes that a right for information is one of the basics of democracy and she gives a more than 400 –year old retrospective history of how this legal formed internationally and in the West European states (Levkina, 2015). In her article Nadirova G.K. analyses the efficiency and implementative practice of the laws forbidding mass media crossownership in the Western countries. She pays special attention at mass media antitrust legislation and its evolution and underlines the hazards of over- and under-regulation of mass media. Having studied the specificity of interaction between the British government and central and regional mass media in the country (Nadirova, 2017). Gavrilina S and Surma I. presented its typology and elicited some instruments of the government used to control

mass media. The authors consider that the British government influence and use mass media as a political instrument, even though there is no formal censorship in the country. Using the comparative method for analyzing Russian, European and American mass media legislation (Gavrilina, & Surma, 2020) Rubtsova E.V., Devdariani N.V. stress the peculiarities in the forms of interaction between the state authorities and the civil society in different countries (Rubtsova, & Devdariani, 2022). The detail research of mass media constitutional legal administration in Germany is given in the works written by Privalov S.A. (Nguyen et al., 2023), (Privalov, 2022) and also by Erofeev I.M. (Erofeev, 2018a). Legal, (Erofeev, 2018b).) and Areeva M.V. who investigate the mass media legal system of FRG (Areeva, 2016). Bogach K.O. conducts a comparative legal analysis of the interaction models between the state and mass media in Russia, America and Germany in his research (Bogach, 2011).

### Materials and Methods

The article in question is a high-quality research based on such universal scientific methods as observation, deduction, analysis, comparative and comparative historical analysis of different legislatures and the practices of their implementation. The countries chosen for the analysis is a core of the European legal system, they are so-called 'old Europe' countries. Knowing of the specificities in their mass media legal systems evolution enables us to better understand their national ways and stands in this sphere.

In Western media studies, two clearly expressed directions associated with the specifics of historical development and found their form in the 19th-20th centuries are distinguished: "island" (Britain and the USA) and "European-continental" (continental Europe). Thus, in Australia, Spain, the Netherlands, and Norway, as well as in the UK and the USA, there are no separate media laws. France has many press laws, which, however, are contained in different codes. In Germany, on the contrary, a whole series of federal media laws has been developed, moreover, each of the lands has its own separate law regulating this sphere (Wilhelm, 2008).

### Results and discussion

The countries of Old Europe faced censorship quite early and then fought for a long time for its abolition. The path to reaching consensus between the media and the authorities in terms of

recognizing the state's right to restrict the dissemination of information that the authorities considered harmful or undesirable was thorny (Rubtsova, & Devdariani, 2022). And at the beginning, political methods were used to pressure freedom of speech. The first censor of Europe was the Catholic Church: as early as the 5th century, Pope Innocent I compiled a whole list of undesirable books for the flock. Then in the 13th century, the emerging Universities, which were under the strong influence of the clergy, picked up the censorship relay. For instance, at the University of Sorbonne in Paris, the function of censorship was performed by the theological faculty. In the German city of Mainz (1486), the first censorship department was opened, the first act of which was a ban on the distribution of books printed in the local dialect. The first law on preliminary censorship appeared in Spain in 1502. Seven years later, English King Henry VIII passed a law according to which all printing was subject to "secular censorship" (preliminary review by university professors) and "spiritual censorship" (approval by the Archbishop of Canterbury). From 1515, by the bull of Pope Leo X, censorship for all printed publications was introduced in all Catholic countries.

Starting in 1517, a widespread "tightening of the screws" began. For instance, in Germany, the "Edict of Worms on Pre-Censorship" (1521) was adopted, according to which Martin Luther was declared a heretic and a criminal, and all his books were banned from publication and distribution (Nguyen et al., 2023). The introduction of secular censorship, established at the princes' congress in Speyer (1529), led to the printing press becoming completely dependent on local authorities. In France, a taboo was placed on all publications of religious topics that had not been approved by the Sorbonne (1521). In England, after the adoption of the law (1538), without obtaining a royal patent for printers or an ordinance (1557), as well as a decision of the High Royal Court, books and flyers were not allowed for publication, and in the printing houses of London, Oxford and Cambridge without prior approval of the Archbishop of Canterbury or an order of the Bishop of London. All this sharply limited the opportunities for engaging in publishing activities (Bykov, 2023).

The assault on press freedom continued to escalate. In Germany, Charles V proposed new censorship restrictions, which entailed measures of persecution and punishment for the absence of the printer's name and place of printing on the printed publication, 1530. The new censorship



charter adopted at the princes' convention in Speyer (1570) began to regulate not only the content of printed publications but also the printing business as a whole. Censorship became even stricter with the rise of the Jesuits to power (Nadirova, 2017).

In all Catholic countries, the papal inquisition became increasingly harsh:

1545-1563 - The "Council of Trent" in Italy approved a list of prohibited Protestant books (Index of Trent);

1559 - The first printed index of banned books (Index Librorum Prohibitorum) was introduced, compiled by Pope Paul IV;

1571 - Pope Pius V established the Congregation of Indexes, which was responsible for the regular preparation and publication of lists of banned publications (Bykov, 2023).

In England, by the decree of the Star Chamber on book printing (1637), all legal books were subject to the review of the supreme judges, and the chief state secretaries were obliged to censor political works. All other literature fell under the supervision of the Archbishop of Canterbury and the Bishop of London. Only compositions that did not contain "anything contrary to the Anglican Church, the state and government, as well as good manners" were allowed to print. The decree allowed searches and seizures, and only persons who fully met certain requirements and only with the permission of the spiritual authority and members of the Supreme Commission were allowed to engage in typographical work. At the same time, all foreign publications were also subject to review at customs (Prutskov, 2002).

The approved Patent for Book Affairs in France (1547) prohibited the printing and sale of books directed against the Catholic religion. It obliged, firstly, to submit all works of religious content for preliminary inspection by the theological faculty of the Sorbonne, and secondly, to state the names of the author, printer, and place of the building on each printed work. Secret print shops were categorically prohibited. The edict of 1551 strengthened restrictions, according to it, the death penalty threatened not only owners but also buyers of a book if it did not have preliminary and formal permission (Anikeev, 1999). Every subsequent act adopted by the authorities only complicated the life of publishers. Louis XIII violated the established censorship rights of universities by obliging all manuscripts to be submitted for preliminary review to the chancellor and the custodian of the state seal, and the monarch assigned the duty of monitoring the

strict observance of press laws to a special institution (Syndicat pour l'Imprimerie et la Librairie), which was supposed to carry out control over printing houses and bookstores (Beglov, 2002).

As a result of such steps in Europe, power begins to actively use economic levers of pressure on the press through the issuance of patents and censorship. The 17th century was also enriched by a number of laws related to censorship restrictions. Thus, in England, a law on preliminary censorship (1643) and an Act on the licensing of printing (1662) were adopted, and all newspapers criticizing the crown were banned by the chief censor, Roger L'Estrange (Gavrilina, & Surma, 2020).

The tightening of censorship in the 18th-19th centuries involved even greater pressure on the printed word. In France, in 1723, a censorship code was introduced, which provided for executions for any indecent publications directed against religion and the authority of the government. As a result of the division of Germany due to the 13-year war, Friedrich Wilhelm issued a verdict on press cases, and after the unification of many German states into the German Confederation (1815), by the decision of the Carlsbad Conference of Ministers (1819), widespread censorship was introduced for all politically-oriented messages. The adoption and repeated extension of the "Law against Harmful and Dangerous Aspirations of Social Democracy" (1878-1890) in Germany led to a sharp reduction in opposition publications (Privalov, 2022).

Each of the European countries took its own path towards freedom of speech. The dramatic journey towards freedom and the legislative framework for the media that was ultimately formed, as well as its effectiveness, can be traced in the case of the oldest European countries (Rassolova, 2017).

Citizens of both Germany and the United Kingdom have the right to freedom of expression and freedom of information dissemination, and censorship is prohibited by law in both countries. However, it should be understood that freedom cannot be unlimited, as one person's freedom ends where another's begins. Therefore, in the studied countries, a normative legislative framework has been established to create conditions for the adequate functioning of journalism. Laws act as guarantors of the preservation of certain rights and freedoms of citizens and are aimed at ensuring the protection

of both society, journalists, and the state (Erofeev, 2018a).

In the development of the existing legislative framework in Europe that regulates the activities of the media, historical events played a significant role in the countries under consideration. First and foremost, the period of military conflict from 1939 to 1945 had a profound impact on the current functioning of media law. This was particularly evident in the legislation of Germany, as after a long period under the Nazi regime (1933-1945), during which journalism had no rights to freedom of expression, the Constitution adopted in 1949 enshrined the basic rights and freedoms of citizens at the legislative level. In the United Kingdom, freedom of speech was enshrined by law as early as 1689, when the Bill of Rights was adopted. After the end of the war, the country ratified the Convention for the Protection of Human Rights and Fundamental Freedoms, and also introduced new laws for the effective functioning of the media (Rassolova, 2017).

It is important to note that the majority of laws governing European media today were passed before the 2000s. Since then, new laws have been enacted mainly to regulate the internet and television. In Germany, the main general laws regulating the media include the Youth Protection Act, the Cartel Act, the State Secrets Act, and the Defamation Act. In the field of media, we have identified the following specific laws: the Broadcasting Act, the State Treaty on Broadcasting and Telemedia, and the Telemedia Act (Eng-News (n/f)). In 2020, the new State Treaty on Media (Medienstaatsvertrag, MStV) came into effect (Erofeev, 2018b).

In the United Kingdom, the media is subject to the following laws: broadcasting law, defamation law, state secrets law, and communications law. In the country, self-regulatory mechanisms have a stronger impact on the activities of the media compared to Germany. However, the media also adheres to general legislation, the foundations of which are similar in both countries.

There is no single law on the media in the United Kingdom and Germany. In the United Kingdom, the media is subject to a number of general laws of the country. In Germany, the media also operates in accordance with the general laws of the country, but each state in Germany has its own media law. It is important to note that the laws of the German states regarding the media are largely similar, but they have some differences. In order to harmonize these media

laws in Germany, there are special agreements that do not allow the states to enact their own laws if they contradict the Basic Law of the Federal Republic of Germany to a certain extent and significantly differ from each other. For example, the State Treaty on Broadcasting defines the organization of television and radio broadcasting structures, which must guarantee freedom of speech and pluralism of opinions to the society, as well as exclude monopolization in the market of information services.

It is important to understand that in a democratic society, laws, both specific to the media sphere and general, to which the media are subject, are created for the benefit of progressive development of journalism. Analysis of specific cases and lawsuits has shown that the legal regulation of the media in the United Kingdom and Germany, despite some differences in the structural organization of legislation, have a number of similar approaches. Given that both countries do not have a single law on the media, they rely on similar laws (Areeva, 2016).

In both the pre-internet era and today, despite a fairly well-developed legal framework, the relationship between journalists and society often moves from the media environment to the courts.

In modern European law, the regulation is based on the principle of complexity of organizational, administrative, social, legal, and economic mechanisms. However, serious problems arose with the rapid spread of internet resources that did not fall under the status of traditional media (Positive Technologies, 2020). When the situation reached threatening proportions, work began on the regulation of activities of individual segments of the Global network. However, these legislative acts do not represent a clear trend towards restraint, and sometimes the actions of European authorities appear inconsistent (Bogach, 2011).

## Conclusions

Thus, the Internet gradually becomes an integral part of legal frames in the European countries. The states with even most prominent democratic institutes can't do without a systematic work on the mass and social media legislature advancement to avoid chaotic distribution and consumption of information. The analysis undertaken has revealed that it's not just the law itself, which regulates the relations between mass media and the state, between mass media and society but, first and foremost, the system of its proper implementation. That's why it's just the

independent mass media watch-dog organizations and, subsequently, courts of all levels that play a key role in the developing of free and independent journalism. Actually, mass media legal regulation in the Western countries both makes problems and gives opportunities. On the one hand, it's very important to guarantee the freedom of expression and the pluralism of opinions, but, on the other hand, it's indispensable to defend national security and protect private life and other fundamental rights of citizens. The balance between these two objectives is utterly fragile and requires constant work of the government, mass media and civil society.

### Bibliographic references

- Anikeev, V. E. (1999). *History of the French press*. M.: MSU, pp. 40. ISBN 5-7776-0010-7 (In Russian)
- Areeva, M. V. (2016). On the issue of the legal basis of the information policy of the Federal Republic of Germany. *Actual problems of modern international relations*, 8. URL: <https://acortar.link/6Si42B>
- Beglov, S.I. (2002). *The Fourth Estate: The British Model: A history of the UK press from 'newsletters' to electronic newspapers*. M.: Moscow University Publishing House, pp. 210. (In Russian)
- Bogach, K. O. (2011). Comparative legal study of the status of public bodies of control and supervision over the activities of the media in Russia, the USA and Germany. *Bulletin of the RUDN. Series: Legal Sciences*, 1. URL: <https://acortar.link/ZNOmwQ>
- Bykov, A. Yu. (2023). *History of foreign journalism: a textbook for universities*. Moscow: Yurayt Publishing House, pp. 260. (In Russian) ISBN 978-5-534-11507-9
- Gavrilina, S., & Surma, I. (2020). The state and the UK media: a form of interaction. *Modern Europe*, 1, pp. 49-58. URL: <https://acortar.link/Ca7QdF>
- Eng-News. (n/f). *Germany votes for €50 million fines on social media*. URL: <https://eng-news.ru/Germany-votes-for-50m-euro-social-media-fines/>
- Erofeev, I. M. (2018a). Legal regulation of activities mass media in Germany. *Society and law*, 3(65). URL: <https://acortar.link/vNFFoD>
- Erofeev, I. M. (2018b). The formation of the international political actorship of the German media. *South Russian Journal of Social Sciences*, 9(3). URL: <https://acortar.link/CYAbDK>
- Levkina, L. I. (2015). The right to information in Europe. *Communicologiya*, 3(1), 128-136. URL: <https://cyberleninka.ru/article/n/pravona-informatsiyu-v-evrope>
- Nadirova, J. K. (2017). Prohibition on cross-media ownership as a means of limiting media concentration. *Scientific Dialogue*, 6. URL: <https://acortar.link/wIZe0y>
- Nguyen, T.A., Bui, T.C., Dudareva, M., & Bubnov, V. (2023). Correlation Between the World's Social Media Usage and Political Stability in a Country. *Public Organiz Rev*. <https://doi.org/10.1007/s11115-023-00744-y>
- Positive Technologies (2020). *The EU will block IT companies for non-compliance with digital laws*. URL: <https://www.securitylab.ru/news/514115.php>
- Privalov, S. A. (2022). Constitutional and legal regulation of freedom of mass information in Germany: the possibility of adapting experience. *Bulletin of the SSS*, 5(130). URL: <https://acortar.link/DgYyaj>
- Privalov, S.A. (2022). Prohibition of censorship as a guarantee of freedom of mass media in Russia and Germany. *Bulletin of PAGS*, 3. URL: <https://acortar.link/UDet1F>
- Pruttskov, G.V. (2002). *Introduction to world journalism*. M.: MSU., pp. 19. (In Russian)
- Rassolova, I.M. (2017). *Information legal relations: theoretical aspects*. M.: Prospekt, pp. 158. (In Russian)
- Rubtsova, E. V., & Devdariani, N. V. (2022). Comparative analysis of the systems of legal regulation of mass media in the Russian Federation, the United States of America and the European Union. *BGZH*, 4(25). URL: <https://acortar.link/bkdiUu>
- Skorik, N. V. (2020). Constitutional regulation of freedom of speech in the USA and Great Britain. *Domestic jurisprudence*, 7(32). URL: <https://acortar.link/gfHhg4>
- Wilhelm, K. Yu. (2008). German media at the end of the twentieth century. *Power*, 4, 101-108. URL: <https://acortar.link/hBwHyl>

DOI: <https://doi.org/10.34069/AI/2023.71.11.7>

How to Cite:

Zlyvko, S., Puzyrnyi, V., Nishchymna, S., Tkachenko, O., & Samofalov, O. (2023). Administrative and legal methods of preventing corruption among public authorities: the experience of EU countries. *Amazonia Investiga*, 12(71), 83-92. <https://doi.org/10.34069/AI/2023.71.11.7>


## Administrative and legal methods of preventing corruption among public authorities: the experience of EU countries

### Адміністративно-правові методи запобігання корупції у діяльності публічної влади: досвід країн ЄС

Received: October 7, 2023

Accepted: November 25, 2023

Written by:

Stanislav Zlyvko<sup>1</sup> <https://orcid.org/0000-0003-2732-3144>Viacheslav Puzyrnyi<sup>2</sup> <https://orcid.org/0000-0002-5692-2990>Svitlana Nishchymna<sup>3</sup> <https://orcid.org/0000-0001-7424-7688>Oleksandr Tkachenko<sup>4</sup> <https://orcid.org/0000-0002-5640-0906>Oleksandr Samofalov<sup>5</sup> <https://orcid.org/0000-0001-9157-7435>


#### Abstract


The study deals with the analysis of administrative and legal methods used in EU countries to fight corruption among public authorities. Fighting corruption is critically important for ensuring transparency and accountability, good governance, and achieving the effectiveness of management actions. The aim of the article is to determine the effectiveness of administrative and legal methods used in the EU countries to fight corruption among public authorities based on the implementation of the good governance principles.


The research methodology provided for the use of the methods of contextual analysis, comparison, and graphic correlation. The study outlined the necessary measures: improving legislation on the status of public authorities, the responsibility of public officials, introducing e-governance models and the concept of good


#### Анотація


Дослідження присвячене аналізу адміністративно-правових методів, що застосовуються в країнах ЄС для боротьби з корупцією в органах публічної влади. Боротьба з корупцією є критично важливим завданням для забезпечення прозорості та підзвітності, належного (доброго) управління, досягнення ефективності управлінських дій. Метою статті є визначення дієвості адміністративно-правових методів, які використовуються в країнах ЄС для протидії корупційним проявам в органах публічної влади, на основі реалізації принципів належного управління. Методологія дослідження передбачила використання методу контекстного аналізу, методу порівняння, методів графічної кореляції. Дослідження окреслило необхідні заходи (удосконалення законодавства щодо статусу органів публічної влади, відповідальності

<sup>1</sup> Doctor of Sciences (Law), Professor, Department of Administrative, Civil and Commercial Law and Process, Academy of the State Penitentiary Service, Chernihiv, Ukraine.  WoS Researcher ID: ACU-0657-2022

<sup>2</sup> Doctor of Sciences (Law), Vice Rector for Scientific and Academic Affairs, Academy of the State Penitentiary Service, Chernihiv, Ukraine.  WoS Researcher ID: G-6332-2014

<sup>3</sup> Doctor of Sciences (Law), Head of the Department of Administrative, Civil and Commercial Law and Process, Academy of the State Penitentiary Service, Chernihiv, Ukraine.  WoS Researcher ID: S-4182-2017

<sup>4</sup> Ph.D. in Law, Head of the Department of Formation and Development of Professional Competences of the Personnel of the SCES of Ukraine, Institute of Professional Development, Academy of the State Penitentiary Service, Chernihiv, Ukraine.  WoS Researcher ID: ISB-1138-2023

<sup>5</sup> Ph.D. in Law, Associate Professor, Department of Administrative, Civil and Commercial Law and Process, Academy of the State Penitentiary Service, Chernihiv, Ukraine.  WoS Researcher ID: ABL-3548-2022

governance among public authorities of EU member states. It was found that the application of administrative and legal methods in the system of public administration is not enough for the implementation of anti-corruption policy, because corruption in the EU goes beyond the borders of one country and its law enforcement. In view of the expanding manifestations of corruption, implementation of effective administrative and legal methods of fighting corruption is an urgent task for public authorities and leading EU institutions. The specified will require a systemic approach, robust anti-corruption institutions, and the establishment of legal anti-corruption mechanisms.

**Keywords:** corruption, quality of government, good governance, EU, prevention.

## Introduction

Corruption poses a significant threat to the stability, integrity, and democratic values of any society. It undermines public trust, hinders economic growth, and perpetuates social inequality. According to Eurobarometer 2022 data, 68% of people and 62% of businesses in the EU believe that corruption is widespread in their country (European Union, 2022).

In the context of developing effective anti-corruption strategies, EU the countries have made significant efforts to create reliable administrative and legal methods aimed at fighting corruption among public authorities. These approaches include preventive, investigative, and punitive strategies designed to minimize corrupt practices, bringing perpetrators to justice, improving transparency and accountability in the public sector.

Administrative and legal methods used in EU countries are based on key initiatives such as the creation of specialized anti-corruption bodies, modernization and implementation of the legal framework, promotion of transparency and accountability through e-governance and good governance tools, as well as international cooperation in the fight against corruption. In the first section of the study, readers will find a literature review, while the second part focuses on the methodology. The third section is dedicated to the research findings, and the fourth part involves a discussion of the results. In the final section, the research conclusions are summarized.

публічних службовців, впровадження моделей електронного урядування та концепції належного (доброго) управління в органах публічної влади країн-членів ЄС). З'ясовано, що застосування адміністративно-правових методів у системі публічного управління не достатньо для реалізації антикорупційної політики, адже в ЄС корупція виходить за межі однієї країни та її правозастосування. Впровадження ефективних адміністративно-правових методів протидії корупції є нагальним завданням для органів публічної влади та керівних інституцій ЄС, зважаючи на розширення проявів корупційних дій. Зазначене потребуватиме системного підходу, сильних антикорупційних інституцій та формування правових антикорупційних механізмів.

**Ключові слова:** корупція, якість уряду, належне управління, ЄС, запобігання.

The aim of the article is to study and analyse the effectiveness of administrative and legal methods in the system of public administration bodies of EU member states with the aim of countering corruption based on the implementation of the good governance principles and the results of the impact of these methods on corruption.

The main research objectives include:

1. Analyse key initiatives, such as the creation of anti-corruption bodies, implementation of the legal framework, promotion of transparency through e-governance tools;
2. Evaluate the effectiveness of approaches to reducing the corruption rate based on the implementation of administrative and legal measures;
3. Provide recommendations on improving anti-corruption strategies among public authorities based on the experience of EU countries.

## Literature Review

Existing studies related to administrative and legal methods of fighting corruption in the activities of public authorities quite widely study the relevant experience of EU countries, key topics, offering possible approaches to solving the specified issues. Corruption undermines citizens' trust in public authorities, reduces economic growth, hinders investment, and creates political instability. Therefore, the



problem of corruption remains the subject of study by various researchers.

Measuring corruption manifestations, which are inherently illegal activities actively concealed by perpetrators, is a challenging task for researchers (Armand et al., 2023). A significant number of researchers prove the negative impact of corruption on the economy, society, and the environment (Kasa et al., 2023). So, it is believed that the corruption rate can be reduced by implementing democratic principles in the public administration system, such as political openness, a system of checks and balances, honesty, effective supervision, accountability, etc. (Gorsira et al., 2018). Specialized independent anti-corruption institutions are key to success in the fight against corruption (Di Mascio et al., 2020). Expanding digitization and effective e-governance systems should also have the effect of reducing the overall corruption rate in the country (Agarwal & Maiti, 2020). Accordingly, the use of good governance, which involves the implementation of the rule of law, transparency, accountability and participation, is one of the factors aimed at minimizing corruption risks. It is important that e-governance significantly contributes to the implementation of the good governance principles (Castro & Lopes, 2022).

Numerous studies emphasize the importance of creating a reliable administrative and legal framework as an effective means of fighting corruption among public authorities. Considering the need to create specialized anti-corruption agencies, one should understand their place as an important component in this system. The study (Johnston & Heidenheimer, 2017) analysed the structures, powers and independence of anti-corruption bodies, including in the EU countries, tested numerous anti-corruption tools and good governance strategies, which provides insight into their effectiveness in investigating and fighting corruption crimes.

Transparency and accountability measures play an important role in the fight against corruption in public authorities. A study on promoting transparency through e-government tools, open data initiatives, and citizen engagement concluded that the response must go beyond law enforcement to include the reorganization of government agencies and their relationships with the private sector (Rose-Ackerman, 2018).

With the development of e-government, public authorities have been transformed both

structurally and in terms of the dynamics of relations between the state and the recipients. E-government should be considered as an integral and integrated aspect of the functioning of public institutions and the provision of services. The methodology implemented in the EGDI e-Government Development Index is one of the approaches that assesses e-government development at the national level (United Nations, 2022). E-government creates new opportunities for change in public authorities and integrated governance, providing public services and information to stakeholders with greater quality, accountability and efficiency, as well as improving relations between social actors (United Nations, 2020). The development of e-government encompasses transformation at the technical and organizational levels, that is, the use of opportunities to modernize outdated processes and reintegrate public authorities in order to meet the needs of people in public services through increased integrity, flexibility, and adaptability (Mao et al., 2021).

The World Governance Indicators (WGI) are among the indicators of the quality of public administration, which rank countries according to good governance aspects. These indicators are determined according to the researchers' understanding of the fundamental concepts of management. These indicators were used in a number of studies as variables to study possible relationships between aspects of public governance and growth, and they are also used to monitor the quality of governance (Gallego-Álvarez et al., 2021). Improving the quality of public administration, independence of public officials from political pressure, and stopping corrupt practices can give tangible results in increasing the economic efficiency of public administration. Furthermore, strong institutions can mitigate the adverse effects of less transparent procedures and processes in public authorities.

## Methodology

The research design is based on the identification of the main context of administrative and legal methods of fighting corruption, which is implemented in the legal acts, regulations of the functioning of powerful EU anti-corruption institutions. It is also based on determining the correspondence between the quality of public administration and the state of corruption and the general progress of the corruption rate in the EU countries during 10 years; analysis of obtained data, providing propositions, and drawing conclusions. Open data on individual indicators

of 27 EU member states were used as research objects. The main legislative acts in the field of anti-corruption policy in the EU were used (European Union, 1997; 2012; 2023; European Commission, 2023a; 2023b). The methods of contextual analysis, correlation analysis, and graphic comparison were used.

The first stage was a contextual analysis of the current EU anti-corruption legislation and the relevant changes through the data search on the legislative framework of the European Union and the European Commission on anti-corruption. The next step was to find out the influence of the public administration system on corruption through correlation analysis (scattering diagrams).

The indicator of the effectiveness of public authorities of the World Governance Indicators (WGI) (World Bank, 2023) was used as a factor demonstrating the level of public administration and the features of good governance. The Corruption Perceptions Index (CPI) is considered a more appropriate measure for corruption analysis (Qu et al., 2019). The Public Sector Corruption Perceptions Index was developed as an indicator used to measure the perception of corruption ranging from 0 to 100 (Transparency International, 2023a). A scatter (point) diagram was built for 27 EU member states using data on indicators of efficiency of public authorities and corruption by building a graphic model of the dependence of the corruption indicator on the efficiency of public authorities. The diagram was built using Gretl software.

The E-Government Development Index (United Nations, 2022) is used as an additional factor (predictor), an indicator that can show the ability to implement public administration, which is also sufficiently relevant to the implementation of good governance. A graphic analysis of the Corruption Perceptions Index (CPI) and the E-Government Development Index in EU countries was conducted (Transparency International, 2023a; United Nations, 2022).

A mixed approach to the study made it possible to comprehensively investigate the consequences of administrative and legal methods of fighting corruption. The quantitative component relied on statistical data to measure performance, while the qualitative component captured the specifics of legislation, its changes, administrative procedures and institutions. The integration of the research results provided a comprehensive analysis that allowed for a more in-depth study of the issue and development of recommendations.

At the same time, it should be noted that the data used in the study (World Bank, 2023; Transparency International, 2023a; United Nations, 2022) are formulated based on the developers' own methodology for index creation, which may not sufficiently objectively reflect the state of affairs in the fields of public governance, corruption, and e-governance. Additionally, these indicators are based on existing data from previous years, reflecting situations that occurred in past periods.

## Results

### *Determining the main aspects of administrative and legal methods of fighting corruption in EU legislative acts*

Regarding the research objectives, special attention is paid to the issues of effective functioning of the public administration system and the provision of public services with the minimization of corruption risks. EU anti-corruption approaches are based on a number of general provisions. The Treaty on the Functioning of the European Union (TFEU) established the need to prevent and combat criminal activity, including corruption, in the EU. This requires the harmonization of current legislation and the establishment of appropriate sanctions. In general, the legal anti-corruption framework must be provided both directly by the EU and by the member states (European Union, 1997).

Administrative and legal forms of fighting corruption provide for the establishment of administrative regulations for the performance of state functions and the provision of public services. The goals of the adoption of administrative regulations are to increase the transparency of the activities of public authorities, to exclude the possibility of corruption-inducing factors. Anti-corruption administrative and legal methods are based on specific practical means (measures and methods) of fighting corruption in the public administration system used by authorities in the EU. The tools of good governance provide for anti-corruption monitoring, which includes the analysis of corruption-inducing factors and anti-corruption policy implementation measures. Monitoring ensures detection and forecasting of the development of negative processes affecting the corruption rate in public authorities, as well as correlation of action plans to fight corruption. The analysis of corruption risks is related to the identification and study of the possibility of the occurrence of causes and conditions that

contribute to the commission of corruption offences in state administrative activities. The indicated tools are approved by a number of fundamental EU legal acts.

The Convention Against Corruption Involving Public Officials of EU countries determined the main approaches to the subject field of corrupt acts, the measures and actions of member states regarding officials who commit crimes, punishments for corruption crimes, and issues of jurisdiction and prosecution for committing corruption crimes (European Union, 1997). The institutional framework of the anti-corruption system is determined by public authorities of EU member states, which are entrusted with the anti-corruption functions, the European Commission, the European Parliament, and Eurojust. The said authorities should ensure joint cooperation on the exchange of information and experience in the fight against corruption (European Union, 2008).

In 2022, the President of the European Commission identified the need to modernize anti-corruption legislation in order to improve the fight against various forms of corruption in the EU (von der Leyen, 2022). The modern vision of the fight against corruption in the EU should provide for the implementation of additional administrative and legal methods, namely: preventive measures based on the stimulation of integrity and education; expanding the basis of corruption crimes beyond the classical understanding of criminal acts; establishment of criminal punishment based on the same approaches in EU member states; extension of the statute of limitations for corruption crimes; the availability of appropriate tools for law enforcement agencies and the prosecutor's office regarding the possibility of fighting corruption (European Union, 2023).

New approaches in anti-corruption policy include the Directive of the European Parliament and the Council (European Commission, 2023a), which provides for a significant update of the legislative framework on anti-corruption, which

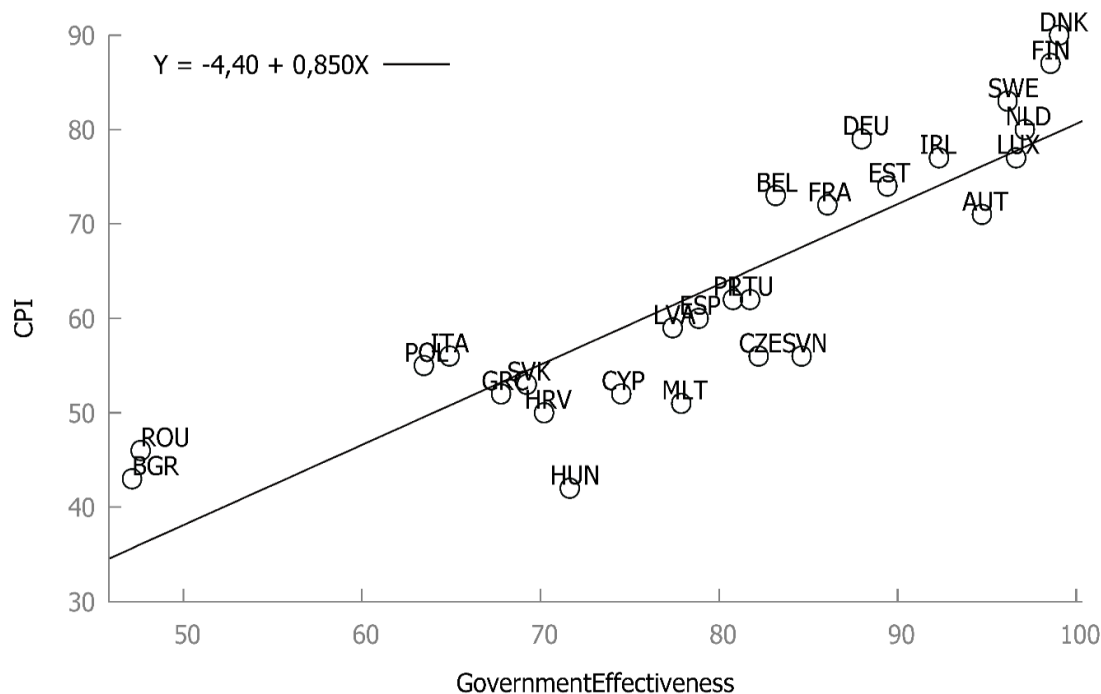
includes updating tools, national law enforcement, deepening cooperation between member states, and introducing preventive and repressive mechanisms, application of sanctions, etc.

In a Joint Communication, the European Commission proposes strengthening accountability, transparency, detecting corruption and punishing it, increasing the efficiency of investigations, resolving conflicts of interest, disclosing financial data, maintaining anti-corruption provisions in all relevant sectoral laws, cooperation and exchange of experience (European Commission, 2023b).

### ***Evaluation of the results of the implementation of administrative and legal methods of public administration in anti-corruption activities***

The influence of the management activities of public authorities on the implementation of administrative and legal methods on the state of corruption in the EU member states will be analysed based on the considered number of approaches to the prevention of corruption.

It was determined that the primary emphasis should be placed on the use of the World Governance Indicators (WGI) in the analysis, where the indicator of the effectiveness of governance by public authorities is one of the components (World Bank, 2023). This involves determining the capabilities of the country's public administration system (results of the use of administrative, legal, organizational management methods, models of good governance by authorities). A scatter diagram that demonstrates the relationship between the corruption indicator and the e-government development indicator (Figure 1) was obtained using the data of two indicators that describe the corruption component (CPI) and the state of governance (WGI) for 27 EU member states. It shows a certain correlation. The graphic model was built using Gretl software.

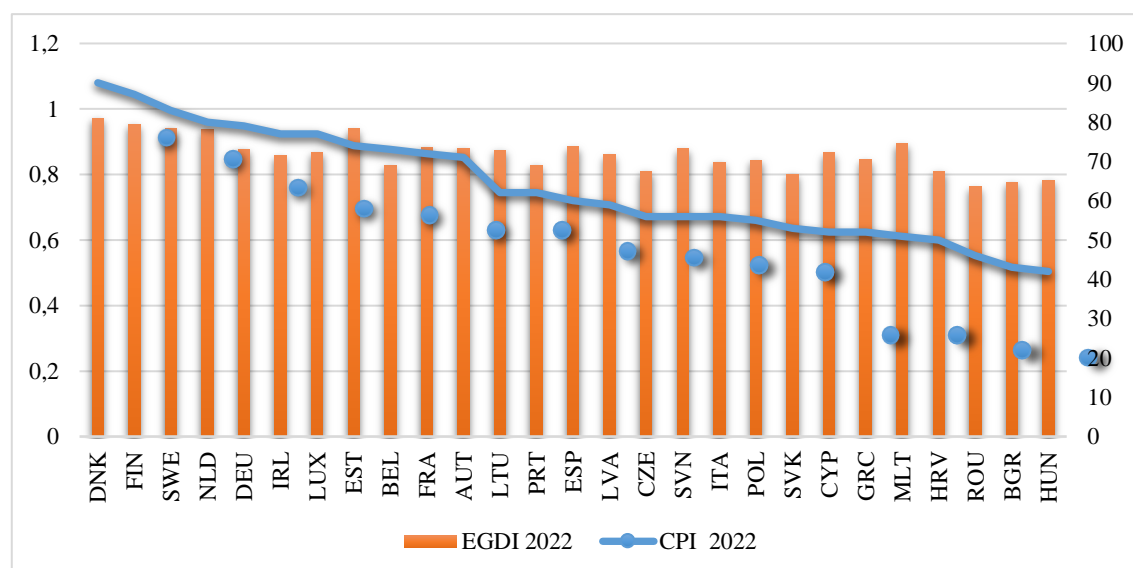


**Figure 1.** The relationship between the Corruption Perceptions Index (CPI) and the effectiveness of governance, 2022

**Source:** Transparency International (2023a), World Bank (2023)

As regards different models and approaches to modern public administration, the approach with the identification of the development factor of e-governance is appropriate. It is closely related to good governance, which is based on increasing transparency, expanding communications with society. The key vision is the study of the potential of public authorities in the application of information and communication technologies. The state of e-government development at the national level is demonstrated by the e-

Government Development Index (EGDI), which is developed by the United Nations. The development indicator ranges from 0 to 1 (United Nations, 2022). A graphical model that demonstrates the connection between the Corruption Perceptions Index and the e-Government Development Index will be built using the data of two indicators (CPI, EGDI) for 27 EU member states (Figure 2). It demonstrates only partial correlation.



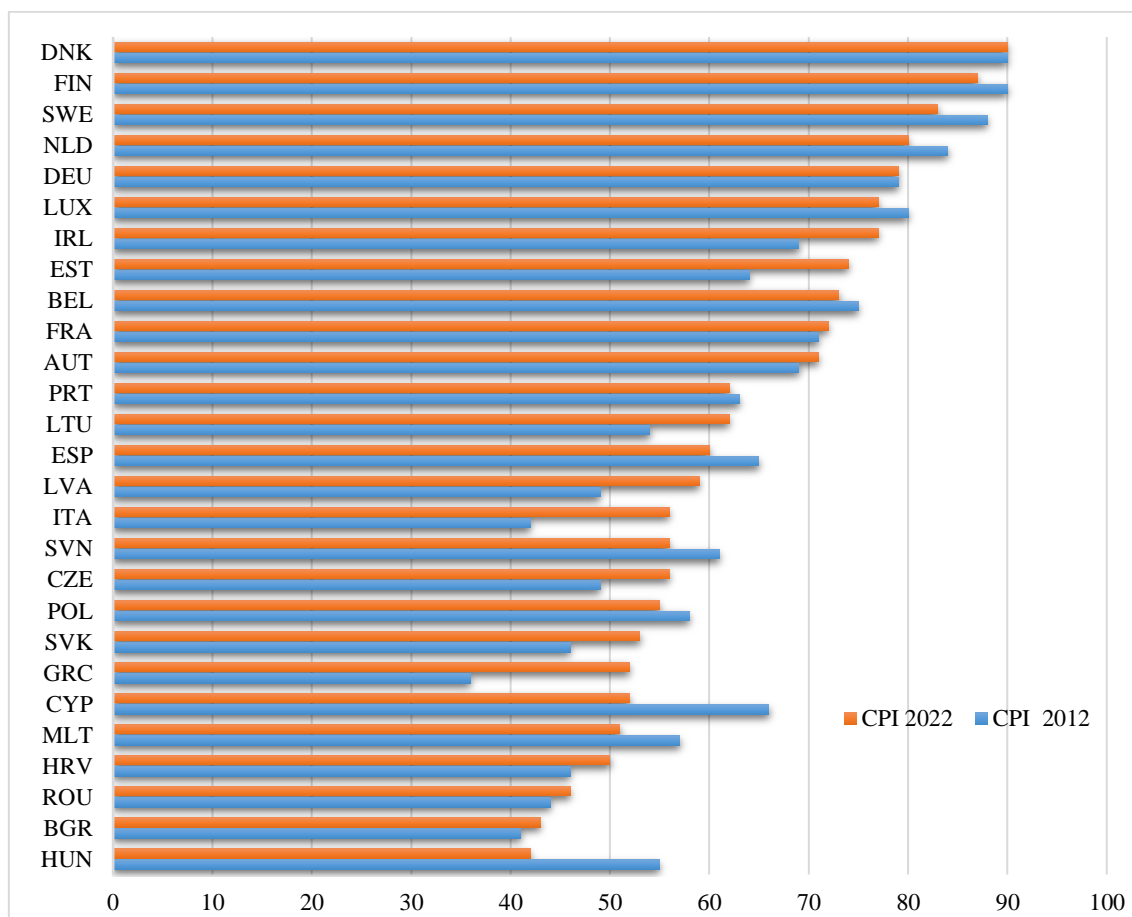
**Figure 2.** Corruption Perceptions Index (CPI) and e-Government Development Index in EU countries

**Source:** Transparency International (2023a), United Nations (2022)

Further analysis of the obtained data (Figure 2) proves that the e-government development only partially improves anti-corruption activities. Despite a fairly high level of e-government development, such countries as Slovenia, Spain, Cyprus, Malta, Poland, Bulgaria, Hungary and some others have relatively low indicators of the level of corruption perceptions.

The data for 2012 and 2022 will be compared to identify the main trends in the change in indicators of the Corruption Perceptions Index of

the EU countries (Figure 3). A significant regression over the last decade in such countries as Hungary, Cyprus, Malta, Poland, Spain, Slovenia, etc. is noted. The data of Figure 3 show that a decrease in the Corruption Perceptions Index, for example, in the specified countries, was determined by a number of unbalanced approaches to the issues of the rule of law, freedom of speech, and the effectiveness of the implementation of administrative and legal methods of preventing corruption.



**Figure 3.** Indicators of the Corruption Perceptions Index of EU countries in 2012 and 2022

**Source:** Transparency International (2023a)

In view of the rather significant approach to the revision of administrative and legal methods in the EU anti-corruption policy (European Commission, 2023a; European Commission, 2023b), it should be recognized that a really significant decrease in the Corruption Perceptions Index in some EU countries indicates insufficiently effective tools in the public administration system. Some researchers argue that, other things being equal, the high level of the rule of law provides higher control over corruption (Chong et al., 2020). Certain areas of public administration, related to the

quality of legal education, gender balance in politics and administration, delegation of powers, freedom of speech, rule of law, good governance principles, can effectively and quickly minimize corruption manifestations.

### Discussion

The study of administrative and legal methods of preventing corruption among public authorities demonstrates that this issue is quite complex and involves a significant range of factors. Based on the main focus on the EU member states, the



analysis indicatively shows the heterogeneity of both the level of corruption perceptions and the level of governance in the EU member states, and the situation when even democratic European countries can increase their own tolerance for corruption manifestations during the last decade.

As the aim of the study provided, the administrative and legal principles of the EU member states regarding the implementation of specialized anti-corruption bodies, legal boundaries, control and supervision, transparency, participation and other measures that contribute to fighting corruption were considered. This made it possible to identify the effectiveness of such measures in different contexts and in terms of using the good governance principles in anti-corruption activities.

The obtained results show that the high performance of the public administration system, which is reflected by two different parameters (the efficiency of public administration bodies, the level of e-governance), is partially correlated with the strong anti-corruption policy of most EU member states. But this is not a complete match. This situation is confirmed by studies that demonstrate, for example, the partial impact of e-government on corruption (Sihal et al., 2023).

The use of two factors describing the public management system (WGI, EGDI), the implementation of the good governance model showed almost similar results, which proves the correctness of the chosen methodological approach. Some deviations can be explained by the very specifics of the formation of both the Electronic Government Development Index and the efficiency indicator of public administration bodies. In general, it can be argued that the quality of public administration, the implementation of the concept of good governance, and the development of political institutions are positively related to efficiency and state development, determining control over corruption (Chong et al., 2020). Another study (Zou et al., 2023) also testifies to the partial influence of the effectiveness of public administration on corruption.

We can talk about the partial confirmation of the obtained research results regarding the reduction of corruption in the public administration system due to the development of e-government (Chen & Aklikokou, 2021). E-government reduces the space of power, regulates the behaviour of public authorities and public servants, thereby fundamentally fighting corruption. E-

government reduces the personal interaction between civil servants and citizens, thereby weakening the freedom of action of officials and reducing the opportunities for corruption (Zou et al., 2023). As mentioned, e-governance approaches contribute to good governance.

Based on the obtained results regarding the decreased level of corruption perceptions in such countries as Hungary, Cyprus, Malta, Poland, Spain, Slovenia, the following should be noted. Poland has decreased its approval of the rule of law in relation to limitations on government powers, protection of fundamental rights, and criminal justice (World Justice Project, 2020). Over the past decade, democratic achievements have partially weakened. Similarly, Poland has deepened autocratic positions over the past 10 years, gradually eliminating media freedom and curtailing civil society (Lührmann & Lindberg, 2020). Although recently, the Polish government has been trying to strengthen the independence of the judiciary and reform the disciplinary regime in the judicial branch of government after criticism from the European Commission regarding the observance of the rule of law.

As for Cyprus, the country is not able to start the full functioning of the recently created anti-corruption body. Spain is delaying anti-corruption measures and updating legislation on lobbying, transparency and information, prompting warnings from the European Commission. Malta demonstrates political interference in mass media and anti-corruption activities, cases of corruption of high-ranking officials remain without verdicts for a long time. Since 2014, a decreased freedom and integrity of elections has been recorded in Hungary, which has significantly limited the activities of mass media and civil society (Bozóki & Hegedűs, 2018), while civil freedoms have become significantly restricted. The degradation of democratic achievements and the weakening of the rule of law in Hungary in 2022 put the country at the very bottom of the corruption perceptions in the EU. Evidence of misuse of EU and state funds by political leaders were revealed. There is an urgent need for pressure from EU institutions on the government to restore the rule of law in Hungary (Transparency International, 2023b).

The development of effective legal, organizational and administrative methods aimed at preventing and stopping corruption among public authorities will not only improve the quality of management, but also ensure reliable protection of the rights and legitimate interests of

citizens. First of all, the legislation on the status of public authorities, on the powers of officials, on the administrative and disciplinary responsibility of public officials should be improved at the EU level, and key provisions should be implemented in the national legislation of EU member states. The improvement of administrative legislation is determined by the fact that corruption deforms administrative-legal management relations that arise between the powerful subject of law (a body of public authority) and the subordinate subject of law (a natural person or legal entity). In turn, this entails negative consequences in the form of a criminal threat to citizens, society, and the state. Besides, the corruption of the management of individual institutional bodies is primarily costs of the system not only of the budget of an individual country of the Commonwealth, but also of the EU budget as a whole, which must be minimized. Particular attention should be paid to the improvement of e-governance models and the concept of good governance in the system of public authorities of EU member states.

## Conclusions

The study shows that EU member states use different administrative and legal methods of fighting corruption. This includes legislative measures, the establishment of specialized anti-corruption bodies, improving of the system of control and supervision, development of transparency and accountability codes in the activities of public authorities. Effectively fighting corruption requires cooperation between various actors, including supranational and national authorities, anti-corruption agencies, and civil society.

The study shows that the EU countries make significant efforts to develop and implement effective administrative and legal methods that contribute to the prevention of corruption, the detection of corruption cases, their proper investigation and punishment. Improving anti-corruption legislation, strengthening control, monitoring, increasing the efficiency of anti-corruption bodies, sharing experience and transferring best practices and using the good governance principles are necessary steps to achieve sustainable progress in the fight against corruption among public authorities in EU countries.

It was found that administrative and legal methods in the system of public administration are not sufficient for the implementation of anti-corruption policy. The reason is that corruption

in the EU sometimes goes beyond the boundaries of only one country and its legislative boundaries and law enforcement. The implementation of effective administrative and legal methods of fighting corruption is a key task for public authorities and leading institutions of the EU, as evidenced by the existing problems of some EU countries. This requires a systemic approach, strong legislative frameworks, strengthening the capacity of specialized anti-corruption bodies and constant improvement of anti-corruption mechanisms.

## Bibliographic references

- Agarwal, A., & Maiti, D. (2020). ICTs and Effectiveness of Governance: A Cross-Country Study. In: D. Maiti, F. Castellacci & A. Melchior (Eds.), *Digitalisation and Development* (pp. 321-343). Singapore: Springer. [https://doi.org/10.1007/978-981-13-9996-1\\_12](https://doi.org/10.1007/978-981-13-9996-1_12)
- Armand, A., Coutts, A., Vicente, P. C., & Vilela, I. (2023). Measuring corruption in the field using behavioral games. *Journal of Public Economics*, 218, 104799. <https://doi.org/10.1016/j.jpubeco.2022.104799>
- Bozóki, A., & Hegedűs, D. (2018). An externally constrained hybrid regime: Hungary in the European Union. *Democratization*, 25(7), 1173-1189. <https://doi.org/10.1080/13510347.2018.1455664>
- Castro, C., & Lopes, C. (2022). Digital government and sustainable development. *Journal of the Knowledge Economy*, 13(2), 880-903. <https://doi.org/10.1007/s13132-021-00749-2>
- Chen, L., & Aklikokou, A. K. (2021). Relating e-government development to government effectiveness and control of corruption: a cluster analysis. *Journal of Chinese Governance*, 6(1), 155-173. <https://doi.org/10.1080/23812346.2019.1698693>
- Chong, S. P. C., Tee, C. M., & Cheng, S. V. (2020). Political institutions and the control of corruption: A cross-country evidence. *Journal of Financial Crime*, 28(1), 25-48. <https://doi.org/10.1108/jfc-05-2020-0094>
- Di Mascio, F., Maggetti, M., & Natalini, A. (2020). Exploring the dynamics of delegation over time: Insights from Italian anti-corruption agencies (2003–2016). *Policy Studies Journal*, 48(2), 367-400. <https://doi.org/10.1111/psj.12253>
- European Commission. (2023a). *Directive of the European Parliament and of the Council on*

- combating corruption. Retrieved from <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2023%3A234%3AFIN>
- European Commission. (2023b). *Joint Communication to the European Parliament, the Council and the European economic and social committee on the fight against corruption*. Retrieved from [https://commission.europa.eu/system/files/2023-05/JOIN\\_2023\\_12\\_1\\_EN.pdf](https://commission.europa.eu/system/files/2023-05/JOIN_2023_12_1_EN.pdf)
- European Union. (1997). *Convention drawn up on the basis of Article K.3 (2) (c) of the Treaty on European Union on the fight against corruption involving officials of the European Communities or officials of Member States of the European Union*. Retrieved from <https://acortar.link/zxUhH3>
- European Union. (2008). *Council Decision 2008/852/JHA of 24 October 2008 on a contact-point network against corruption*. Retrieved from <https://acortar.link/picHf7>
- European Union. (2012). *Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union*. Retrieved from <https://acortar.link/pCE1CW>
- European Union. (2022). *Corruption. Eurobarometer*. Retrieved from <https://europa.eu/eurobarometer/surveys/detail/2658>
- European Union. (2023). *EU legislation on anti-corruption*. Retrieved from <https://acortar.link/ZgzII9>
- Gallego-Álvarez, I., Rodríguez-Rosa, M., & Vicente-Galindo, P. (2021). Are worldwide governance indicators stable or do they change over time? a comparative study using multivariate analysis. *Mathematics*, 9(24), 3257. <https://doi.org/10.3390/math9243257>
- Gorsira, M., Steg, L., Denkers, A., & Huisman, W. (2018). Corruption in organizations: Ethical climate and individual motives. *Administrative Sciences*, 8(1), 4. <https://doi.org/10.3390/admsci8010004>
- Johnston, M., & Heidenheimer, A. (2017). *Political Corruption: Concepts and Contexts*. New York, NY: Routledge. <https://doi.org/10.4324/9781315126647>
- Kasa, R., Réthi, G., Hauber, G., & Szegedi, K. (2023). Simulation of corruption decisions – An agent-based approach. *Sustainability*, 15(3), 2561. <https://doi.org/10.3390/su15032561>
- Lührmann, A., & Lindberg, S. I. (Eds.). (2020). *Autocratization Surges – Resistance Grows*. Democracy Report 2020. V-DEM. Retrieved from <https://acortar.link/NZrOJN>
- Mao, Z., Yao, H., Zou, Q., Zhang, W., & Dong, Y. (2021). Digital contact tracing based on a graph database algorithm for emergency management during the COVID-19 epidemic: Case study. *JMIR Mhealth Uhealth*, 9(1), e26836. <https://doi.org/10.2196/26836>
- Qu, G., Slagter, B., Sylwester, K., & Doiron, K. (2019). Explaining the standard errors of corruption perception indices. *Journal of Comparative Economics*, 47(4), 907-920. <https://doi.org/10.1016/j.jce.2019.07.003>
- Rose-Ackerman, S. (2018). Corruption & purity. *Daedalus*, 147(3), 98-110. [https://doi.org/10.1162/daed\\_a\\_00505](https://doi.org/10.1162/daed_a_00505)
- Silal, P., Jha, A., & Saha, D. (2023). Examining the role of E-government in controlling corruption: A longitudinal study. *Information & Management*, 60(1), 103735. <https://doi.org/10.1016/j.im.2022.103735>
- Transparency International. (2023a). *Corruption perceptions index 2022*. Retrieved from <https://www.transparency.org/en/cpi/2022>
- Transparency International. (2023b). *CPI 2022 For Western Europe & EU: undue influence and fragmented anti-corruption measures hurt progress*. Retrieved from <https://acortar.link/oQOp6J>
- United Nations. (2020). *E-Government survey 2020 – digital government in the decade of action for sustainable development*. Retrieved from <https://digitallibrary.un.org/record/3884686?ln=ru>
- United Nations. (2022). *E-government survey 2022. The Future of Digital Government*. Retrieved from <https://acortar.link/2FVcv5>
- von Der Leyen, U. G. (2022). State of the Union Address by President von der Leyen. *European Commission*. Retrieved from <https://acortar.link/Inq6Vt>
- World Bank. (2023). *Worldwide Governance Indicators*. Retrieved from <https://info.worldbank.org/governance/wgi/>
- World Justice Project. (2020). *Rule of Law Index 2020*. Retrieved from <https://acortar.link/pYgizO>
- Zou, Q., Mao, Z., Yan, R., Liu, S., & Duan, Z. (2023). Vision and reality of e-government for governance improvement: Evidence from global cross-country panel data. *Technological Forecasting and Social Change*, 194, 122667. <https://doi.org/10.1016/j.techfore.2023.122667>



DOI: <https://doi.org/10.34069/AI/2023.71.11.8>

How to Cite:

Khmyrov, I., Khriapynskyi, A., Svoboda, I., Shevchuk, M., & Dotsenko, K. (2023). The impact of disinformation on the state information policy. *Amazonia Investiga*, 12(71), 93-102. <https://doi.org/10.34069/AI/2023.71.11.8>

## The impact of disinformation on the state information policy

### Вплив дезінформації на державну інформаційну політику

Received: September 30, 2023

Accepted: November 25, 2023

Written by:


**Ihor Khmyrov<sup>1</sup>** <https://orcid.org/0000-0002-7958-463X>**Anton Khriapynskyi<sup>2</sup>** <https://orcid.org/0000-0002-2492-051X>**Ivo Svoboda<sup>3</sup>** <https://orcid.org/0000-0002-0941-4686>**Mykhailo Shevchuk<sup>4</sup>** <https://orcid.org/0000-0001-7549-6344>**Kateryna Dotsenko<sup>5</sup>** <https://orcid.org/0000-0003-1299-4703>

#### Abstract


The spread of disinformation in digital communication causes anti-democratic behaviour among Internet users, which may threaten national security. The aim of the study was to determine the legal means of combating disinformation on the Internet as the main factor in shaping antisocial behaviour in terms of digital content. This issue was studied using the methods of comparative analysis, system logical analysis and doctrinal approach, as well as empirical and theoretical methods. Legal means of combating disinformation in cyberspace are means aimed at detecting and removing manipulative information from the information space. The state information policy aimed at combating fakes should ensure the transparency of digital platforms, improve the digital literacy of society, and establish monitoring and control over the information flow in cyberspace. International information standards oblige developers of social networks and digital platforms to create accessible and safe content for their users to combat disinformation in


#### Анотація


Поширення дезінформації в засобах цифрової комунікації стає причиною формування антидемократичної поведінки серед користувачів мережі Інтернет, яка в майбутньому може стати загрозою для національної безпеки. Метою дослідження був визначення правових засобів подолання дезінформації в мережі Інтернет як основного чинника формування антисоціальної поведінки серед цифрового контенту. Обрану тему досліджено розкрито за рахунок методів компаративного аналізу, системно-логічного та доктринального аналізу, а також емпіричного і теоретичного методів. Правовими засобами боротьби з дезінформації в кіберпросторі є засоби, спрямовані на виявлення, призупинення та вилучення із інформаційного простору маніпулятивної інформації. Державна інформаційна політика, спрямована на боротьбу з фейками має забезпечити прозорість цифрових платформ, підвищення рівня цифрової грамотності суспільства та встановлення моніторингу й контролю за

<sup>1</sup> Doctor of Science in Public Administration, Senior Researcher at the Scientific Department of Problems of Civil Protection and Technogenic and Ecological Safety of the Scientific and Research Center, National University of Civil Protection of Ukraine, Kharkiv, Ukraine.  WoS Researcher ID: CZO-2061-2022

<sup>2</sup> Candidate of Law, Director of "Khriapinsky and Co. Ltd.", Kharkiv, Ukraine.

<sup>3</sup> Associate Professor, Guarantor of Security Management Studies, AMBIS, Czech Republic.  WoS Researcher ID: CBV-4475-2022

<sup>4</sup> Candidate of Science of Law, Doctoral Student, Department of Constitutional Law, Administrative Law, Financial Law, Leonid Yuzkov Khmelnytskyi University of Management and Law, Khmelnytskyi, Ukraine,  WoS Researcher ID: IQW-6294-2023

<sup>5</sup> Candidate of Philological Sciences/PhD, Social Communications and Information Activity Division, Department of Journalism, Zaporizhzhia National University, Zaporizhzhia, Ukraine.  WoS Researcher ID: CND-4269-2022



cyberspace. The results of the study are useful for governments in the context of the formation of an effective state system of means of combating fake news.

**Palabras clave:** cyberspace, disinformation, information policy, social networks, fake information.

## Introduction

Increasing popularity of information and communication technologies, the growing volume of digital content and the relevance of social networks open new opportunities for cybercrime and the spread of disinformation. The popularization of social networks among the public entails the tendency to spread fake information. They become a means of communication with a lot of digital content, where one can gather a crowd and spread false information among them. Fake destructive information is distributed among such digital content to instigate extremist actions with the incitement of racial or national enmity and the spread of manifestations of racism or anti-Semitism. The uncontrolled flow of disinformation in cyberspace shapes anti-democratic views and anti-social behaviour in digital content. Ignoring the consequences of disinformation can lead to crimes against the state's national security interests, mass riots, or harm to the international authority of any country in the world. Therefore, identifying the best practices of foreign experience in the field of countering and combating disinformation is currently relevant.

The aim of this research is to study the impact of disinformation on the state information policy and its consequences on the development of a legal democratic state. The aim of the article was achieved through the fulfilment of the following research objectives:

- Carry out an analysis of the provisions of international standards on human rights and find out the state of their violation in the circulation of disinformation;
- Identify the role and significance of fake news on the development of a democratic society and the effectiveness of state information policy measures to combat

поток інформації в кіберпросторі. Для подолання дезінформації в кіберпросторі міжнародні інформаційні стандарти зобов'язують розробників соціальних мереж та цифрових платформ створити доступний та безпечний контент для їх користувачів. Результати дослідження є корисними для урядів в контексті формування ефективної державної системи засобів боротьби з фейковими новинами.

**Ключові слова:** дезінформація, інформаційна політика, кіберпростір, соціальні мережі, фейкова інформація.

disinformation by analysing the provisions of regulatory and legal acts;

- Outline the limits of public permissibility of state interference in a person's private life in the interests of increasing information security.
- Determine the system of countermeasures against disinformation and determine their effectiveness in the fight against fake news on the Internet.

## Literature Review

The problem of disinformation is widely covered in the works of scientists due to its global nature. Disinformation can threaten the interests of not only individual citizens, but also cause such large-scale consequences as sowing enmity, panic, can be aimed at the spread of undemocratic ideas and, ultimately, threaten the national security of individual states. Studying disinformation as a threat to democracy, Tenove (2020) and Allcott, Gentzkow and Yu (2019) argue that the preservation of democracy is possible only through the establishment of legal mechanisms to ensure information security based on openness, reporting, monitoring and public control. Analyzing the importance of artificial intelligence-supported disinformation for developing the information sphere, Whyte (2020) and Clayton, Davis, Hinckley and Horiuchi (2019) note that informational fakes are a modern public policy challenge. Miller and Vaccari (2020) and Bimber and Gil de Zúñiga (2020) note that developing an effective information policy is possible by eliminating risks from digital fakes aimed at manipulating public opinion and forming antisocial behavior of citizens.

False information in open sources forms a wrong view in a person, regardless of his/her level of



education, knowledge and experience (Bidzilya et al., 2022). In the modern world, disinformation is becoming the main threat to information security and can discredit democratic values, which is emphasized in several scientific works. Rapp and Salovich (2018) and Greene and Yu (2016), researching the consequences of disinformation for a democratic society, note that in order to overcome it, a system of countermeasures against fake information should be implemented at the state level, using modern technologies. Examining disinformation as a risk to democracy, McKay and Tenove (2021) and Ahler and Sood (2018) believe that public information policy to counter disinformation should be based on factors and logic, moral respect of listeners and democratic inclusiveness.

Reviewing EU information legislation and legal European instruments to contain, mitigate or neutralize hybrid threats, Lonardo (2021) and Halbert (2016) note that disinformation creates a cyber threat to destabilize a political opponent. EU information legislation should consider the interests of the public and private sectors, which are vital for countering disinformation. Analysing the European legal mechanisms for combating disinformation, Monti (2020b) believes it is necessary to fight against false news by involving journalists. This method enables regulating the level of false news in the information space through trust in journalistic investigations, thereby not violating freedom of speech. Investigating Taiwan's state information policy and its means of countering disinformation, it was concluded that fake news destabilizes the political situation in the state by causing anti-social public behaviour (Chen, 2021; Rak, 2022).

Examining the impact of fake news on society and the means of protecting information security in Germany, Colomina and Pérez-Soler (2022) and Kutscher (2022) note that disinformation is a threat to the state's political regime. The reason is that unreliable information in cyberspace undermines the basic scientific information necessary for effective decision-making processes. Studying the digital regulation of the EU, Cendic and Gosztanyi (2022) state that for most countries of the world, Internet regulation has become one of the main priorities of the political order, albeit with different solutions, from Australia through Germany and Canada to Poland and Hungary. Monti (2020a) and Krzywoń (2021) studied information security threats and countermeasures in Italy. According to them, disinformation is a manifestation of the violation of the freedom of information paradigm

and, unfortunately, appears as a tool through the mass use of fake news by populist movements.

The Italian legal system that regulates the information sphere is based on the observance of constitutional human rights - the right to receive information. Examining Singapore's Protection from Online Falsehoods and Manipulation Act (POFMA), Teo (2021) and Carson and Gibbons (2023) note that enforcement of the Act's provisions demonstrates its effectiveness in combating misinformation in cyberspace. According to the researchers, POFMA's effectiveness is evidenced by the fact that the government was entrusted with the main powers for anti-fake news functions. POFMA empowered the government to challenge wrongdoing by civil society on the Internet, which helped build resistance against online censorship. POFMA also provides participation in online political discussions in cyberspace, which contributed to controlling the spread of fake political information.

However, despite a fairly wide range of studies on this issue, the issues of countering and combating disinformation as the main task of the state information policy remain poorly studied. The key contradiction in considering disinformation as a threat to democracy is that excessively strict actions of the state aimed at limiting disinformation can affect basic rights and freedoms, particularly freedom of speech and the right to information. Therefore, states' efforts in the field of information policy should be aimed at forming mechanisms for countering disinformation, which can balance human rights and freedoms with the necessary restrictions. Scientific studies of successful foreign experiences and means of "soft power" can contribute to the resolution of this contradiction and significantly help governments develop effective countermeasures against disinformation.

## Methods and materials

The research design of this study included three stages. The first stage provided a review of the academic literature on the importance of disinformation problem. The provisions of international human rights and freedoms standards, European standards for combating disinformation, and norms of national legislation of EU countries on combating fakes on the Internet, including social networks, were selected. The materials of sociological surveys on the social values of the European community were selected for the assessment of the state's

ability to take measures to ensure information security.

The second stage involved theoretical and experimental research by comparing their results and analysing discrepancies. The provisions of the European Convention on Human Rights (European Convention on Human Rights, 1950) for assessing the consequences of disinformation on a democratic society and the content of disinformation are considered. The provisions of the EU Action Plan against Disinformation (European Commission, 2018) in terms of the assessment of the state information policy and its countermeasures against disinformation were considered. The provisions of the Resolution Parliamentary Assembly, Recommendation CM/Rec(2018)2 (Council of Europe, 2018) and CM/Rec(2020)1 in terms of the assessment of the European systems of anti-rail news tools were also studied. The content of disinformation and its influence on the development of state information policy are revealed by comparing the norms of the European Convention on Human Rights with the fact of violation of human rights and freedoms during the spread of controlled circulation of disinformation containing elements of anti-democratic views. The means of countering disinformation were assessed through the analysis of the practice of the Parliamentary Assembly of the Council of Europe and the norms of national legislation.

The third stage involved systematizing criteria for evaluating public opinion regarding state borders, taking measures in the interests of national security, and discussing disinformation's impact on the information policy development in a legal democratic state using Microsoft Office. The materials were analysed to fulfil the research objectives, and the research results were presented.

Comparative analysis was used to analyse data on disinformation and its consequences for a legal democratic state. Among other things, this method made it possible to reveal the essence of misinformation by comparing two categories - unreliable information and information containing true and false facts. The survey results of European countries' public values were analysed through a system logical method to assess the state's right to take measures to ensure information security in cyberspace. This made it possible to determine the extent to which each of the studied nations allows state intervention to ensure information security. Empirical and theoretical methods were combined for an empirical interpretation of the theory and a

theoretical interpretation of empirical data. In addition, this method made it possible to reveal the legal basis for taking countermeasures and combating fake news, propaganda and disinformation in cyberspace by researching the regulatory and legal framework. The doctrinal analysis of studies on the issues of information policy development and information security strategies determined the effectiveness of the state information policy with disinformation on the Internet. Using this method, the most effective measures to counter disinformation were identified, which were determined by scientists considering the practical results of their implementation.

The sample was:

- the general characteristics of disinformation and its consequences for the state; understanding of informational cyberspace and social networks as the main space for spreading disinformation;
- assessment of Europeans regarding the state's right to take measures to ensure information security in cyberspace;
- the system of international human rights and freedoms violated by disinformation;
- anti-fake strategies and state information policy of the European Union;
- system of legal measures against fake news on the Internet;
- national legislation of European countries in the field of countering and combating disinformation;
- the practice of countering the circulation of fake news on social networks.

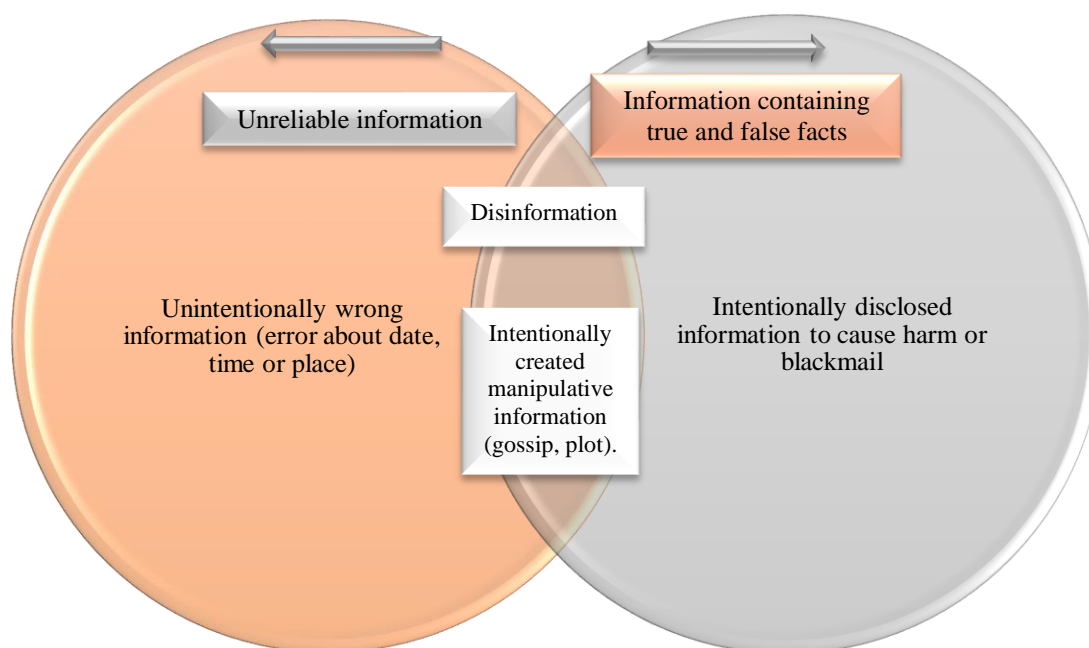
The totality of the study of these objects contributed revealed the content of the state information policy through the prism of the problems of countering and combating the circulation of disinformation in cyberspace.

The research was based on the provisions of the following documents: European Convention on Human Rights (European Convention on Human Rights, 1950), EU Action Plan against Disinformation (European Commission, 2018), Resolution Parliamentary Assembly "Democracy hacked? How to respond?" (Parliamentary Assembly, 2020), Recommendation CM/Rec(2018)2 (Council of Europe, 2018) on the roles and responsibilities of Internet intermediaries and Recommendation CM/Rec(2020)1 on the human rights impacts of algorithmic systems. The provisions of the national legislation of the EU countries: Code of Practice on Disinformation and the Law "On the Regulation of Social Networks" (Germany)

(Federal Ministry of Justice, 2017), Law on Combating Information Manipulation (France), Anti-Fake Law (Great Britain). Besides, the research was carried out based on the practice of the joint unit of Great Britain with Poland for countering Russian disinformation and propaganda, the results of a sociological survey by the Ukrainian Centre for European Politics with the support of the World Values Survey.

## Results

A comprehensive approach to understanding information cyberspace and the impact of disinformation on digital content (Figure 1) is key to creating a safe environment conducive to freedom of expression, which is guaranteed by Article 10 of the European Convention on Human Rights (European Convention on Human Rights, 1950).



**Figure 1.** Concept and content of disinformation  
**Source:** created by the author

Every citizen has the right to freely express his/her views without the interference of state authorities. The state is obliged to create safe conditions for receiving and transferring information to every citizen. In other cases, the state is empowered to take information security measures. In other words, when such information is disinformation and carries a threat to national security, territorial integrity, public safety, calls for public disturbances or crimes, harms health or morals, leads to the disclosure of confidential

information or the impartiality of the court, and generally harms reputation or rights of others. Therefore, to establish a democratic society in the interests of information security, each state undertakes to implement a system of effective legal mechanisms to counter such misinformation. However, public opinion regarding the assessment of disinformation and its consequences for the state is ambiguous (Table 1).

**Table 1.**

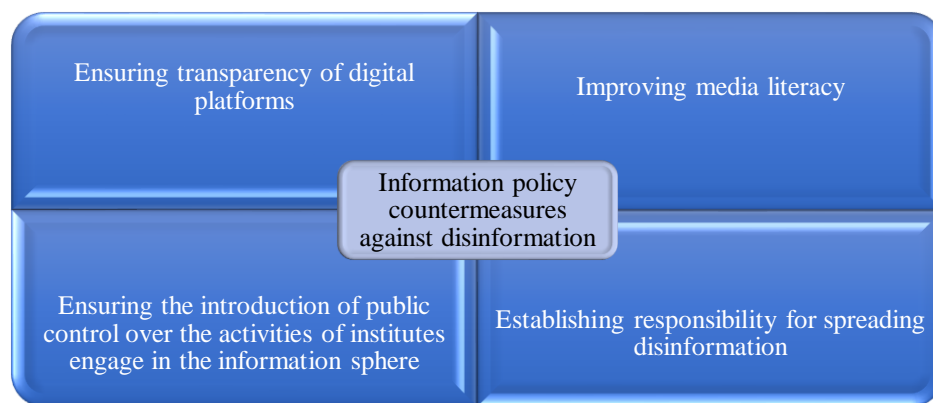
*Assessment of the right of the state to take measures to ensure information security in cyberspace, 2020.*

Country	Can the state collect information about a person without his/her knowledge?			Country	Can the government monitor e-mail or any other information that a person exchanges on the Internet?		
	Yes	No	Difficult to answer		Yes	No	Difficult to answer
Poland	4.5%	93.3%	2.2%	Poland	9.4%	86.6%	4.0%
Lithuania	8.4%	85.8%	5.8%	Lithuania	10.5%	82.8%	6.7%
Czech Republic	9.4%	87.9%	2.7%	Estonia	11.2%	83.6%	5.2%
Bulgaria	12%	81.7%	6.3%	Czech Republic	11.2%	85%	3.8%
Hungary	12.3%	85.9%	1.8%	Slovenia	11.6%	85.2%	3.6%
Slovenia	13.5%	83.8%	2.7%	Ukraine	12.9%	78.1%	9.0%
Germany	14.3%	83.5%	2.2%	Hungary	14.3%	82.1%	3.6%
Slovakia	14.3%	82.9%	2.8%	Croatia	14.7%	80.6%	4.7%
Austria	15.4%	81.9%	2.7%	Greece	15.0%	82%	3.0%
Estonia	16.9%	79.6%	3.5%	Slovakia	16.9%	79.9%	3.2%
Romania	16.9%	75.2%	7.9%	Cyprus	20.2%	73.4%	6.4%
Greece	17.1%	79.3%	3.6%	Bulgaria	20.4%	66.9%	12.7%
Croatia	18.1%	78.5%	3.4%	Romania	21.4%	69.2%	9.4%
Ukraine	18.3%	73.5%	8.2%	Austria	21.7%	74.8%	3.5%
Sweden	20.2%	77.7%	2.1%	Denmark	23.0%	76.2%	0.8%
France	21.8%	75.2%	3.0%	Germany	25.5%	71.8%	2.7%
Cyprus	24.9%	69.5%	5.6%	Italy	26.3%	67.9%	5.8%
Denmark	27%	72.4%	0.6%	Sweden	28.8%	96.3%	1.9%
Italy	29.3%	67.3%	3.4%	France	30.3%	65.9%	3.8%
Netherlands	31.1%	64%	4.9%	Spain	30.7%	65.7%	3.6%
Spain	32.3%	64.2%	3.5%	Netherlands	35%	60.4%	4.6%
Finland	36.3%	61.3%	2.4%	Finland	40.3%	56.4%	3.3%

**Source:** developed by the author based on Akulenko et al. (2020)

The search for an anti-fake strategy has become a priority for many democratic countries given the need to implement effective measures to hinder the spread of disinformation, which threatens national interests. This is especially relevant for EU member states, which have already experienced negative external informational influences of various kinds. In 2018, the EU introduced its own legal mechanism for countering and combating disinformation — Action Plan against Disinformation (European Commission, 2018). The Plan considers the spread of disinformation through television, journalistic publications, and social networks, currently the most favoured centres for distributing fake news. The European information policy is aimed at ensuring the transparency and credibility of mass media in cyberspace, creating a Code of Practice for digital platforms to facilitate the establishment of transparent private political content and establishing mechanisms to counter and combat chatbots. As a result, it will improve media literacy among the residents of the European Union and reduce the level of cyber threats during the election process.

The European anti-disinformation policy includes some international standards on information security: Resolution of the CoE's Parliamentary Assembly "Democracy hacked? How to respond?" (Parliamentary Assembly, 2020), Recommendation CM/Rec(2018)2 (Council of Europe, 2018) on the roles and responsibilities of internet intermediaries and Recommendation CM/Rec(2020)1 on the human rights impacts of algorithmic systems. The task of the Resolution Parliamentary Assembly is to stop the flow of disinformation that creates anti-social opinion and manipulates and foreign interference in the election process by creating an effective system of countermeasures against fake news (Figure 2). Therefore, EU member states introduce their own state information policy, including countermeasures against disinformation. These measures will be effective provided their legality (as an element of the democratic rule of law), openness and constant control by the government and national civil society institutions.



**Figure 2.** System of countermeasures against disinformation.

**Source:** developed by the author based on Parliamentary Assembly (2020)

Ignoring the consequences of disinformation and its uncontrolled circulation in cyberspace contributes to shaping anti-social public behaviour and anti-political attitudes in society. Such consequences threaten the national security of the state, its democracy, territorial integrity and sovereignty. The search for anti-fake measures has become a priority for most countries, given the need to create safe content and implement an effective system for countering the spread of fake information, which threatens national interests. Paradoxically, one of these measures is the digital information environment itself, which creates fake news. Cyberspace, including social networks Facebook, Twitter, Google, YouTube, Reddit, Microsoft, and LinkedIn, is currently a priority source of communication and information for most people. Social networks are positioned as the main source of information due to their multifunctionality, which is related to the possibility of structuring the communicative space and objectively promoting the development of civil society.

International information standards to combat fake news and disinformation oblige developers of social networks and digital platforms to create accessible and safe content for society. Recommendation CM/Rec(2018)2 (Council of Europe, 2018) obliges software developers to ensure secure content by exercising user control. Such control is exercised by automatically processing users' personal data for further access to information on the Internet, which they can later compare with traditional mass media. To create safe content on the Internet, EU countries are implementing various information security strategies that will protect people's rights to free access to cyberspace, where they can freely participate in public debates and express their own thoughts and ideas without fear, harassment or persecution.

For example, Germany is one of the first EU countries to adopt countermeasures against disinformation at the legislative level. In 2017, it adopted the Law "On the Regulation of Social Networks" (Federal Ministry of Justice, 2017), according to which social networks began to be positioned as commercial telecommunications service providers that involve digital platforms for the use and exchange of information. Besides, the developers of such social networks were obliged to inform the competent authorities in the event of recording disinformation. In 2018, Germany approved the Code of Practice for Countering Disinformation on the Internet, strengthening countermeasures against disinformation threatening national security interests. In terms of content, the Code is a system of obligations for developers of digital platforms and associations on which advertising products are placed to voluntarily apply countermeasures against disinformation and propaganda.

In the same year, 2018, France and Great Britain also introduced legal mechanisms to fight disinformation at the state level. France adopted the law to combat information manipulation. This regulation establishes a state regulator that monitors the flow of information in cyberspace, including social networks. In case of finding disinformation spread in social networks, which may possibly affect the public consciousness, the competent national authorities are authorized to stop and remove such fake information without a court decision. Great Britain approved the Anti-Fake Act, which marked the beginning of information policy development. Great Britain also formed a unit to counter Russian disinformation and propaganda jointly with Poland. This body has become a consultative centre for minimizing the risks of the influence of fake activities of the Russian mass media in cyberspace.



The high public trust in social networks becomes a space for cybercriminals in which they intensively spread propaganda and fakes. Therefore, law enforcement officers combat disinformation by actively using digital social content to spread reliable information and challenge fake news, to build awareness and social behaviour aimed at not committing illegal actions, which will ultimately contribute to improving the criminogenic situation.

## Discussion

The inefficiency of the state information policy and the rapid development of cyberspace facilitate the spread of fake news. Ignoring misinformation and its consequences for the state entails forming antisocial behaviour in society. The absence of an effective system of legal means of countering and combating disinformation endangers the sovereignty of the rule of law and its democracy.

Public misinformation in the information space is a threat to the development of a legal democratic state (Tenove, 2020; Allcott et al., 2019). Miller and Vaccari (2020) support this position. In his opinion, public information fakes in the modern digital world become a means of propaganda and information warfare. Multimedia disinformation is a highly adaptable tool used in tandem with cyber operations. It occupies a special place in the information environment of democratic states (Whyte, 2020; Clayton et al., 2019). Rapp and Salovich (2018) state that overcoming public information fakes requires establishing effective tools of the state information policy to counter and fight against false information in cyberspace. Disinformation is a factor in the stagnation of the development of a democratic society, as it promotes anti-social behaviour, including aggressive lies and psychological slander (McKay & Tenove, 2021; Ahler & Sood, 2018).

Disinformation is a tool of cybercrime to destabilize a political opponent (Lonardo, 2021). Misinformation in cyberspace exacerbates problems of trust in digital spaces and limits access to reliable data (Teo, 2021; Vese, 2022). Novais (2021) and Bayer et al. (2019) claimed that ineffective countermeasures against disinformation become the basis for shaping antisocial behaviour in society. For example, using disinformation through coverage of false information and public harassment contributed to the discrediting of a political opponent during presidential campaigns in Cape Verde.

The effectiveness of the state information policy in countering disinformation is manifested not through the establishment of tools to destroy fake news but through their control and regulation. The establishment of legal tools to combat disinformation should be based on the observance of freedom of speech and soft measures to combat false information in cyberspace. The effectiveness of countermeasures against fakes will depend on the fact-checking of citizens and the support of society depending on their level of education and training (Chen, 2021). Monti (2020b) noted that countering disinformation is possible only by establishing Internet liability — criminal liability for the spread of misinformation on the Internet. Digital platforms that provide information services in cyberspace worldwide do not allocate significant resources to protect their own economic interests and establish means of countering false news (Cendic & Gosztanyi, 2022).

The conducted analysis of ensuring information security because of the threat of disinformation gives grounds to note that researchers consider it appropriate to further study disinformation as a threat to information and national security, which generally adjusts the content and directions of the development of the information sphere.

## Conclusions

The state information policy for combating disinformation is a system of political, technical, organizational, and socio-economic measures aimed at identifying unreliable, manipulative information that is a threat to the state's national security and removing it from the information space. Based on the results of the analysis carried out in the study, the following recommendations can be formulated for countering disinformation in the field of information policy:

- ensure transparency of digital platforms through proper regulation and incentives;
- implement specialized campaigns aimed at increasing the level of media literacy of the population, motivating the population to perceive information critically, fact-checking;
- to ensure public control over the activities of information sphere institutes;
- establish responsibility for spreading disinformation.

These recommendations should be emphasised to maintain a balance between freedom of speech and measures to counter disinformation, which is

made possible by using "soft power". These measures will be effective, provided their legality, transparency, and accessibility for Internet users. The main tool of the state information policy for combating fake news is the information space of digital platforms and social networks, where law enforcement officers distribute reliable information and challenge fake news.

The prospect for further research is the development of practical recommendations for improving the sphere of observance of human rights and freedoms for the free and safe expression of one's views on the Internet. It is the empirical research and theoretico-methodological substantiation of effective mechanisms for countering and combating disinformation at the national level. The obtained results can be used to develop effective ways to overcome the uncontrolled circulation of fake news in cyberspace.

### Bibliographic references

- Ahler, D. J., & Sood, G. (2018). The parties in our heads: Misperceptions about party composition and their consequences. *The Journal of Politics*, 80(3), 964-981.
- Akulenko, L., Balakireva, O., Volosevych, I., Dmytruk, D., Kostyuchenko, T., Latsiba, I., Pavlova, D., & Shurenkova, A. (2020). World Values Survey 2020 in Ukraine. Kyiv: Ukrainian Center for European Policy. (In Ukrainian)
- Allcott, H., Gentzkow, M., & Yu, C. (2019). Trends in the diffusion of misinformation on social media. *Research & Politics*, 6(2), 1-8. <https://doi.org/10.1177/2053168019848554>
- Bayer, J., Bitiukova, N., Bard, P., Szakács, J., Alemanno, A., & Uszkiewicz, E. (2019). *Disinformation and propaganda – Impact on the functioning of the rule of law in the EU and its member states*. Brussels: European Parliament. <http://dx.doi.org/10.2139/ssrn.3409279>
- Bidzilya, Y., Tolochko, N., Haladzhun, Z., Solomin, Y., & Shapovalova, H. (2022). The problems in the development of public broadcasting in the polycultural borderland Region of Ukraine. *Amazonia Investiga*, 11(53), 59-69. <https://doi.org/10.34069/AI/2022.53.05.6>
- Bimber, B., & Gil de Zúñiga, H. (2020). The unedited public sphere. *New Media & Society*, 22(4), 700-715. <https://doi.org/10.1177/1461444819893980>
- Carson, A., & Gibbons, A. (2023). The big chill? How journalists and sources perceive and respond to fake news laws in Indonesia and Singapore. *Journalism Studies*, 22(14), 1819-1838. <https://doi.org/10.1080/1461670X.2023.2192299>
- Cendic, K., & Gosztonyi, G. (2022). Main Regulatory Plans in European Union's New Digital Regulation Package. In: D. A. Alexandrov (Ed.), *Digital Transformation and Global Society. DTGS 2021. Communications in Computer and Information Science* (pp. 163-176). Cham, Switzerland: Springer. [https://doi.org/10.1007/978-3-030-93715-7\\_12](https://doi.org/10.1007/978-3-030-93715-7_12)
- Chen, K. W. (2021). Dealing with disinformation from the perspective of militant democracy: A case study of Taiwan's Struggle to regulate disinformation. In: Ch. Sieber-Gasser & A. Ghibellini (Eds.), *Democracy and globalization: Legal and political analysis on the eve of the 4th Industrial Revolution* (pp. 125-147). Cham, Switzerland: Springer.
- Clayton, K., Davis, J., Hinckley, K., & Horiuchi, Y. (2019). Partisan motivated reasoning and misinformation in the media: Is news from ideologically uncongenial sources more suspicious? *Japanese Journal of Political Science*, 20(3), 129-142. <https://doi.org/10.1017/S1468109919000082>
- Colomina, C., & Pérez-Soler, S. (2022). Information disorder in the European Union: building a regulatory response. *Revista CIDOB d'Afers Internacionals*, 131, 141-161. <https://doi.org/10.24241/rcai.2022.131.2.141>
- Council of Europe. (2018). *Recommendation CM/Rec(2018)2 of the Committee of Ministers to member States on the roles and responsibilities of internet intermediaries*. Retrieved from <https://rm.coe.int/09000001680790e14>
- European Commission. (2018). *Action Plan against Disinformation*. Retrieved from <https://acortar.link/QOTtom>
- European Convention on Human Rights. (1950). *European Court of Human Rights, Council of Europe*. Retrieved from [https://www.echr.coe.int/documents/convention\\_eng.pdf](https://www.echr.coe.int/documents/convention_eng.pdf)
- Federal Ministry of Justice. (2017). *On the Regulation of Social Networks*. Retrieved from <https://www.gesetze-im-internet.de/netzdg/BJNR335210017.html>
- Greene, J. A., & Yu, S. B. (2016). Educating critical thinkers: The role of epistemic cognition. *Policy Insights from the*

- Behavioral and Brain Sciences*, 3, 45-53.  
<https://doi.org/10.1177/2372732215622223>
- Halbert, D. (2016). Intellectual property theft and national security: Agendas and assumptions. *The Information Society*, 32(4), 256-268.  
<https://doi.org/10.1080/01972243.2016.1177762>
- Krzywoń, A. (2021). Summary judicial proceedings as a measure for Electoral disinformation: Defining the European standard. *German Law Journal*, 22(4), 673-688. <https://doi.org/10.1017/glj.2021.23>
- Kutscher, S. (2022). Fake news and the illusion of truth: The influence of media on German political discourse in the wake of COVID-19. *Sortuz: Oñati Journal of Emergent Socio-Legal Studies*, 11(2), 142-169.
- Lonardo, L. (2021). EU law against hybrid threats: A first assessment. *European Papers-a Journal on Law and Integration*, 6(2), 1075-1096. <https://doi.org/10.15166/2499-8249/514>
- McKay, S., & Tenove, C. (2021). Disinformation as a threat to deliberative democracy. *Political Research Quarterly*, 74(3), 703-717.  
<https://doi.org/10.1177/1065912920938143>
- Miller, M. L., & Vaccari, C. (2020). Digital threats to democracy: Comparative lessons and possible remedies. *The International Journal of Press/Politics*, 25(3), 333-356.  
<https://doi.org/10.1177/1940161220922323>
- Monti, M. (2020a). Italian Populism and Fake News on the Internet: A new political weapon in the public discourse. In G. Delledonne, G. Martinico, M. Monti, & F. Pacini (Eds.), *Italian populism and constitutional law: Strategies, conflicts and dilemmas* (pp. 177-197). Cham: Palgrave Macmillan.
- Monti, M. (2020b). The EU Code of practice on disinformation and the risk of the privatisation of censorship. In S. Giusti, & E. Piras (Eds.), *Democracy and fake news. Information manipulation and post-truth politics* (p. 214-225). London: Routledge.
- Novais, R. A. (2021). Veracity pledge or discreditation strategy? Accusations of legacy disinformation in presidential campaigns in Cabo Verde. *Southern Communication Journal*, 86(3), 201-214.  
<https://doi.org/10.1080/1041794X.2021.1903539>
- Parliamentary Assembly. (2020). *Democracy hacked? How to respond?* Retrieved from <https://acortar.link/ndhPNd>
- Rak, J. (2022). Neo-militant democracy and (Un)fulfilled destination of consolidated democracies? The inner six in comparative perspective. *Historia i Polityka*, 40(47), 9-24.
- Rapp, D. N., & Salovich, N. A. (2018). Can't we just disregard fake news? The Consequences of Exposure to Inaccurate Information. *Policy Insights from the Behavioral and Brain Sciences*, 5(2), 232-239.  
<https://doi.org/10.1177/2372732218785193>
- Tenove, C. (2020). Protecting democracy from disinformation: Normative threats and Policy responses. *The International Journal of Press/Politics*, 25(3), 517-537.  
<https://doi.org/10.1177/1940161220918740>
- Teo, K. X. (2021). Civil society responses to Singapore's online "Fake news" Law. *International Journal of Communication*, 15, 4795-4815.
- Vese, D. (2022). Governing fake news: the regulation of social media and the right to freedom of expression in the era of emergency. *European Journal of Risk Regulation*, 13(3), 477-513.  
<https://doi.org/10.1017/err.2021.48>
- Whyte, C. (2020). Deepfake news: AI-enabled disinformation as a multi-level public policy challenge. *Journal of Cyber Policy*, 5(2), 199-217.  
<https://doi.org/10.1080/23738871.2020.1797135>

DOI: <https://doi.org/10.34069/AI/2023.71.11.9>

How to Cite:

Shulha, A., Tkach, A., Murzo, Y., Horodetska, M., & Sokur, T. (2023). Forensic information sources during the investigation of war crimes. *Amazonia Investiga*, 12(71), 103-116. <https://doi.org/10.34069/AI/2023.71.11.9>


## Forensic information sources during the investigation of war crimes

### Джерела криміналістичної інформації під час розслідування воєнних злочинів

Received: October 10, 2023

Accepted: November 27, 2023

Written by:

**Andriy Shulha<sup>1</sup>** <https://orcid.org/0000-0001-5524-5433>**Andrii Tkach<sup>2</sup>** <https://orcid.org/0009-0007-3253-3687>**Yevheniia Murzo<sup>3</sup>** <https://orcid.org/0009-0000-4409-0560>**Maryna Horodetska<sup>4</sup>** <https://orcid.org/0000-0002-3228-6299>**Tetiana Sokur<sup>5</sup>** <https://orcid.org/0000-0002-2061-2229>

#### Abstract

The relevance of studying the forensic information sources in the investigation of war crimes is determined by the specifics of these acts, the impact of the armed conflict on the activities of law enforcement officers, and the need for information exchange between national and international agencies. The aim of the study is to determine the specifics of working with forensic information sources in the investigation of war crimes. The research employed the logical method, comparative method, forecasting. The commission of war crimes in wartime determines the specifics of the choice of forensic information sources. The legal status of information affects the possibility of its use in the investigation process. Working with data sources depends on regulatory, infrastructural support, and staffing. Subjects of work with forensic information sources are national and foreign law enforcement agencies and international institutions. The appropriateness of data exchange using European platforms is substantiated.


#### Анотація


Актуальність дослідження джерел криміналістичної інформації при розслідуванні воєнних злочинів визначається специфікою цих діянь, впливом збройного конфлікту на діяльність правоохоронців, необхідністю обміну інформацією між національними та міжнародними структурами. Метою дослідження є визначення особливостей роботи з джерелами криміналістичної інформації при розслідуванні воєнних злочинів. У дослідженні використані практичні методи: логіко-юридичний, порівняльний, прогнозування.


Вчинення воєнних злочинів в умовах війни обумовлює специфіку вибору джерел криміналістичної інформації. Правовий статус відомостей впливає на можливість їх використання в процесі розслідування. Робота з джерелами даних залежить від нормативного, інфраструктурного та кадрового забезпечення. Суб'єктами роботи з джерелами криміналістичної інформації є національні та зарубіжні правоохоронні структури і

<sup>1</sup> Candidate of Juridical Sciences, Associate Professor of the State and Legal Disciplines and Public Administration Department, Faculty №4, Donetsk State University of Internal Affairs, Kropyvnytskyi, Ukraine.

<sup>2</sup> Candidate of Juridical Sciences, Senior Lecturer of the Department of Criminal Procedure, National Academy of Internal Affairs, Kyiv, Ukraine.

<sup>3</sup> Postgraduate student, Department of Criminal Procedure, National Academy of Internal Affairs, Kyiv, Ukraine.  WoS Researcher ID: HOC-1764-2023

<sup>4</sup> Doctor of Law Sciences, Associate Professor, Head of the Department of Organization of Pre-trial Investigation, Faculty №1, Kryvyi Rih Educational & Scientific Institute, Donetsk State University of Internal Affairs, Kryvyi Rih, Ukraine.  WoS Researcher ID: AAY-6835-2021

<sup>5</sup> Doctor of Philosophy, Associate Professor of the Department of Criminal, Civil and International Law, Law Faculty, National University "Zaporizhzhia Polytechnic", Zaporizhzhia, Ukraine.  WoS Researcher ID: JGC-7268-2023

The academic novelty of the research consists of analysing the sources of forensic information in the context of the specifics of war crimes and the specifics of cooperation between national and international agencies.

The study reveals the prospects of algorithmization of work with sources of forensic information on war crimes in the context of armed conflict.

**Keywords:** War crimes, criminal proceedings, investigations, effectiveness of evidence, forensic information.

## Introduction

The uniqueness of war crimes is determined by the duality of regulation, which determines different contexts of analysis:

- when war crimes are committed, international humanitarian law emphasizes the protection of war victims, international criminal law focuses on ensuring law and order and responsibility for the committed acts (Banjarani et al., 2023);
- due to the highest degree of public danger of war crimes, their criminalization in national law is not mandatory (Hathaway et al., 2019). However, the international criminal law prohibition (International Criminal Court, 2010) does not limit individual states to determine their own approaches to these acts (Ortynska et al., 2022);
- prosecution for war crimes falls under the jurisdiction of the International Criminal Court (ICC), but the capabilities of national law enforcement and judicial authorities are not diminished (Mayans-Hermida & Hola, 2020; Colvin & Orchard, 2022);
- war crimes are systemically linked to transnational crimes (illegal trafficking of cultural values, weapons, money laundering, etc.) (Caianiello, 2022).

Accordingly, the investigation of war crimes involves the specifics of the forensic information sources and the peculiarities of their processing (Freeman, 2018; Paliy, 2022). This raises a number of conceptual, organizational and applied problems in identifying and processing forensic information sources, in particular:

- a large number of data sources with all the structured and unstructured information contained in them, with a focus on

міжнародні інституції. Обґрунтовується доцільність обміну даними з використанням європейських платформ.

Наукова новизна дослідження полягає в аналізі джерел криміналістичної інформації у контексті особливостей воєнних злочинів та специфіки співробітництва між національними та міжнародними структурами.

Дослідження відкриває перспективи алгоритмізації роботи з джерелами криміналістичної інформації щодо воєнних злочинів в умовах збройного конфлікту.

**Ключові слова:** Воєнні злочини, кримінальні провадження, розслідування, ефективність доказування, криміналістична інформація.

identifying and using digital traces (Freeman, 2021);

- a wide list of owners of data sources (from the state to specific individuals) (Blahuta & Movchan, 2020), which requires establishing communication with them on the part of law enforcement agencies;
- the specifics of working with victims of conflict-related violence and witnesses of such crimes (Murad Code, 2022);
- communication of national and international law enforcement agencies, use of platforms for exchanging information about war crimes (Aksamitowska, 2021; Moussa, 2021);
- determining the possibilities of using forensic information on war crimes to solve and investigate other crimes (Tsybulskyi, 2022).

The latest forensic information sources increase the speed and efficiency of war crimes investigations. At the same time, they urge the issue of security and compliance with human rights in criminal proceedings (Akbari et al., 2022), which determines the appropriateness of discussing the standardization of their investigation process (Dufeniuk, 2022).

So, the study of forensic information sources on war crimes is determined by the specifics of such acts and the objective impossibility of using traditional approaches to collecting evidence (Schmitt, 2022; Fedoriv, 2022). In general, all problematic aspects are relevant to theory and practice. However, only their comprehensive critical consideration can increase the effectiveness of criminal prosecution for the commission of such acts.



### Aim

The aim of the study is to examine the forensic information sources as a component of ensuring the effective investigation of war crimes and to determine areas for improving work with those sources.

The aim involved the fulfilment of the following research objectives:

- a) generalize the approaches to understanding war crimes, present their classification;
- b) identify the types of forensic information sources in the context of the specifics of the investigation of war crimes;
- c) outline promising directions for improvement of war crimes investigation procedures.

The results of the study can be conditionally divided into three sections. The first introduces readers to approaches to defining war crimes. This section provides statistical information on the main categories of crimes committed on the territory of Ukraine by the Russian Federation - crimes of aggression and war crimes, crimes against national security, and crimes against children. Also, the relationship between war crimes and transnational acts in the conditions of armed conflict is described. The second section reveals the classification of forensic information sources, highlighting the problems of their processing. This section provides information on subjects of work with forensic information sources and data exchange between them. In particular, the importance of forming some international cooperation instruments is emphasized, their examples and key tasks are given. The third section summarizes the analysis, identifying the problems that complicate the work with forensic information sources during the investigation of war crimes. This section proposes directions for improving the processing of forensic information sources.

### Literature Review

The literature review was conducted regarding the main aspects on which the research is based. The sources of scientific information were divided into groups depending on the identified aspects, and the most representative ones in the study context were analyzed. In particular, the main attention is paid to the classification of war crimes, the participation of national and international actors in the investigation of war crimes, the understanding of the category of forensic information, the identification of

sources of forensic information and the prospects for improvement. The results of the conducted review according to the defined categories are as follows:

1. Classification of war crimes. The international legal regulation of the elements of war crimes (International Criminal Court, 2010) contributes to the diversity of approaches to their generalization. In particular, broad (Ghosh, 2022) and narrow (Banjarani et al., 2023) approaches are proposed. Along with this, the limitations of the features of international criminalization for the further study of war crimes are emphasized (Hathaway et al., 2019). The number of types of war crimes determine the use a situational approach to specialized methods of their investigation (Dufeniuk, 2022).
2. Participation of national and international actors in the investigation of war crimes. The importance of the ICC in responding to war crimes is emphasized (Colvin & Orchard, 2022). The leading role of nation states in criminal prosecutions is noted (Mayans-Hermida & Hola, 2020). The problem of admissibility of evidence collected by national investigators is outlined (Braga da Silva, 2020; United Nations, 2022b).
3. Understanding forensic information and its importance in the process of investigating war crimes. The study of the nature and types of forensic information clarified its purpose (Tsybulskyi, 2022) and gave grounds to analyse the technical support for data collection and processing (Filipov, 2022). The formation of the newest branches of forensic activity, which specialize in the study of large amounts of information, is noted (Kozytska, 2022; Dufeniuk, 2022). The issues of ensuring the security of the received information, its availability, and the protection of human rights in criminal proceedings are urged (Freeman, 2018; Akbari et al., 2022).
4. Forensic information sources. The dominance of open sources is emphasized (Nizamani et al., 2019; Blahuta & Movchan, 2020). images on the Internet and on personal media occupy a special place among them (Meng et al., 2020). In general, it is stated that war crimes leave digital traces, which fundamentally changes their investigation (Freeman, 2021). However, the discourse on traditional sources of forensic information remains relevant. These include forensic examinations

(Morgan & Levin, 2019; Cioffi & Cecannecchia, 2023). Work with victims is important (Institute for International Criminal Investigations, 2022; Human Rights Center, 2022). The studies on data exchange is a separate block of research. In particular, the need for international cooperation agreements on the storage of digital evidence (Moussa, 2021), the effective use of a platform for such an exchange based on Eurojust (Caianiello, 2022) are emphasized. The experience of Ukraine shows the effectiveness of combining work with the latest and traditional sources of information during the investigation of war crimes (Ministry of Temporarily Occupied Territories and Internally Displaced Persons of Ukraine, 2019; Office of the Prosecutor General, (s.f)).

5. Prospects for improving work with forensic information sources. In particular, the following methods are considered appropriate:
  - a) standardization of the investigation of war crimes (Dufeniuk, 2022);
  - b) implementation of technical and technological means of detection and identification of traces (Filipov, 2022);
  - c) using the capabilities of international humanitarian agencies (Ortynska et al., 2022).

Special attention is paid to the training of specialists both in the process of exchanging experience and on the platforms of international non-governmental organizations (OECD, 2021; Institutefor International Criminal Investigations, 2022). So, the literature presents a number of conclusions regarding the work with forensic information sources during the investigation of war crimes. However, they mainly cover certain problematic issues and do not fully use the possibilities of analysing war crimes at the current stage.

## Methodology

### Research design

The problems of the research determined its procedure, which is presented in the form of successive stages of achieving the set aim (block diagram). The text of studying the experience of Ukraine in the investigation of war crimes in the context of the military conflict chronologically limited the research to the period of armed aggression.

### Methods

The following methods were used during the research:

- the method of descriptive analysis was used to study the factors that influence the work with the sources of forensic information on war crimes. Among other things, with the help of this method, the limitations faced by subjects of work with sources of forensic information according to each of these sources were determined (for example, if the source of information is victims, the limitation may be a reluctance to report the crime, problems with access to information etc);
- the logical method in law made it possible to identify the specifics of the regulation of responsibility for war crimes and the specifics of their investigation by national and international institutions (ICC, Eurojust). With the application of this method, the process of information movement between such institutions, as well as the specifics of international cooperation tools, was revealed;
- the comparative method was applied to compare the experience of Ukraine with the standardized practices of processing forensic information sources in the investigation of war crimes. This made it possible to reveal the positive experience of Ukraine in this field, in particular, the fruitfulness of combining work with new and traditional sources of information during the investigation of war crimes, which is an important practical achievement of the work;
- the forecasting method was used to determine the prospects for improving the forensic information support for the investigation of war crimes, taking into account their types and the specifics of data sources. Such perspectives were formed based on the problems identified during the research in working with forensic information sources. Each of the identified perspectives solves a separate task to overcome the corresponding problem.

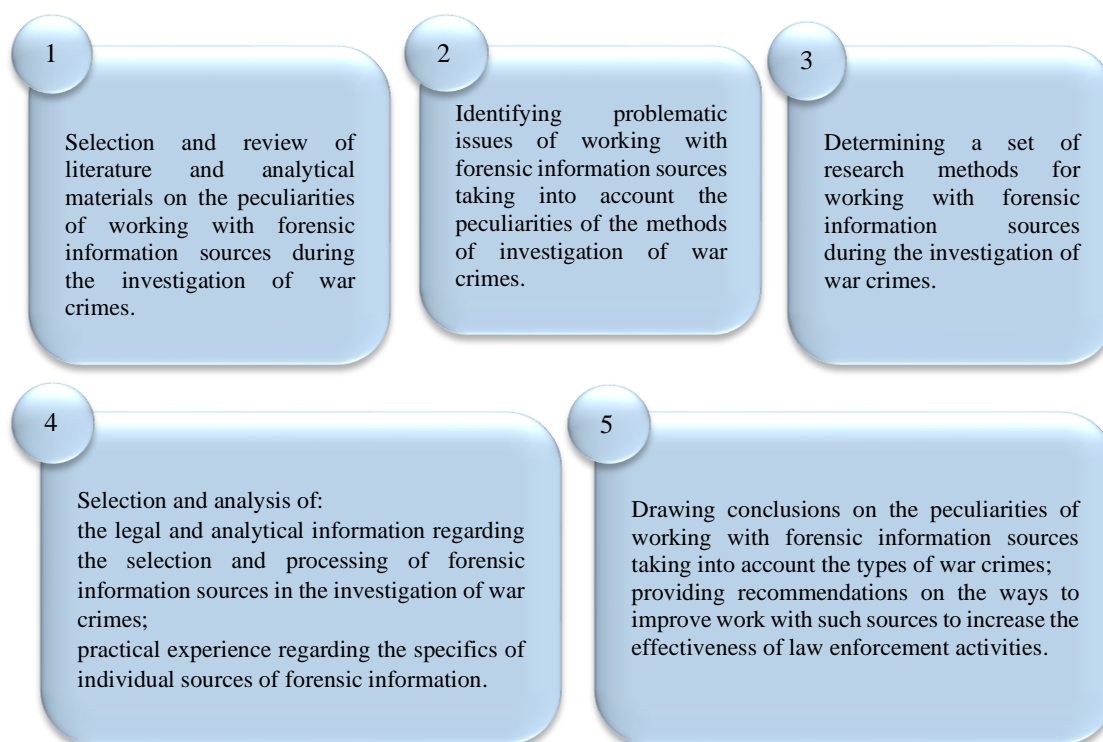
The validity of the specified methods is explained by the fact that their use made it possible to solve all the tasks specified in the work and, ultimately, to achieve the research goal. The reliability of the methods is supported by the use of information from official sources, appropriate standards of work with forensic information sources, current investigation

practices, and expert opinions during their implementation.

### Sample

Along with specialized studies, the following sources were processed in the course of the research:

- standards for working with sources of forensic information on crimes related to armed conflict (in particular, Berkeley Protocol on Digital Open Source Investigations; Prevention and Response to Conflict Related Sexual Violence (United Nations, 2022a); The Global Code of Conduct for Gathering and Using Information about Systematic and Conflict-Related Sexual Violence);
- current practices of investigating war crimes in the context of armed conflict in Ukraine (in particular, Ukraine: UN expert urges all war crimes investigators work closely with national authorities; Guide to collecting evidence for the International Criminal Court and documenting international crimes);
- expert generalizations regarding the prospects for improving the investigation of war crimes (in particular, the Annual Report of the Institute for International Criminal Investigations; Performance of the Prosecution Services in Latvia).

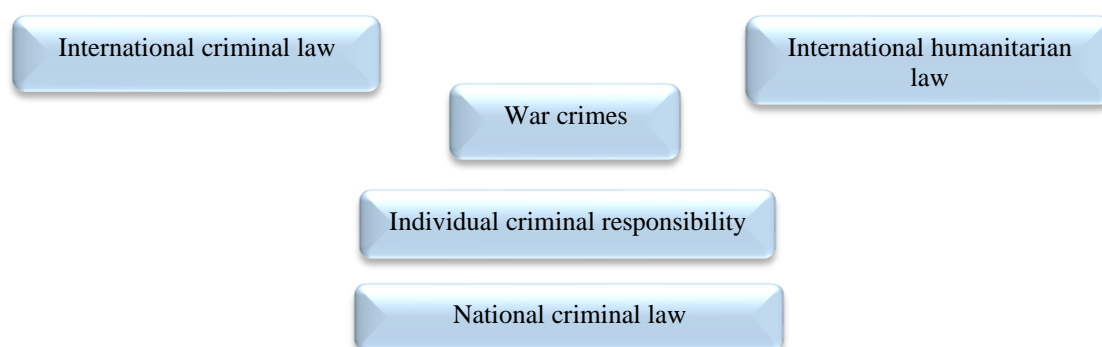


**Figure 1.** Block diagram of the research stages.  
 Source: (developed by authors)

### Results

The choice of the necessary forensic information and its sources is significantly influenced by the understanding of war crimes. In general, its basis

is the connection between international criminal and international humanitarian law, as well as the reflection of their provisions in national criminal legislation (see Figure 1A).

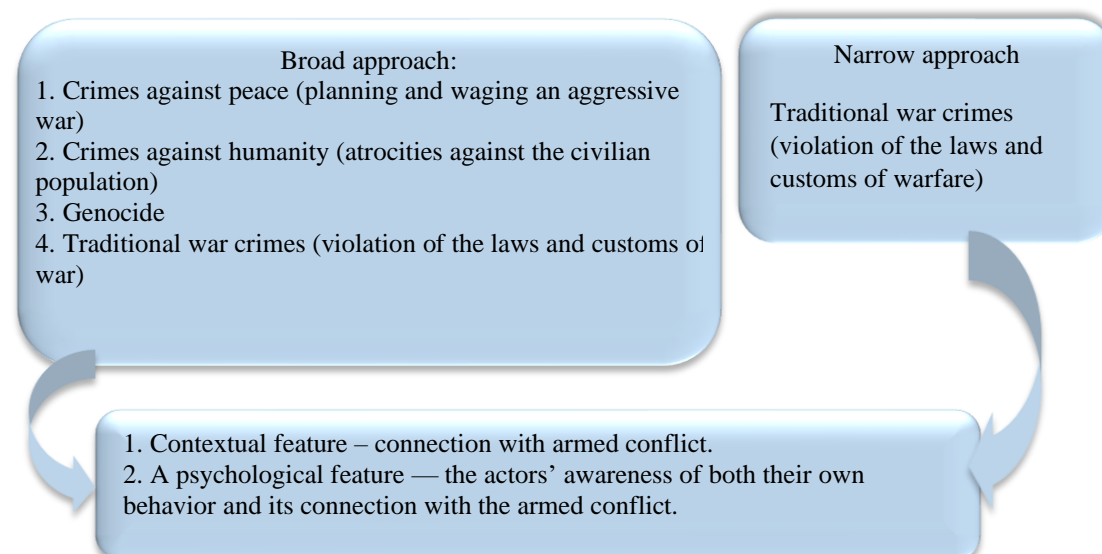


**Figure 1A.** War crimes in the context of international and national law.

Source: (developed by authors)

At the same time, the grounds of individual criminal responsibility determine the need for a certain approach to defining the list of acts that are considered war crimes. Broad and narrow

approaches can be distinguished in this regard. Within each of them, all war crimes are characterized by two common features – contextual and psychological (see Figure 1B).



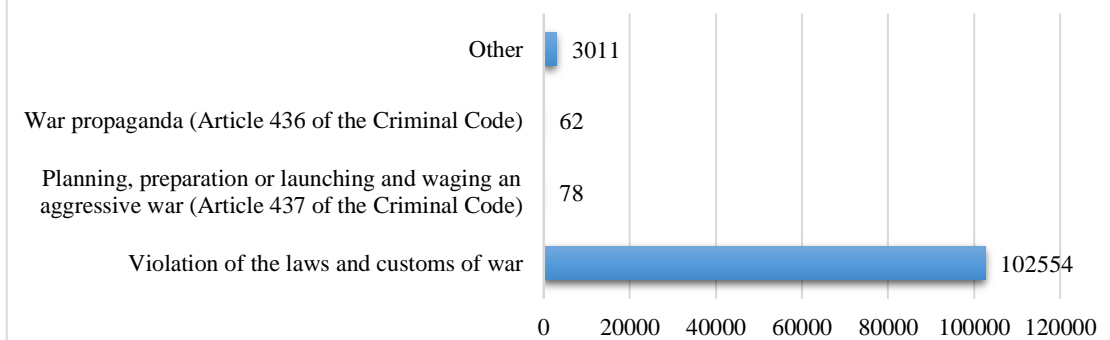
**Figure 1B.** Broad and narrow approaches to the list of war crimes.

Source: (developed by authors)

According to the Office of the Prosecutor General of Ukraine, since the beginning of the full-scale invasion of the Russian Federation into Ukraine, crimes of aggression and war crimes, crimes against national security, and crimes against children have been the main categories of crimes committed by the invaders. Figures 1C-1E show statistics on the number of crimes of the specified categories as of September 1, 2023.

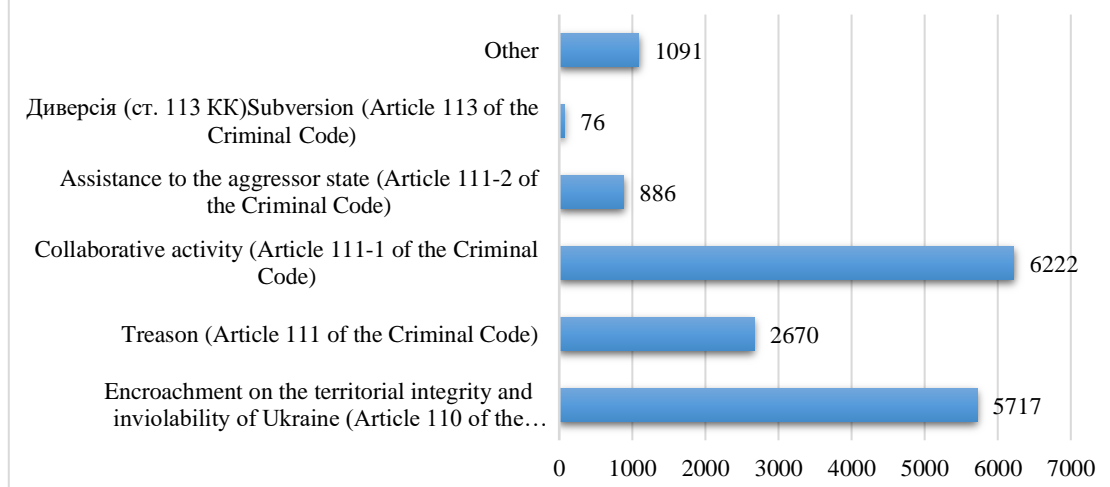
Effective law enforcement control both over temporarily occupied territories and in areas where hostilities continue is objectively difficult in the conditions of an international armed conflict. This determines the importance of connections between war crimes and other crimes, primarily transnational ones (see Figure 1E).

## Crimes of aggression and war crimes



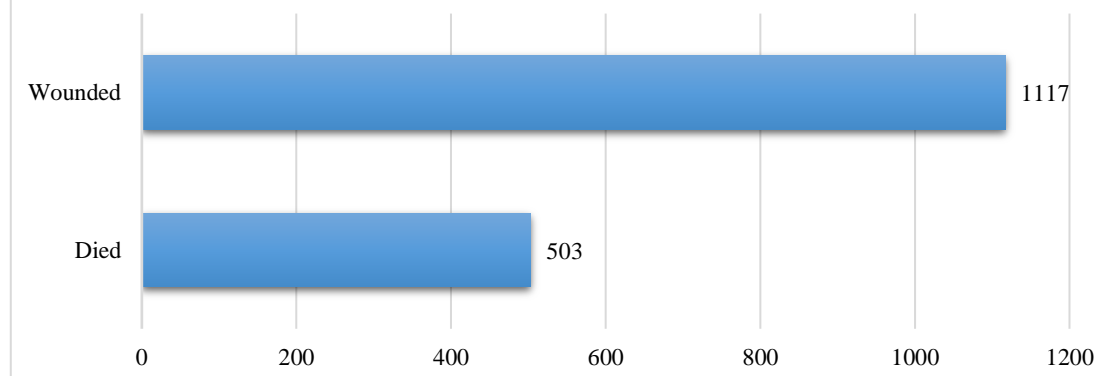
**Figure 1C.** Crimes of aggression and war crimes.  
Source: (built by the author based on ArmyInform, 2023)

## Crimes against national security



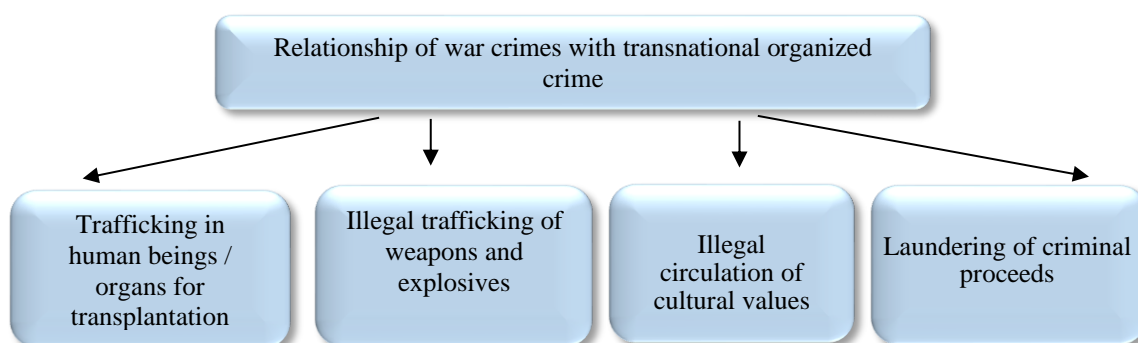
**Figure 1D.** Crimes against national security.  
Source: (built by the author based on ArmyInform, 2023)

## Crimes against children



**Figure 1E.** Crimes against children.  
Source: (built by the author based on ArmyInform, 2023)

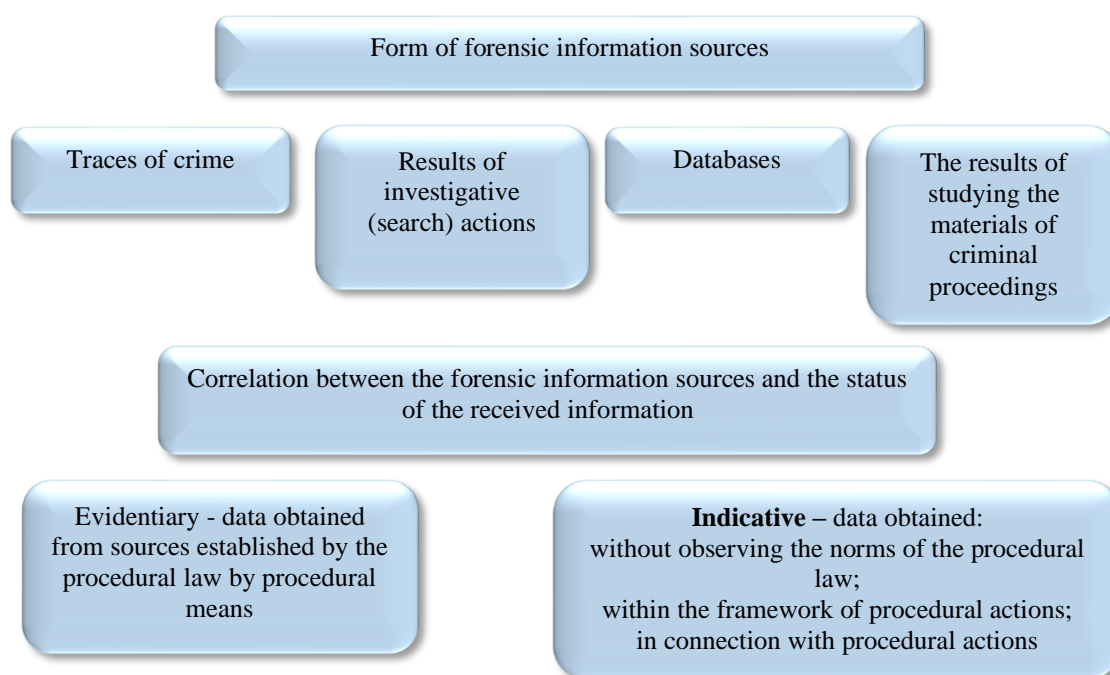




**Figure 1F.** War crimes as an element of the totality of illegal acts of a transnational nature.  
Source: (developed by authors)

Certain forensic information is collected and processed in the process of investigating war crimes: information about a specific set of circumstances of the crime, which are studied using forensic means and methods. A significant

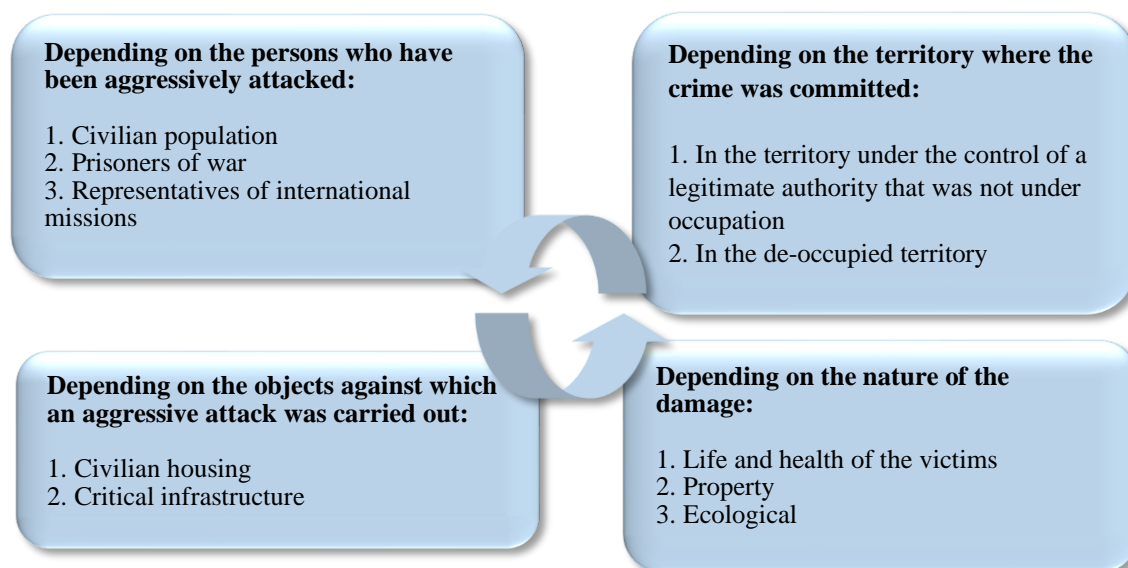
volume of data determines the appropriateness of classifying the sources of forensic information, in particular, according to the form and the connection between obtaining information and its legal status (see Figure 2).



**Figure 2.** Classification of forensic information sources.  
Source: (developed by authors)

A complex vision of war crimes determines the specifics of the selection of forensic data in the context of an armed conflict. Regardless of the

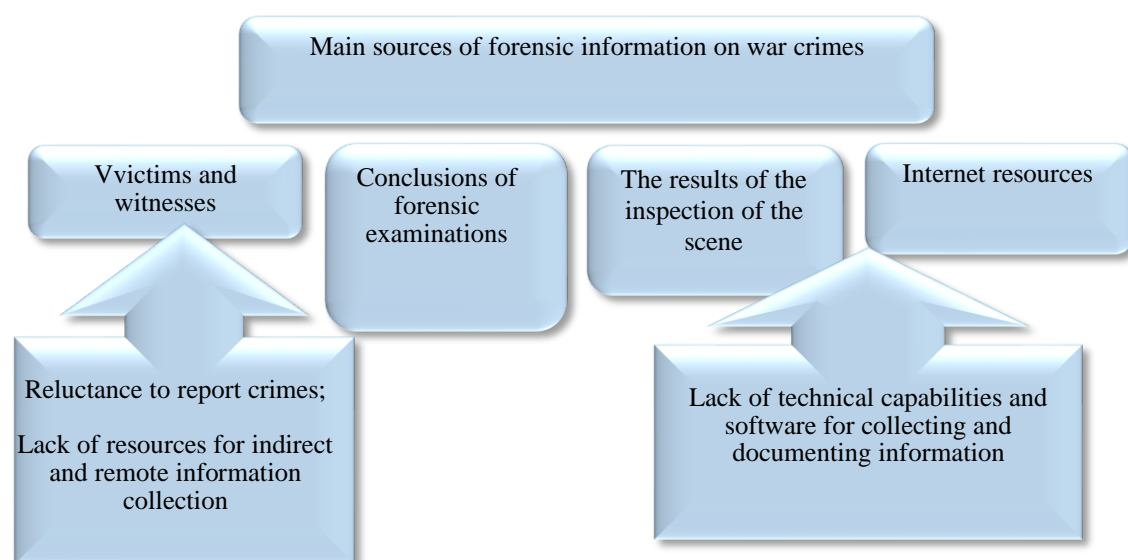
approach to understanding such crimes, attention in the process of their investigation is focused on interconnected sets of data (see Figure 3).



**Figure 3.** Collections of forensic data on war crimes.  
Source: (developed by authors)

Correlation of the specifics of war crimes and the specifics of forensic information makes it possible to determine relevant sources of forensic information. As war crimes are caused by an armed conflict, the choice of such sources in wartime is determined by the intensity of hostilities and the situation in particular territories.

The experience of Ukraine shows the importance of these conditions when working with certain forensic information sources. In particular, the list of data sources that can actually be processed is limited due to the mining of the territory, the impossibility of simultaneously involving a large number of investigators and experts, problems of technical and forensic support for work at the scene (see Figure 4).



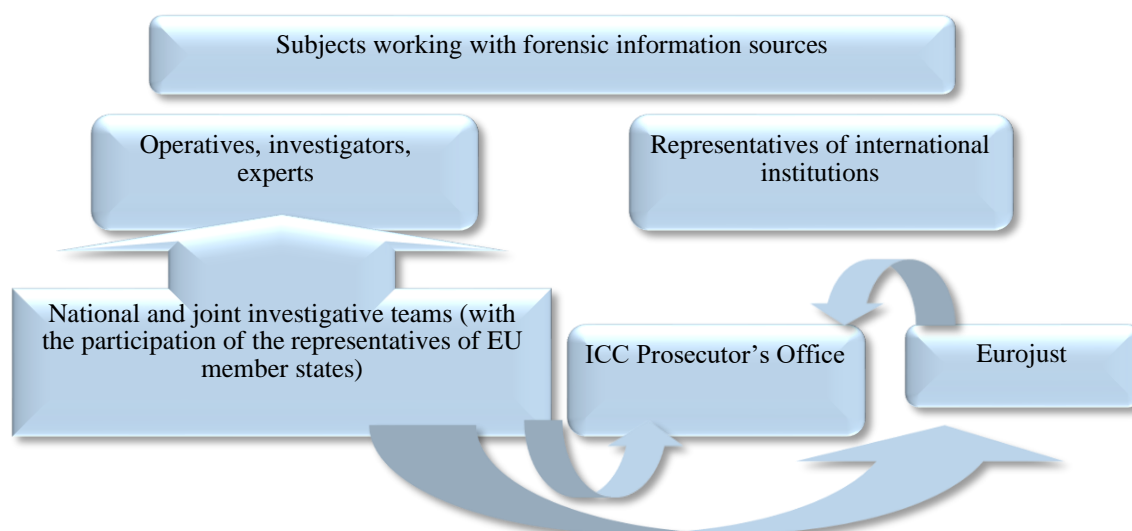
**Figure 4.** The main sources of forensic information on war crimes and the problems of their processing (using the example of Ukraine)  
Source: (developed by authors)

Based on the experience of Ukraine, the subjects working with the sources of forensic information on war crimes include national, foreign, and

international specialists - employees of law enforcement agencies and special institutions. In this case, an important aspect is the exchange of

evidentiary forensic information. In the current context, the information exchange platforms are of great importance. For example, Eurojust

accumulates information on war crimes and ensures their transfer to the Prosecutor's Office of the ICC (see Figure 5).



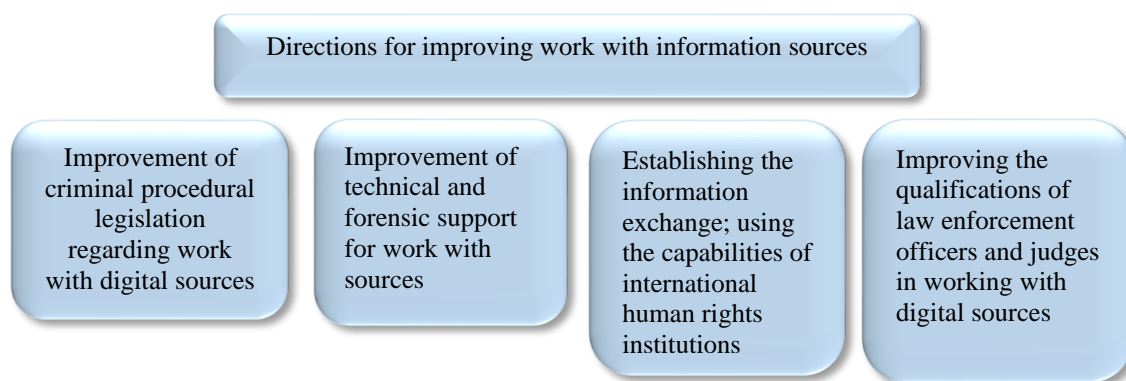
**Figure 5.** Subjects working with sources of forensic information and exchange of data on war crimes (using the example of Ukraine)

Source: (developed by authors)

Today, the formation of such international instruments of cooperation as the Joint Investigation Team (JIT) and the International Centre for the Prosecution of the Crime of Aggression against Ukraine (ICPA) are of great importance for the collection and exchange of evidentiary information). The JIT investigates serious international crimes, and the members of the group concluded an agreement not only to investigate war crimes, but also genocide crimes. The JIT was established on March 25, 2022, with the participation of Ukraine, Lithuania, and Poland, but later the composition of the group expanded by joining of Estonia, Latvia, Slovakia (May 31, 2022), and Romania (October 13, 2022). On March 3, 2023, JIT member countries signed a Memorandum of Understanding with the US Department of Justice. Europol also joins Eurojust and the ICC Prosecutor's Office as the JIT members (Europol, 2021). ICPA started its work on July 3, 2023 in The Hague. Ukraine is represented in it by the Eurojust Liaison Prosecutor. ICPA is integrated into Eurojust as a

unique judicial centre for supporting investigations of the crime of aggression arising in connection with the war in Ukraine. The centre employs the prosecutors from different states, who quickly and efficiently exchange information and agree on aspects of the investigation and prosecution strategy (Eurojust, 2023).

In view of the above, it is possible to formulate a number of problems that complicate the work with forensic information sources during the investigation of war crimes: gaps in the regulation of the collection and use of digital evidence; lack of technical resources and personnel to work with certain data sources; imperfect information exchange between national law enforcement agencies and international institutions, etc. The above provides grounds for determining directions for improving the processing of forensic information sources (see Figure 6).



**Figure 6.** Directions for improving the processing of forensic information sources.  
 Source: (developed by authors)

## Discussion

The approaches to the concept of war crimes were summarized, the appropriateness of their international legal criminalization was emphasized in the course of the study. The relationship between war crimes committed during hostilities and the sources of forensic information about them is shown. Emphasis is placed on the need to process modern and traditional data sources. The data sources are selected taking into account the possibilities of their processing in the context of an armed conflict and under the condition of technical and forensic support. The inappropriateness of specialized methods of investigating war crimes is substantiated taking into account their specific characteristics. It is shown that international institutions participating in the investigation of war crimes should also be considered subjects of work with forensic information sources. The importance of the exchange of evidentiary forensic information, including the use of European data exchange platforms, was emphasized. The main directions for improving the work with forensic information sources are outlined, which should contribute to the standardization of the investigation of war crimes in the context of the armed conflict.

In view of the obtained results, we share the position regarding the appropriateness of the discussion about the understanding of war crimes (Caianiello, 2022; Ghosh, 2022). However, we do not agree with the reasoning about the untimeliness of prosecuting war criminals during hostilities (Eichensehr, 2022). The approach to abandoning international criminalization is also controversial (Hathaway et al., 2019). We consider that this will not contribute to the unification of the regulation and the development of algorithms for the investigation of war crimes.

We justify the correlation of the features of war crimes and the specifics of forensic information. The position regarding the dominance of open sources of information (Nizamani et al., 2019; Blahuta & Movchan, 2020) can be supported. However, we emphasize that victims and witnesses are an equally popular source of data. This is confirmed by analytical reports and standardized practice guidelines (Institute for International Criminal Investigations, 2022; Human Rights Center, 2022). Along with this, such evidence is relevant for proving harm caused to crime victims (Schmitt, 2022), as well as to infrastructure and the environment. In general, one should agree with the promising nature of digital information (Meng et al., 2020). However, we showed the effectiveness of combining work with the latest (Freeman, 2021) and traditional (Morgan & Levin, 2019; Cioffi & Cecannecchia, 2023) sources of information during the investigation of war crimes using the experience of Ukraine as an example. We point out the impracticality of developing specialized methods of investigating war crimes taking into account their specifics (Dufeniuk, 2022), as the grounds for classifying such crimes actually describe one act in different contexts.

We agree with the considerations regarding the range of subjects in responding to war crimes (Mayans-Hermida & Hola, 2020; Colvin & Orchard, 2022). However, we draw attention to the subject composition, which includes national, foreign, and international institutions. This vision urges the issue of different data exchange formats (Moussa, 2021), while supporting the appropriateness of using European platforms (Caianiello, 2022).

As for the improvement of the work with the forensic information sources, we support the position about realistic and attainable proposals (Weyermann et al., 2023). That is why we share

those proposals that do not require long-term implementation as priority, for example, regarding thorough training of national judges, investigators and prosecutors regarding the investigation of war crimes (Aksamitowska, 2021). However, we share the possibility of standardizing this investigation (Dufeniuk, 2022). At the same time, we emphasize the necessity of improving the procedural legislation. This will provide opportunities to technically and infrastructurally meet the needs of law enforcement activities, including data exchange platforms. Moreover, we emphasize the need to ensure the security of the received information.

### *Limitations*

Studying the sources of forensic information in the investigation of war crimes is limited by the specifics of these acts and the conditions of armed conflicts. A limiting factor is the growth of varieties of open sources of information, the processing of which requires the development of special algorithms and platforms for data exchange.

### *Recommendations*

regarding the improvement of law enforcement activities - algorithmization of the processing of forensic information sources as a component of the standards of investigation of war crimes; regarding the legal support of the investigation – regulation of work with the latest sources of information, as well as interaction between national and international law enforcement agencies, including data exchange; regarding prospective studies – modernization of the approach to the understanding of war crimes and the standards of their investigation in the context of an armed conflict and after it.

### **Conclusions**

The academic novelty of the study is a critical consideration of the work with forensic information sources during the investigation of war crimes in the context of: discussions about the definition of war crimes; specifics of data sources in the context of the armed conflict; features of cooperation between national and foreign law enforcement agencies and international institutions.

The approaches to the definition of war crimes are summarized, the strengthening of the links between war crimes and transnational acts in the context of the armed conflict is emphasized. The

classification of forensic information sources is presented, the importance of the legal status of data for their use in the investigation process is emphasized. The correlation between war crimes committed in wartime and forensic information sources is proven. The comprehensive processing of modern and traditional data sources is emphasized, the dependence of work with sources on its technical and forensic support is shown. The circle of subjects working with forensic information sources is determined. The importance of the exchange of evidentiary forensic information between national and international institutions is emphasized. The promising nature of using European data exchange platforms is emphasized.

The directions for improving the work with the forensic information sources during the investigation of war crimes are outlined. Special emphasis is placed on: the regulatory and technical forensic support for the processing of forensic information sources in the context of the armed conflict; increasing the efficiency of data exchange between national and international institutions; strengthened specialized professional training of national law enforcement and judicial bodies. The appropriateness of standardizing the investigation of war crimes in the context of the armed conflict is argued, which will contribute to strengthening the protection of human rights in the field of criminal justice.

The applied significance of the study is the following recommendations: intensification of training of national employees of law enforcement agencies in working with data sources, which in practice means the inclusion of materials containing theoretical and methodological aspects of such work, as well as the formation of relevant practical skills, in the training and retraining programs of employees; improvement of procedural legislation in terms of work with the latest sources of forensic information and data exchange, which consists in defining clear processes, norms and restrictions regarding work with the latest sources of information; development of standards for the investigation of war crimes in the context of the armed conflict and after it, which may include the development of standards for each of the stages of such an investigation, possible investigation methods, etc.

### **Bibliographic references**

Akbari, Y., Al-maadeed, S., Elharrouss, O., Khelifi, F., Lawgaly, A., & Bouridane, A. (2022). Digital forensic analysis for source



- video identification: A survey. *Forensic Science International: Digital Investigation*, 41, 301390. <https://doi.org/10.1016/j.fsidi.2022.301390>
- Aksamitowska, K. (2021). *War Crimes Units: Legislative, Organisational and Technical Lessons*. The Hague: Asser Instituut, Center for International and European Law. <https://acortar.link/LTujyY>
- ArmyInform. (2023). *More than 105,000 war crimes committed by the Russian Federation against Ukraine were documented by the Prosecutor General's Office*. <https://acortar.link/bcxwsK>
- Banjarani, D.R., Febrian, F., Zuhir, M. A., & Adisti, N. A. (2023). The Urgency of War Crimes Regulation in Indonesian Criminal Law. *Fiat Justisia: Journal of Legal Studies*, 17(2), 109-132. <https://doi.org/10.25041/fiatjustisia.v17no2.2859>
- Blahuta, R.I., & Movchan, A.V. (2020). *The latest technologies in the investigation of crimes: the current state and problems of use*: monograph. Lviv: LvSUIAIR. (In Ukrainian)
- Braga da Silva, R. (2020). Sherlock at the ICC? Regulating Third-Party Investigations of International Crimes in the Rome Statute Legal Framework. *Journal of International Criminal Justice*, 18(1), 59-86. <https://doi.org/10.1093/jicj/mqaa021>
- Caianiello, M. (2022). The Role of the EU in the Investigation of Serious International Crimes Committed in Ukraine. Towards a New Model of Cooperation? *European Journal of Crime, Criminal Law and Criminal Justice*, 30(3-4), 219-237. <https://doi.org/10.1163/15718174-30030002>
- Cioffi, A., & Cecannecchia, C. (2023). Role of forensic medicine in addressing the war crimes: Perspective from Russia-Ukraine conflict during the COVID-19 pandemic. *Medicine, Science and the Law*, 63(2), 168-173. <https://doi.org/10.1177/00258024221125135>
- Colvin, V., & Orchard, Ph. (2022). Forced deportations and the Ukraine war: Russian culpability in atrocity crimes. *Violence: An International Journal*, 3(2), 281-300. <https://doi.org/10.1177/26330024231167184>
- Dufeniuk, O. (2022). Investigation of War Crimes in Ukraine: Challenges, Standards, Innovations. *Baltic Journal of Legal and Social Sciences*, 1, 46-56. <https://doi.org/10.30525/2592-8813-2022-1-6>
- Eichensehr, K. (2022). International institutions mobilize to impose accountability on Russia and individual perpetrators of war crimes and other abuses. *American Journal of International Law*, 116, 631-642. <https://acortar.link/q0RXoH>
- Eurojust. (2023). *The joint investigation team garners further support for the ICPA and agrees to investigate genocide crimes in Ukraine*. <https://acortar.link/P1tMi3>
- Europol. (2021). *Joint Investigation Teams – JITs*. <https://acortar.link/JHftjP>
- Fedoriv, O.M. (2022). Implementation of standards for effectiveness of pre-trial investigation under martial law. *Actual Problems of Native Jurisprudence*, 4, 210-218. <https://doi.org/10.32782/39221342>
- Filipov, Yu. (2022). Technical and forensic support for the investigation of war crimes: Concept, purpose, individual areas of development. *Law Journal of the National Academy of Internal Affairs*, 12(4), 72-83. <https://doi.org/10.56215/04221204.72>
- Freeman, L. (2018). Digital Evidence and War Crimes Prosecutions: The Impact of Digital Technologies on International Criminal Investigations and Trials. *Fordham International Law Journal*, 41(2), 283-335. <https://ir.lawnet.fordham.edu/ilj/vol41/iss2/1>
- Freeman, L. (2021). Weapons of War, Tools of Justice: Using Artificial Intelligence to Investigate International Crimes. *Journal of International Criminal Justice*, 19(1), 35-53. <https://doi.org/10.1093/jicj/mqab013>
- Ghosh, A. K. (2022). War Crimes and Crime of Genocide: Does the Laws really prevent Crimes in the Modern Society. *International Journal for Research in Applied Science & Engineering Technology (IJRASET)*, 10(V), 4452-4461. <https://doi.org/10.22214/ijraset.2022.43428>
- Hathaway, O.A., Strauch, P.K., Walton, B.A., & Weinberg, Z.A.Y. (2019). What is a War Crime? *The Yale Journal of International Law*, 44(1), 54-113. <https://acortar.link/J1ArP2>
- Horiunova, Y., Shemchuk, V., Lysianskyi, P., Vykhovanets, Z., & Gerasymova, E. (2022). Foreign policy strategy of Ukraine in the context of the Russia-Ukraine war. *Amazonia Investiga*, 11(60), 75-89. <https://doi.org/10.34069/AI/2022.60.12.8>
- Human Rights Center. (2022). *Berkeley Protocol on Digital Open Source Investigations: A Practical Guide on the Effective Use of Digital Open Source Information in Investigating Violations of International Criminal, Human Rights and Humanitarian Law*. <https://acortar.link/OSZj5V>
- Institute for International Criminal Investigations. (2022). *Annual Report of*

- Institute for International Criminal Investigations*. <https://acortar.link/92yRvz>
- International Criminal Court. (2010). *Elements of Crimes*. <https://acortar.link/OSqz1w>
- Kozytska, O. (2022). General Characteristics of Open-Source Cyberintelligence as a Method of Obtaining Forensically Relevant Information. *Baltic Journal of Legal and Social Sciences*, 3, 91-98. <https://doi.org/10.30525/2592-8813-2021-3-10>
- Mayans-Hermida, B.E., & Hola, B. (2020). Balancing 'the International' and 'the Domestic': Sanctions under the ICC Principle of Complementarity. *Journal of International Criminal Justice*, 18(5), 1103-1130. <https://doi.org/10.1093/jicj/mqab003>
- Meng, X., Meng, K., & Qiao, W. (2020). A Survey of Research on Image Data Sources Forensics. *AIPR`20: Proceedings of the 3<sup>rd</sup> International Conference on Artificial Intelligence and Pattern Recognition* (pp. 174-179). <https://doi.org/10.1145/3430199.3430241>
- Ministry of Temporarily Occupied Territories and Internally Displaced Persons of Ukraine. (2019). *A Guide to Gathering Evidence for the International Criminal Court and Documenting International Crimes*. Kyiv. <https://acortar.link/UTt0kc>
- Morgan, R.M., & Levin, E.A. (2019). A crisis for the future of forensic science: Lessons from the UK of the importance of epistemology for funding research and development. *Forensic Science International: Synergy*, 1, 243-252. <https://doi.org/10.1016/j.fsisy.2019.09.002>
- Moussa, A.F. (2021). Electronic evidence and its authenticity in forensic evidence. *Egyptian Journal of Forensic Sciences*, 11, 20. <https://doi.org/10.1186/s41935-021-00234-6>
- Murad Code. (2022). *The Global Code of Conduct for Gathering and Using Information about Systematic and Conflict-Related Sexual Violence*. [File PDF] <http://surl.li/lbtsp>
- Nizamani, S., Nizamani, S., Nizamani, Sh., & Ismaili, I.A. (2019). On the computational models for the analysis of illicit activities. *Sindh University Research Journal (Science Series)*, 46(4), 561-566. <https://doi.org/10.48550/arXiv.1902.05691>
- OECD. (2021). *Performance of the Prosecution Services in Latvia: a Comparative Study*. OECDilibrary <https://doi.org/10.1787/c0113907-en>
- Office of the Prosecutor General. (s.f). *If you became a victim or witness of Russia's war crimes, record and send the evidences!* <https://warcrimes.gov.ua/>
- Ortynska, N., Baranyak, V., Tsyliuryk, I., Koniushenko, Ya., & Krasiuk, I. (2022). Investigation and justice of crimes committed under war conditions in Ukraine. *Cuestiones Políticas*, 40(73), 311-329. <https://doi.org/10.46398/cuestpol.4073.16>
- Paliy, H.O. (2022). *Participation of Ukrainian civil society organizations in documenting crimes committed by the Russian Federation in Ukraine*. Kyiv: NISS. <https://acortar.link/4tpAKx>
- Schmitt, S. (2022). *Proving war crimes isn't simple – a forensics expert explains what's involved with documenting human rights violations during conflicts, from Afghanistan to Ukraine*. The Conversation. <http://surl.li/djeia>
- Tsybulskyi, D. (2022). Forensically significant information for the prevention of criminal offenses. *Legal Bulletin*, 5, 232-239. <https://doi.org/10.32782/yuv.v5.2022.25>
- United Nations. (2022a). *Prevention and Response to Conflict Related Sexual Violence*. <https://acortar.link/NwDsVH>
- United Nations. (2022b). *Ukraine: UN expert urges all war crimes investigators work closely with national authorities*. <https://acortar.link/4a8uiq>
- Weyermann, C., Willis, S., Margot, P., & Roux, C. (2023). Towards more relevance in forensic science research and development. *Forensic Science International*, 348, 111592. <https://doi.org/10.1016/j.forsciint.2023.111592>

DOI: <https://doi.org/10.34069/AI/2023.71.11.10>

How to Cite:

Reznik, E.A. (2023). On the ways of product quality fixation from the perspective of consumption psychology theory. *Amazonia Investiga*, 12(71), 117-125. <https://doi.org/10.34069/AI/2023.71.11.10>


## On the ways of product quality fixation from the perspective of consumption psychology theory

### О СПОСОБАХ ФИКСАЦИИ КАЧЕСТВА ПРОДУКЦИИ СКВОЗЬ ПРИЗМУ ТЕОРИИ ПСИХОЛОГИИ ПОТРЕБЛЕНИЯ

Received: June 9, 2023

Accepted: October 10, 2023

Written by:

Reznik Elena Anatolyevna<sup>1</sup> <https://orcid.org/0000-0002-6835-728X>

#### Abstract

The notions of product quality fixation ways are characterized in the given paper. It also contains opinions of different authors on the consumption psychology characteristics and specifies the importance of personal features of consumers and peculiarities of marketing communications for study. The article gives the notion of marketing communications and substantiates that quality management systems (QMS) are marketing communications. It also demonstrates that ISO standards in the sphere of quality management are aimed at developing effective models of business communications.

The author of the paper focuses on the fact that certificates and standards lose importance, to some extent, due to the invention and development of "bypasses" for standardization and certification of both the products themselves and business management systems that results in the formality and inefficiency of such tools, which give only the appearance of the qualitative products.

The conclusions are made that branding, as an alternative market tool, which can comprise both quality standards and conformance certificates, is such a tool of the marketing communication, which is formed based on a consumer's demand and product market characteristics; branding is competitive and it is attractive from the investment point to more extent.

**Keywords:** product quality, fixation ways, marketing practice, branding, consumer, voluntary certification, disappoint expectations of consumers, certificate.


#### Аннотация

В данной статье охарактеризованы понятия способов фиксации качества продукции; приводятся мнения различных авторов на характеристики психологии потребления; определено значение для изучения личностных особенностей потребителей и особенностей маркетинговых коммуникаций; дано понятие маркетинговых коммуникаций; обосновано, что системы менеджмента качества (СМК) есть маркетинговые коммуникации; показано, что стандарты ISO в сфере системы менеджмента качества направлены на построение эффективных моделей бизнес-коммуникаций.

Автором статьи сделан акцент на том, что сертификаты и стандарты стали в определенной степени обесцениваться в связи с изобретением и разработкой «обходных путей» для стандартизации и сертификации, как самой продукции, так и систем бизнес-управления, что приводит к формальности и неэффективности таких инструментов, которые лишь создают видимость качественной продукции.

Сделаны выводы о том, что брендинг, как альтернативный рыночный инструмент, который может включать в себя и стандарты качества, и сертификаты соответствия, является таким инструментом маркетинговой коммуникации, который формируется непосредственно на основании спроса потребителя и рыночных характеристик продукции; брендинг конкурентоспособен и инвестиционно привлекателен в гораздо большей степени.

**Ключевые слова:** качество продукции, способы фиксации, маркетинговая практика, брендинг, потребитель, добровольная сертификация, разочарование потребителей, сертификат.

<sup>1</sup> Candidate of Economic Sciences, Associate Professor of the Higher School of Finance and Management of the Russian Presidential Academy of National Economy and Public Administration, Moscow, Russia,  WoS Researcher ID: IWU-7500-2023

## Introduction

Brand, standard or conformance proof by the quality certificate are the ways of product quality fixation mostly appropriate with the organization strategy pointed out in scientific literature.

The issue of selecting the preference of the abovementioned ways, despite all seeming simplicity and artificiality, is one of the key ones in marketing and management practice and is especially relevant in Russian reality in the light of such circumstance that manufacturers do not understand why they should undergo voluntary certification and pay for the audit of own company if they feel themselves quite comfortably at the market in the current situation.

The issue of branding and its comparison with other quality fixation ways of products is very relevant as brand is a more unique and individual quality fixation tool, therefore, it should be more carefully studied in comparison with standards and certification of product quality conformance. Branding issues are investigated well in the brand as a strategic marketing tool by such authors as E.A. Bubenok (Bubenok, 2013), I.V. Gvozdet'skaya (Gvozdet'skaya, 2009), I.A. Zakharova (Zakharova, 2007), I.V. Ilyina (Ilyina, 2007), V.V. Fominykh (Fominykh, 2010) and others.

The definition of brand and branding is diverse. There are many approaches to the notion of brand, which touch upon its different aspects and properties.

We, indeed, are interested in those brand properties, which would connect it with the quality of products presented by it and individualize the manufacturer of such products, i.e. we are interested in the brand as a strategic marketing. Such approach is mentioned in Mc Donald's definition: "Brand is the name or symbol, which identify the product. Successful brand identifies the product, which has the undeniable competitive advantage" (Mc Donald, 1999).

## Literature Review

To sum up the principal concepts of the "brand", we can determine that brand as the the following set of perceptions in consumer's eyes (Feldwick, 2002). A consumer often perceives brand at the psychological and cognitive level when it is enough to hear about the brand and a consumer receives all the information about the goods.

Consumer psychology is also a certain section of psychology and the brand awareness, "capture" by eyes, what is the most important property of the branded product. Therefore, manufacturers and sellers struggle severely for certain places in shop-windows and shelves of supermarkets since this is the competition for "capture", struggle for the coverage of potential consumer audience, and brand, in this sense, surpasses in many times both certificates and standards by marketing properties.

Brand can comprise all those marketing tools, it can be, sort of, "focus" of marketing tools, including all the combination – from QMS to the voluntary certification by ISO. But it can also not contain, and in the competitive struggle the brand not containing such tools can unexpectedly appear more successful and profitable than carefully adjusted and selected standards and certificates. For example, one company can introduce QMS by ISO 9001 standards onto its production, it voluntarily certified all its products, however, it did not develop its personal individual brand. And such company can easily lose in the competitive struggle to the company, which did not introduce QMS into its production, did not receive voluntary certificates but developed and launched a successful visually attractive brand. This is the first type of the marketing strategy.

Primarily, the second marketing strategy will be more advantageous and then the product quality factor will come in. And here the selection of marketing strategy will tackle everything – because the first company could select the long-term strategy of entering the market, and the second one only wanted to cream off the market and leave. We studied also this type of strategy in our work.

Describing the brand psychologism, G. Dowling insists on the use of the marketing tool of promoting the product. Brand is the combination of the name and other symbols used to identify the product and "promise" given to the customer (Dowling, 2006). The customer really wants not only to obtain qualitative products under the notion of brand at present, right now, but expects that the product quality will not get worse in future, to say the least. Probably, in this sense the notion of brand is more psychological and marketing than the certificate, which guarantees the product quality but it is still not unique to the same degree as the brand. The strong marketing side of the brand is the fact that it creates the



name not only for the products themselves but also for their manufacturer.

Some experts, I. Kretoy and N. Karyagin repeat the same thesis in their brand definition, saying that «the trademark is, in some way, the promise that the offered product has a set of positive qualities and will not disappoint the customers' expectations» (Kretoy & Karyagin, 2005).

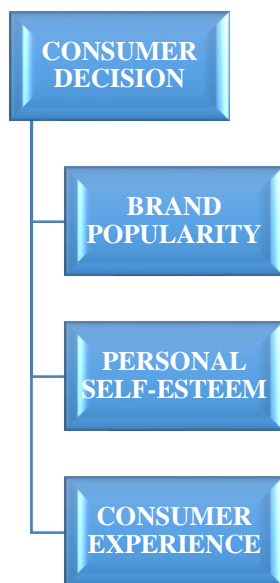
Another important psychological and marketing moment is the moment of motivation, which is one of the key notions in marketing. As it was defined by F. Jones, «Brand is the product meeting the functional needs of some consumers and providing them with some additional value able to satisfy certain psychological needs and induce them to buy» (Jones, 2005).

The incentive to buy one or another product is the most important notion of consumer psychology. Scientists and marketers conduct expensive researches trying to understand what forces a consumer to buy one or another product – a spontaneous desire or such probability can be increased. Obviously, the brand and trademark, together with the qualitative products, will be the

best incentives to buy rather than just All-Union State Standard (GOST) mark on the product. At present, it is impossible to surprise anyone by GOST mark availability since the threshold levels of the market are such that the products manufactured not according to the standards do not practically have chances to hit store shelves.

But brand is also the essence of the product marketability, it is the combination of many characteristics targeted at the consumer's psychological motives. Motivation in consumption psychology is the notion of intellectual, volitional and emotional scope. According to N.P. Ketova, motivation in marketing is the combination of interests, inquiries, considerations, which the consumer is driven by making the decision on the practicability of buying the product and preference of selecting the product among others. In the scientist's opinion, motivation can be influenced by the following factors: consumer's interest, self-esteem.

To sum up the said above, we determined the following factors of the consumer decision to obtain any brand (Design 1).



**Design 1.** The factors of the consumer decision to obtain a brand

As we see, motivation is divided into external and internal. An internal motivation does not require encouragements and incentives for the individual who is driven by internal motives. Such motives can exist both at conscious and unconscious levels.

An external motivation requires public recognition and reaction. Motivation is connected with the need to exercise own

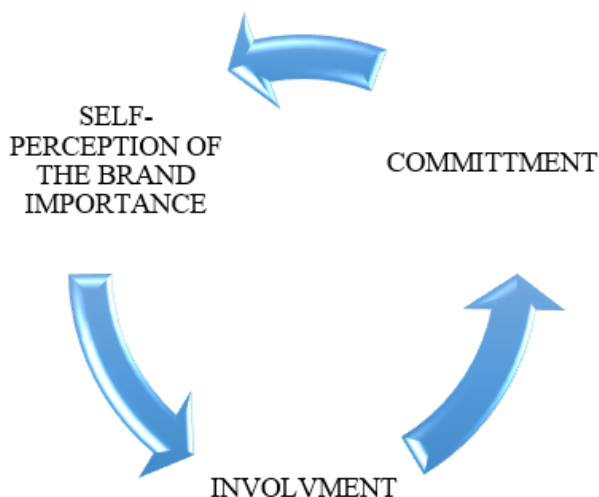
personality; however, external motivation can have the opposite expression, especially in the consumption sphere. The consumer can buy products only because all the others buy them. The massiveness of consumption seems to be the best marker of the product quality but it is not always so.

Motivation by N.P. Ketova is initiated by the interest, self-perception, commitment and



possession. Self-perception is a subjective psychological process revealed in marketing in such a way that the consumer is motivated to buy those products, which he or she bought before and the experience indicates that these products are qualitative. In such case, at self-perception the brand importance increases since the brand allows the product not to be lost in the variety of other goods and products.

Interest (involvement) indicates the product significance to the consumer and its importance for a certain consumer. A commitment, by Ketova (2009) is the consumer's stable and developed attitude to the trademark formed during the consumption process. Commitment is obviously based on self-perception.



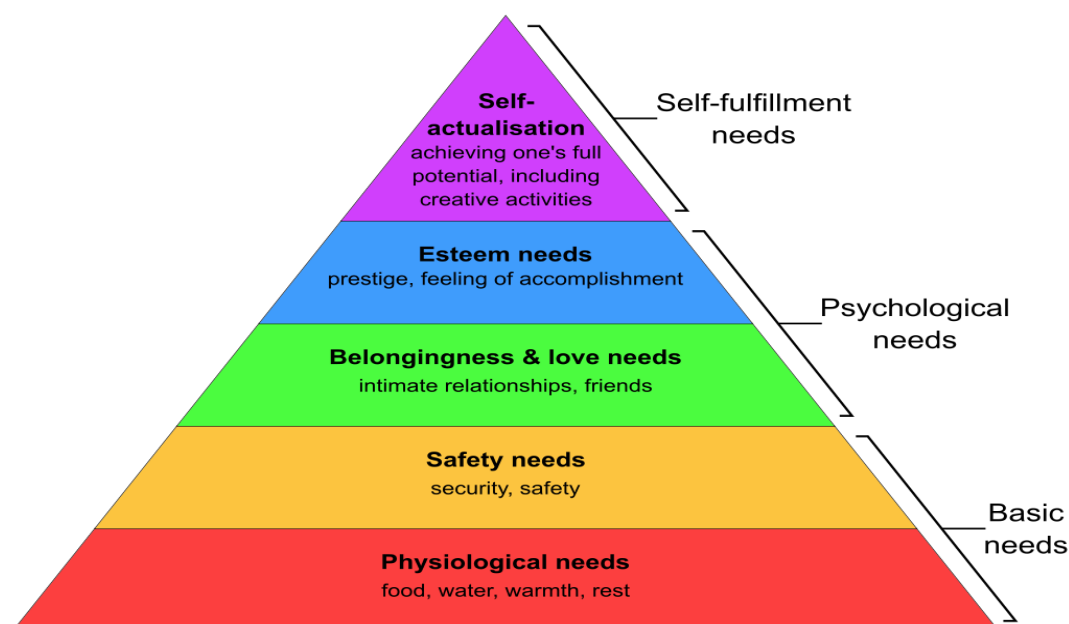
**Design 2.** The factors of the product significance for the consumer

So, the trademark or brand are extremely important for commitment.

### Methodology

There are several theories of motivation in marketing, which are worked out by general

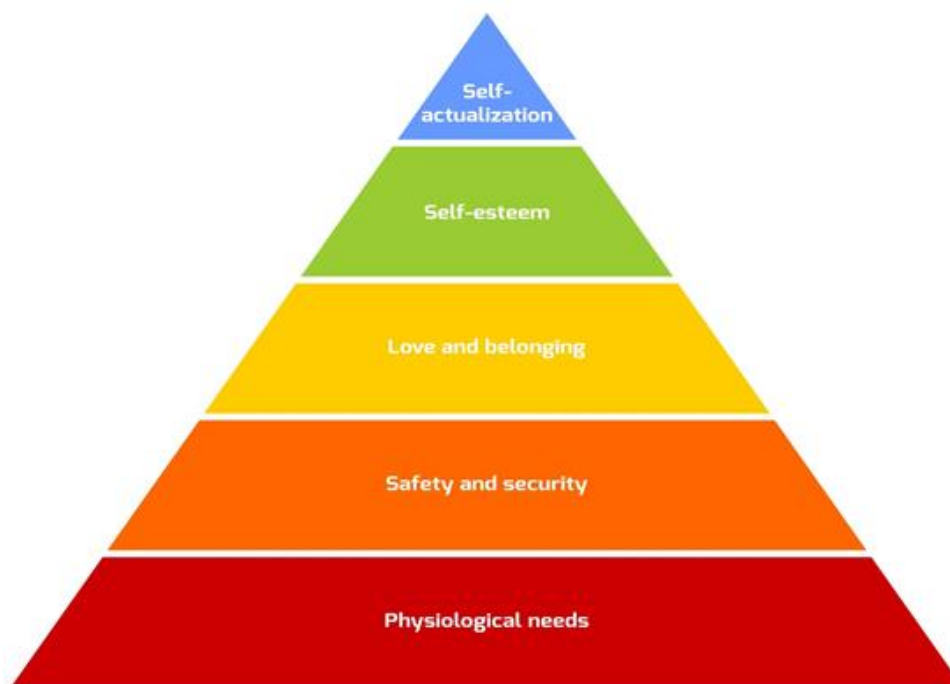
psychology. The same theories are also applied to study the consumer behavior. We have already met one of such motivational theories in the work. This is the theory of motive hierarchy by A. Maslow (Design 3).



**Design 3.** Maslow's hierarchy of needs (McLeod, 2023)

According to this hierarchy, people successively satisfy the needs most important for them at the

moment and these needs become the incentive for them and motive of behavior (Design 4).



**Design 4.** The process of actualization of needs according the hierarchy of Maslow.

We see that the physiological needs are prevailing meanwhile a self-actualization needs are undergoing.

The second important for the given work theory is S. Freud's theory, which divides all motives into conscious and unconscious. In marketing the big is bet on unconscious motives of consumption when the person cannot even answer the question why he or she bought this product and what he was driven by in the process of its selection. It is obvious that the unconscious motives of consumption behavior are much more powerful in forming buying capacity of the goods and no standards and certificates can be compared with such motives (Ganti, 2020).

It is not important for the consumer what QMS and according to which standard is installed by this manufacturer and how it helped him or her to produce this product. The consumer may not know at first who is the manufacturer but he or she buys the product and seems to do it spontaneously but the unconscious motives consist in it. The concept of brand, product appearance, packing and other external features – all these can contain unconscious motives to buy the product, and exactly such motives to buy the products define such “spontaneous” purchases.

We see that according the Freudian theory the motivation is based on the unconscious psychological forces, such as hidden desires and motives, shape an individual's behavior, like their purchasing patterns.

According to the key moments of S. Freud's motivation theory, unconscious psychological forces, such as hidden wishes and motives, form a human's behavior as well as his or her model of purchases. Freud's motivation theory treats the purchasing process as the combination of meeting conscious and unconscious needs of a consumer. That is, the probability of buying the detergent of a certain trademark and certain brand will be much greater, if the consumer was primarily driven by such conscious motive but not came to the store to buy the dog food and suddenly, affected by some spontaneous factors, decided to buy the detergent as well. It is obvious that in the second case no unconscious motives will force the consumer to buy such product even though it is manufactured according to international ISO standards.

These ideas can help market researchers to find out why the consumer made one or another purchase paying attention to his or her conscious and unconscious motives, as well as to the weight of social expectations (Financial Encyclopedia, 2021).

But, in any case, as applicable to the topic of our research it can be surely said that the factor of availability of conformance signs to quality standards, conformance certificates can be the conscious motive to buy one or another product. The existence of the product brand, its popularity for the consumer, and experience in using this brand can be a stable conscious motive for the purchase.

At present, there are also modern psychological motivation theories in the marketing science. Based on one of them, Kotler's theory, consumers buy not the products but the way to meet their needs. The availability of needs, as the guiding motive of the consumer activity, defines branding and marketing strategies of product promotion (Kotler, 2004).

Another important approach in marketing is the one according to which the orientation should be switched from selling the goods to the consumer's personality. Such approach is rather innovative since the consumer psychology basis, in general, is the massiveness. The consumption ideology is aimed at masses and the total mass of people are the impersonal consumers. However, apparently, this concept reached its limits and, in this regard, marketers together with psychologists focused on the consumer's personality. According to one of the leading management theorists P. Drucker: «Marketing aim is to make useless the efforts of household activities. Its aim is to get to know and understand the client well, that the product or service will definitely suit the latter and sell themselves» (Drucker, 1973). That is, we speak of some existence independency of the model «manufacturer-product-consumer». To the known extent of recognition the manufacturer should perform the marketing strategy to promote own product to the market. After the consumer recognized this product, the model should transfer to the autonomous state and the selling function itself is not required.

It is useful to compare the method proposed by P. Drucker to the method of company existence independence when the number of vertical links in the company decreases and horizontal ones replace them. When the whole production system shifts to the independent mode of existence becoming the closed system, the management should control only the input and output and finally it's complete matching is achieved.

Therefore, we can conclude that the focus on the consumer and his personality is the modern marketing method is prevailing nowadays. This

type of marketing focalization significantly improve competitiveness.

## Results and Discussion

Thus, the formation of personality markets becomes the new direction in marketing when the consumer's personality is studied, his or her needs are examined and the market is formed based on them.

In this case, such social and economic tools as marketing communications acquire significant importance for investigation of such personal peculiarities of consumers.

In general, marketing communications are the process of data transfer from the manufacturer to consumer. This is a crucial marketing tool, which significantly differs from all other types and kinds of communications. At the same time, communications, in the general sense of this notion, are the means of personal interaction and information transfer, which can be transmitted verbally, lexically, graphically by all ways existing for information transfer.

The distinctive feature of marketing communications is the fact that they transfer not ordinary information but economically important and significant one about the properties and characteristics of goods, which allow selling them better. Can the national or international standard refer to marketing communications? Yes, if it is transferred from the manufacturer to the consumer in the form of information accessible for recognition. The same can be also said about any information connected with the quality of products – it can have the designation of marketing communication since it improves the marketability of goods. The information about QMS introduced according to ISO standards, which was transferred from the manufacturer to consumer, will surely be the marketing communication.

Brand is the important marketing communication of integrated value since brand is the means of product promotion and it is also the way of communication between the manufacturer and consumer. The manufacturer forms the brand as the quality mark, as the trademark counting exactly on the fact that the consumer will memorize the brand and will further identify the products of this manufacturer by the brand. And the consumer associates psychological expectations of the qualitative products exactly with the brand and the brand, in many cases, is also the powerful conscious motivation.

Thus, the specific feature of marketing communications is the fact that the consumer and the manufacturer do not only communicate and transfer information through them but do it indirectly. That is, the manufacturer and the consumer do not meet personally each time and do not discuss the properties and quality of the products. At the marketing and economic level all this is done by the brand as an important tool of marketing communication. It is obvious that standards do not have such marketing communication scope as the brand. Standards are the weaker tool of marketing communication; certificates also do not have such marketing communication essence.

The kind and form of psychological and intellectual scope of marketing communication methods are important. This is not just verbal, lexical, graphical and other visual scope as the method of information transfer. This is the form of transferring consumer motivation, consumer's expectations, hopes for qualitative product, on the one hand, but also from the manufacturer's side this is the whole set of marketing wishes and volitional messages – hope for the product purchase, message about qualitative products, appeal to buy exactly this product, form and method of competitive struggle.

Brand as a marketing tool is the most important intellectual, moral-psychological and economic method and form of marketing communication between the manufacturer and consumer; it has the primary marketing, economic, market-oriented, psychological-communicative and simply social information in compact and pre-prepared form. Neither standards for quality conformance certificates can be compared with such marketing tool as brand by its communicative ability.

Thus, both standard and conformance certificates are essentially inferior in marketing and communicative sense to such promotion tool as brand. Brand significantly improves the competitiveness of products.

Marketers also developed many definitions and approaches to the notion of marketing communications. In our opinion, this is defined by the same vast economic and marketing essence of such notion as brand.

A.P. Pankrukhin considers them as the combination of means and certain actions to search, analyze, generate and distribute the information important for the subjects of marketing relations (Pankrukhin, 2006).

J. Burnett and S. Moriarty consider marketing communications as the process of transferring information about the product to the target audience (Burnett, & Moriarty, 2007).

N.D. Eriashvili and A.V. Korotkov explain the notion of marketing communications as the combination of signals send by the companies to different audiences, complex effect of the company on marketing environment to create favorable conditions for successful and profitable activity on the market (Eriashvili, Korotkov, & Sinyayeva, 2017).

E.E. Tarasova and Y.M. Voronin gives the following definition of marketing communications – this is a complex system of market interaction of the company with public circles connected with goods flow, exchange of information, technologies, knowledge, experience. The complex of marketing communications consists in the development and integration of the company actions to achieve its sales goals (Tarasova, & Voronin, 2008).

If we assume that the quality management systems (hereinafter - QMS) according international ISO 9000 standards are the vast accumulated experience, which was transferred through these standards from European and American market community to Russian companies and market, then it turns out that quality management systems are also marketing communications. However, they are not aimed at transferring information on certain good or products. Due to their universal character these systems and standards are the means of transferring the experience in managing business forms to organize effective business communications. That is, ISO standards in QMS sphere are aimed at constructing effective models of business communications, therefore, they can also be acknowledged, to some extent, as the tools of marketing communication, as the tools to exchange the accumulated experience between two or several markets and business management systems.

ISO standards are aimed at training, therefore, they, by their nature, are the forms of communication, however, their orientation not between the manufacturer and consumer but between one manufacturer or a group of manufacturers having the accumulated experience and inexperienced manufacturers who want to organize their own business management system in the image and likeness of more experienced colleagues.

As D.R. Amirova and A.I. Khramova indicate in their paper, all marketing communications have the same goal – stimulation of buyers to purchase their goods and services (Amirova, & Khramova, 2019). However, in such case, the unavoidable question about individualization arises since marketing communications should answer the question “whose specifically – their”. This means that marketing communications should simply and easily identify certain products with their manufacturer. That is, marketing communications, despite the fact that they are the means of information transfer from the manufacturer to consumer, are definitely more advantageous for the manufacturer; therefore, the manufacturer is the source of origin of marketing communications.

In such case, if we speak about the product competitiveness improvement, the products from the manufacturer as the goods purchased by the consumer have several target designations. They should not only satisfy the buyer's needs and be qualitative but they should also be the means and method of marketing communication with the consumer, i.e. through his or her products the manufacturer transfers the important marketing information to the consumer. This indicates that modern economic marketing and consumer relations become more and more complicated since the goods or products are not simply the qualitative goods anymore aimed at meeting the consumer's needs. They also fulfill an important target function of transferring and distributing the marketing information, i.e. the products are the most important means and form of marketing communication. In essence, the manufacturer has the economic and marketing dialog with the buyer through own products.

Branding as the marketing communication is close by its properties, features and designation to standardization and certification. As indicated in Y.S. Menyailo's work, branding tasks are the competitiveness improvement, improvement of the efficiency of marketing solutions that contributes to the attraction of investments to support the brand (Menyailo, 2019).

Thus, branding is also aimed at improvement of investment attractiveness and competitiveness improvement, consequently, it possesses all marketing features and properties of standard and quality certificate.

As O.A. Kuzmina points out, the market participants in Russia acknowledged the importance of brands for the consumer long ago. The manufacturers of consumer goods are keen

to create brands out of their trademarks guarantying quality, reliability of the products, high status, prestige value of purchase and use to the consumer, and to the manufacturer – additional profit and share of the product market (Kuzmina, 2008).

At the same time, it should be pointed out that certification of product quality conformance, as we indicated in previous paragraphs, is aimed at becoming the quality guarantee and quality conformance necessary for the standard or specified level. One of certification designations is the creation of trustful relations between the manufacturer and consumer at the market, i.e. certification is one of marketing guarantees of product quality. In contrast to the brand, certification is more widespread and is controlled by the state by creating certain vertically integrated system.

## Conclusions

In the given article, the notions of product quality fixation ways were characterized. We have expressed the different opinions on the consumption psychology characteristics. The importance of personal features of consumers and peculiarities of marketing communications were specified. The work gives the notion of marketing communications and substantiates that quality management systems (QMS) are marketing communications. The ISO standards in the sphere of quality management are aimed at developing effective models of business communications.

We focus our research on the fact that certificates and standards lose importance. Due to the invention and development of “bypasses” for standardization and certification of both the products themselves and business management systems that results in the formality and inefficiency of such tools, which give only the appearance of the qualitative products.

Were stated the following thesis:

1. Branding can be substituted an alternative market tool, which can comprise both quality standards and conformance certificates.
2. A tool of the marketing communication is formed on a consumer's demand and product market characteristics.
3. Branding is a competitive device and it is attractive from the investment point of view.
4. Brand is more beneficial because the consumer focuses on own experience



already and for the manufacturer it is only important to initially interest the buyer for him or her to purchase the product for the first time

5. As soon as the experience results in further purchases and the brand starts existing independently, the same happens with QMS.

### Bibliographic references

- Amirova, D.R., & Khramova, A.I. (2019). Marketing Communications: Theoretical Aspect. *E-Scio*, 3(30), 119-124. (in Russ.). Access: <https://cyberleninka.ru/article/n/marketingovye-kommunikatsii-teoreticheskiy-aspekt>
- Bubenok, E.A. (2013). *Formation of competitive advantages of Russian companies on the basis of intrapreneurship and branding mechanisms*. (Dissertation ...D. in Economics). AHO VPO "Russian Academy" entrepreneurship", Moscow, 317 p. (in Russ.) Access: <https://acortar.link/a9N0kQ>
- Burnett, J., & Moriarty, S. (2007). *Marketing communications: an integrated approach*. SPb: Peter: Publisher, 864 p. (In Russ.)
- Dowling, G. (2006). *Science and Art of Marketing. Translated from English*. SPb.: Vector: Publisher, 392 p. (in Russ.).
- Drucker, P.F. (1973). «*Management: Tasks, Responsibilities, Practices*». NY: "Harper & Row": Publisher, 64-65 p.
- Eriashvili, N.D., Korotkov, A.V., & Sinyayeva, I.M. (2017). *Marketing Management*. M.: Unity-Dana: Publisher, 464 p. (in Russ.) Access: [http://htbiblio.yolasite.com/resources/Korotkov\\_upravl\\_market.pdf](http://htbiblio.yolasite.com/resources/Korotkov_upravl_market.pdf)
- Feldwick, R. (2002). *What is Brand Equity Anyway?* Henley-on-Thames: World Advertising Research Centre: Publisher, 148 p.
- Financial Encyclopedia. (2021). *Freud's theory of motivation* [Electronic resource] Mode of access: <https://nesrakonk.ru/freudian-motivation-theory/> (in Russ.)
- Fominykh, V.V. (2010). *Enhancement of Competitive Product Quality on the Basis of Brand Capitalization* (Dissertation ... child economy science.) SPb.: St Petersburg State University of Economics and Finance: Publisher, 172 p. (in Russ.)
- Ganti, A. (2020). *Freudian Motivation Theory: How it Shapes Investor Behavior*. Investopedia. Access: <https://www.investopedia.com/terms/f/freudian-motivation-theory.asp> (In Eng.)
- Gvozdetzkaya, I.V. (2009). *Management of brand capital of an industrial company*. (Dissertation ... child economy science.) Saransk. Mord. state university, Publisher, 173 p. (in Russ.)
- Ilyina, I.V. (2007). *Brand Concept Development* (dissertation ...candidate of economic sciences) M.V. Lomonosov Moscow State University: Publisher, 174 p. (in Russ.)
- Jones, F. (2005). *The role of advertising in creating strong brands*. Translated from English M.: Williams: Publisher, 392 p. (in Russ.)
- Ketova, N.P. (2009). *Marketing Management*. Rostov-on-Don: Phoenix: Publisher, 478 p. (in Russ.)
- Kotler F. (2004). *Marketing-management*. SPb: Peter: Publisher, 800 p. (in Russ.)
- Kretov, I., & Karyagin, N. (2005) *Product strategies and brand technologies in modern marketing*. M.: Economist: Publisher, 164 p. (in Russ.)
- Kuzmina, O.A. (2008). System of Factors Influencing the Brand Creation by Russian Enterprises. *Vestnik of Orenburg State University*, 11, 98-104. (in Russ.) Access: <https://acortar.link/eYlrSU>
- Mc Donald, M. (1999). *Marketing Plans - How to Prepare Them, How to Use Them*. Oxford, Butterworth Heinemann: Publisher, 578 p. Access: <https://acortar.link/KWmfkm>
- McLeod, S. (2023). *Maslow's Hierarchy Of Needs*. SimplyPsychology. Access: <https://www.simplypsychology.org/maslow.html> (In Eng.)
- Menyailo, J.S.B. (2019). The concept, the essence, the origin. Financial University of the Government of the Russian federation. *Conference "A Development Potential and the Growth Ways of the Russian Economy, Part II*. pp. 292-296. (in Russ.)
- Pankrukhin, A.P. (2006). *Marketing*. M.: Omega L.: Publisher, 656 p. (in Russ.)
- Tarasova, E.E., & Voronin, Y.M. (2008). *The role of Internet advertising in the system of marketing communications*. Bulletin of Belgorod University of consumer cooperation, 3(27), 5-14. (in Russ.)
- Zakharova, I.A. (2007). *Economic effect of company brand management*: (Dissertation ...candidate of economic sciences). Lomonosov Moscow State University. M.V. Lomonosov Moscow State University: Publisher, 166 p. (in Russ.) Access: <https://acortar.link/6G4r5w>

DOI: <https://doi.org/10.34069/AI/2023.71.11.11>

How to Cite:

Dinevich, I.A., Ivanova, A.S., & Kunovski, M.N. (2023). Didactic potential of MOOCs in teaching Russian as a foreign language. *Amazonia Investiga*, 12(71), 126-137. <https://doi.org/10.34069/AI/2023.71.11.11>


## Didactic potential of MOOCs in teaching Russian as a foreign language

Дидактический потенциал MOOCs в обучении русскому языку как иностранному

Received: June 26, 2023

Accepted: September 14, 2023

Written by:

Irina A. Dinevich<sup>1</sup>
 <https://orcid.org/0000-0003-1071-3437>
Anna S. Ivanova<sup>2</sup>
 <https://orcid.org/0000-0002-5100-0305>
Marina N. Kunovski<sup>3</sup>
 <https://orcid.org/0000-0002-5872-2052>

### Abstract


The article is devoted to the description of mass open online courses «Read. Listen. Speak» and «Verbs of motion in Russian language», intended for foreign students at the pre-university stage of training. The article presents an analysis of the lexical and grammatical content of presentation and video materials of the proposed training courses, presents a system of tasks from basic to advanced levels, and also offers practical recommendations on the use of various methodological techniques in teaching Russian as a foreign language to foreign students. The authors analyzed the forms of organization of the activities of all subjects of the distance learning process, revealed the didactic potential of mass open online courses as promising distance technologies in teaching Russian as a foreign language.


**Keywords:** foreign students, communicative competence, mass open online course, Russian as a foreign language.


### Аннотация

Статья посвящена описанию массовых открытых онлайн-курсов «Читайте. Слушайте. Говорите» и «Глаголы движения в русском языке», предназначенных для иностранных слушателей на предвузовском этапе обучения. В статье представлен анализ лексического и грамматического наполнения презентационных и видеоматериалов предлагаемых учебных курсов, представлена система заданий от базового до продвинутого уровней, а также предложены практические рекомендации по использованию различных методических приемов в обучении русскому языку как иностранному иностранных учащихся. Авторы проанализировали формы организации деятельности всех субъектов дистанционного учебного процесса, раскрыли дидактический потенциал массовых открытых онлайн-курсов как перспективных дистанционных технологий в обучении русскому языку как иностранному.

**Ключевые слова:** иностранные учащиеся, коммуникативная компетенция, массовый открытый онлайн-курс, русский язык как иностранный.

<sup>1</sup> PhD, Assistant Professor, Assistant Professor of the Russian Language Department No.2, Russian Language Institute, Peoples' Friendship University of Russia (RUDN University), Moscow, Russian Federation.  WoS Researcher ID: JDD-0917-2023

<sup>2</sup> PhD, Assistant Professor, Assistant Professor of the Russian Language Department No.2, Russian Language Institute, Peoples' Friendship University of Russia (RUDN University), Moscow, Russian Federation.  WoS Researcher ID: JDD-1113-2023

<sup>3</sup> PhD, Assistant Professor, Head of the Russian Language Department No.2, Russian Language Institute, Peoples' Friendship University of Russia (RUDN University), Russian Federation.  WoS Researcher ID: AAC-4740-2019

## Introduction

Due to the change in the structure and content of higher professional education caused by transformations in the social, political and economic spheres of society, the approach to teaching Russian as a foreign language (RCT) has also changed.

The Russian language has become fully realized as a means of communication, mutual understanding and interaction of people, a means of familiarization with Russian national culture.

Russian as a foreign language is the main goal of teaching a foreign student to master the Russian language fully and fluently. RCT specialists see the solution to this problem in the formation of a high level of communicative competence among foreign students, which will allow them to communicate in various situations. The formation of students' communicative competence at different stages of learning involves the use of a variety of didactic tools, among which computer-based learning tools occupy a special place.

Since the beginning of the XXI century, e-learning technologies implemented in an open educational space have become widespread in the world and Russian education system. One of the most popular and widespread types of e-learning is massive open online courses (MOOCs), vividly illustrating the emergence of a fundamentally new method of education in all its spheres, including in the field of Russian as a foreign language.

In 2014 MOOCs are named by UNESCO among 30 promising trends in the development of education until 2028, as they contribute to the creation of free educational resources, as well as eliminate territorial and temporary barriers, allowing foreign students to communicate with teachers and other students at thematic forums.

Currently, mass open online courses as modern distance learning technologies play an important role in the process of teaching RCT, being a powerful factor in the formation of the communicative competence of foreign students. As a result, foreign students develop speech skills, the ability to communicate by language means in Russian and to assimilate a certain amount of language material (phonetic, lexical, grammatical).

This problem seems relevant due to the fact that it is connected with the training of foreign

citizens in fluent command of the Russian language. Language learners will not only easily enter the Russian social and cultural space, but also carry out their activities in the educational, professional and professional spheres of communication. The formed skills and abilities in speech activity on the linguistic basis of socio-cultural and socio-everyday spheres of communication will allow them to easily enter the Russian social and cultural space, but to carry out their activities in the educational, professional and professional spheres of communication.

The relevance of the study is due to a number of factors:

- 1) the need to develop the communicative competence of foreign students in all types of speech activity;
- 2) the introduction of e-learning, including MOOCs in the process of training foreign students;
- 3) the development of social communication processes in which the ability to communicate using technical means becomes the most important.

## Literature Review

A review of modern literature shows that most Russian and foreign researchers consider MOOCs as a global trend in the development of an open educational space (Capuano & Caballe, 2015; El Khadiri et al., 2019).

A number of scientific papers present the features of mass open online courses in the didactic aspect, reveal the problems associated with their use in teaching Russian as a foreign language (Azimov, 2014; Vlasova et al., 2018), indicate the prospects for using MOOCs (Bugaichuk, 2013; Vyushkina, 2015; Lebedeva, 2015; Sherman, 2018), organizational and pedagogical characteristics of Russian open educational resources and mass open distance (online) courses are given (Andreev, 2014).

Analyzing the advantages and disadvantages of using MOOCs in the general education system, scientists come to interesting conclusions. In particular, U.S. Zakharova and K.I. Tanasenkov write that «... the advantages of MOOCs, from the point of view of teachers, are to provide an opportunity to better organize the educational process, accessibility and mobility of learning, the realization of professional and personal goals

of the teacher, as well as resource efficiency» (Zakharova, & Tanasenko, 2019, 176). The researchers attribute the disadvantages of MOOCs «to the pedagogical imperfection of the format, special requirements for the educational system, resource consumption and professional risks for the teacher» (Zakharova, & Tanasenko, 2019, 176).

The article «Demand for mass open online courses (MOOCs): the experience of Russian education», based on the survey data conducted as part of the Monitoring of the Education Economy in 2016, determines the determinants of demand for MOOCs from teachers and students of Russian universities and concludes that «... the probability of studying at MOOCs or striving for This is higher among active and high-achieving students, as well as among teachers engaged in scientific research and who received additional training in summer schools» (Roschina et al., 2018, 174).

Modern approaches to the evaluation of mass open online courses and their implementation on the example of Russian language courses are described by a number of Russian scientists (Maltseva et al., 2019).

An important and significant aspect in the disclosure of this topic is the analysis of two actively used MOOCs models: traditional xMOOC and connectivist CMOS (Downes, 2013).

According to a number of researchers, traditional mass open online courses (xMOOC) are created on the basis of a cognitive-behaviorist approach, which is headed by the principles of centralization and attitude to the learner as an object of educational activity. «HMOs are open courses of large international universities. They are based on an institutional model of the educational process: the course content is developed by professional teachers and experts in a certain subject area, a clear schedule of the educational process is presented, the course contains specific tasks, certification of participants is provided» (Chichilanova et al., 2015, 57).

Connectivist online courses (SMOS) use a connectivist approach based on the principles of self-learning and decentralization. The course content is created by the participants of the educational process themselves, using open educational resources (bull content), and the role of the course authors is to manage the educational process. The models of interaction of

participants in the CMOS concept are described in a number of foreign works (Parr, 2013; Sambell, 2010; Yuan, & Powell, 2013; Mozhaeva, 2015).

Marijuan S., Sanz C. It is noted that educational trajectories are changing under the influence of new technologies (MOOCs, online courses), but the practice of teaching a foreign language in a language environment must necessarily take into account the peculiarities of language development and the factors that influence this development (Marijuan, & Sanz, 2018).

The urgent urgent need to study and implement interesting methodological solutions offered in various educational resources, in full-time and distance learning in Russian universities, encourages discussion of this issue through the prism of the specifics of RCT training.

The purpose and objectives of the proposed study:

- Present your own experience of creating and using MOOCs «Read. Listen. Speak» and «Verbs of motion in Russian language» in the process of teaching Russian as a foreign language at the pre-university stage of training,
- Describe the lexical and grammatical content of the presentation and video materials of the proposed training courses,
- To characterize the forms of organization of the activities of all subjects of the distance learning process,
- To offer practical recommendations on the use of various methodological techniques in teaching RCT to foreign students,
- To analyze the didactic potential of MOOCs as promising distance technologies in teaching Russian as a foreign language.

## Methodology

The research material was of MOOCs «Read. Listen. Speak» and «Verbs of motion in Russian language». Taking into account the critical analysis of existing research approaches and pedagogical practices for the creation of mass open online courses, it is possible to identify the novelty of the proposed online training courses:

- The innovative nature of MOOCs «Read. Listen. Speak» it is to create a MOOC language course-a format that relies on video and multimedia as the main learning resource from the zero level of language proficiency and is focused on the active

involvement of the student in the educational process;

- The innovative nature of MOOC «Verbs of motion in Russian language» it is concluded in a comprehensive and multidimensional explanation of the formation and use of verbs of movement, as well as in the use of proverbs, sayings and phraseological units of the Russian language as illustrative material, which allows foreign students to get acquainted with oral folk art and learn the national identity and culture of the Russian people.

General logical and general scientific methods were used to analyze the linguistic material and structure of the presented MOOCs:

- The method of complex theoretical analysis of the studied problem (analysis of modern scientific literature on the development and use of mass open online courses in the practice of higher education);
- Descriptive method (analysis of the lexical and grammatical content of the video materials of the proposed training courses);
- A method of analyzing the educational potential of mass open online courses as promising distance learning technologies in teaching Russian as a foreign language.

## Results and Discussion

At the Institute of the Russian Language the Peoples' Friendship University of Russia has created several MOOCs aimed at the formation and development of foreign students' skills and abilities to use lexical units and grammatical constructions of the Russian language in their speech practice in various communication situations. Depending on the level of Russian language proficiency (Elementary / Basic / First Certification levels), MOOCs have different goals and objectives of implementation in the educational process of RCT.

The initial stage of learning any foreign language, including RCT, is particularly difficult due to the presence of a certain communicative barrier among language learners. The specifics of the initial stage of training is due to the fact that it is the study of the Russian language from scratch, therefore, students lack any language stock, as well as the skills and abilities of using the Russian language in the communication process. In this regard, the most important task facing each RCT teacher is the formation of the communicative competence of foreign students, while both the language material and the speech

skills and skills of the initial stage should be "basic", forming the foundation of Russian language proficiency in the volume determined by the final goals. The subsequent stages of the RCT study are focused on the development and deepening of the skills and abilities of using one's lexical and grammatical stock in speech practice.

MOOC «**Read. Listen. Speak**» developed by the team of the author under the leadership of A.S. Ivanova, is intended for distance learning of foreign citizens who speak Russian at the elementary level (A1), preparing for admission to Russian universities, as well as for everyone who wants to improve their skills in mastering Russian as a foreign language.

The main purpose of the online course is to study the grammatical and lexical material of the Russian language corresponding to the basic level A2, the assimilation of an elementary set of vocabulary that will allow the student to get involved in the real sphere of communication in Russian in the shortest possible time.

The objectives of the course include:

- The formation of practical language skills and speech skills for their subsequent implementation in the process of generation and perception of speech utterances during communication in contacts with native speakers of the Russian language both in Russia and in other countries, as well as with persons for whom the Russian language is an intermediary language;
- Formation of language competence within the framework of the situational-thematic minimum of level A2;
- Development and improvement of language competence in accordance with the requirements for level A2;
- Expansion of cultural ideas about Russia.

The process of studying the online course is aimed at the formation of the following competencies:

- Possession of socio-cultural and intercultural communication skills that ensure the adequacy of social and professional contacts;
- Possession of a system of linguistic knowledge, which includes knowledge of the basic phonetic, lexical, grammatical, word-formation phenomena and patterns of functioning of the studied foreign language;



- The ability to freely express their thoughts, adequately use a variety of language tools in order to highlight relevant information;
- Willingness to carry out intercultural dialogue in the general sphere of communication;
- Ability to use etiquette formulas in oral communication;
- Knowledge of the norms of etiquette adopted in various situations of intercultural communication.

The content of the online course includes presentation and explanation of the grammatical content of the A2 level, a system of exercises aimed at fixing grammatical material, a corpus of

text materials designed to teach listening, reading and speaking.

The online course is designed for 36 academic hours and consists of 9 modules, in each of which the lexical and grammatical material of the A2 level is presented, trained and fixed. Each module contains an explanatory part (lecture) of a certain grammatical aspect, a series of training exercises, dialogical and textual material designed to form the skills of understanding, reading and speaking. The last module is a control one: it presents tasks to check the assimilation of the material of the completed modules (Table 1).

**Table 1.**  
*Content of online course modules*

Topic name	Brief description (content) of the modules
Topic 1. Prepositional case	The meaning of the case. Forms of nouns, adjectives, ordinal numerals, personal and possessive pronouns in the prepositional singular and plural. The corpus of grammatical exercises. A corpus of texts for listening and reading. Control tasks for the content of the module.
Topic 2. Accusative case	The meaning of the case. Forms of nouns, adjectives, ordinal numerals, personal and possessive pronouns in the Accusative singular and plural. The corpus of grammatical exercises. A corpus of texts for listening and reading. Control tasks for the content of the module.
Topic 3. Dative case	The meaning of the case. Forms of nouns, adjectives, ordinal numerals, personal and possessive pronouns in the Dative singular and plural. The corpus of grammatical exercises. A corpus of texts for listening and reading. Control tasks for the content of the module.
Topic 4. Genitive case	The meaning of the case. Forms of nouns, adjectives, ordinal numerals, personal and possessive pronouns in the Genitive singular and plural. The corpus of grammatical exercises. A corpus of texts for listening and reading. Control tasks for the content of the module.
Topic 5. Creative case	The meaning of the case. Forms of nouns, adjectives, ordinal numerals, personal and possessive pronouns in the Creative case of singular and plural. The corpus of grammatical exercises. A corpus of texts for listening and reading. Control tasks for the content of the module.
Topic 6. The pronoun "your"	The meaning and forms of the pronoun "own" in the singular and plural in indirect cases. The corpus of grammatical exercises. A corpus of texts for listening and reading. Control tasks for the content of the module.
Topic 7. The word "which" in different cases	The meaning and forms of the word "which" in the singular and plural in all cases. The corpus of grammatical exercises. A corpus of texts for listening and reading. Control tasks for the content of the module.
Topic 8. The expression of time in different cases	Grammatical ways of expressing time using different cases. The corpus of grammatical exercises. A corpus of texts for listening and reading. Control tasks for the content of the module.
Topic 9. Knowledge control	Control tasks for: - grammatical content of the course; - testing of listening skills; - checking the skills of understanding the text.

After completing this online course, students will be able to

- Use the studied language and speech material when constructing an utterance;
- To formalize a speech utterance in accordance with the norms of the modern Russian language;
- Create a monologue and dialogical utterance in oral or written form (in accordance with the topic or situation of communication);
- Determine the topic and basic information of the read /listened text;
- Adequately interpret the main content of the dialogues and the communicative intentions of the interlocutor, as well as give an adequate response to the interlocutor's remarks.

The educational activities of students are organized in accordance with the types of speech activity. To consolidate the lexical and grammatical norms of the Russian language, the training course presents an extensive system of lexical and grammatical tasks and exercises provided for independent work and aimed at working out and controlling the assimilation of

the studied material. Lexical and grammatical material is fixed by performing intermediate tests after each module.

At this stage of training (A2), various tasks aimed at supporting the level of formation of communication skills are used to practice writing, reading, listening, and speaking skills. The presence of links between reading, writing and language development is noted by researchers K. Paesani, R. Salataci (Paesani, 2016; Salataci, 2002).

The language content of the task options includes vocabulary that corresponds to the A2 lexical level and unfamiliar words. The inclusion of unfamiliar words in the content of tasks solves the problem of forming the transfer of a skill to a new language material and teaches the student to work with unfamiliar vocabulary.

At this stage, much attention is paid to the formation of the skill of comprehending what has been listened/ read, storing it in operational or long-term memory.

### *Types of listening tasks*

**Task 1.** Listen to the beginning of the sentences and finish them.

The student sees:	The student hears:
A) forest	1. Yesterday we were in ....
B) forest	2. Tourists came to ....
	3. Children walked for a long time on ....
	4. In autumn we like to walk in ...

**Task 2.** Listen to the dialogue. Complete the tasks. Please note: the dialog sounds twice.

- Hi, Anna! What are you doing tonight?
- Hi, Katya. I'll be home after work today.
- Do you want to go to the cinema with me tonight at 8 pm?
- Good idea.
- I want to watch a movie about Anna Pavlova.
- What is this movie about?
- This film tells about her life: how difficult it was for her to study at ballet school, how she worked hard, and how she loved Russian ballet. There's a lot of great music there. She was a great ballerina. She was known all over the world. She performed in the best theaters.

"I've heard of her! Have you seen this movie yet?"

- Yes, and I liked it so much that I want to watch it again.
- You are so interesting to talk about this movie! I'm going too.
- Okay, then I'll be waiting for you at 7 o'clock at the bus stop near your work.
- Yes, agreed.

**Tasks 3. A.** Choose the correct answer.

1. Friends decided to go to the cinema. yes/no
2. They want to watch a film about ballet school. yes/no
3. Anna Pavlova was a musician. yes/no
4. Anna Pavlova performed in various theaters. yes/no
5. Friends will meet in the office. yes/no

### *Types of reading tasks*

**Task 4.** Read the phrases and find pairs of synonyms. You have 10 minutes.

1) deceive	A) explore
2) work hard	B) lie
3) study	C) report
4) tell	D) work
5) ask	E) beg
6) ask a question	F) ask
7) love	G) adore

Task 5. Read the sentences.

Find and underline the words that answer the following questions. You have 10 minutes.

Option 1. Which one?

1. This is a new novel.
2. This is the magazine "Science and Life".
3. This is a story about love.
4. This is our music teacher.
5. We watched this movie on TV.
6. She dreams of great love.
7. There was no music today.
8. Here is tea with lemon.
9. We listened to the report with interest.

Keys: 1) new; 2) Science and life; 3) about love; 4) music; 5) this one; 8) with lemon.

Task 6. Read the adjectives. From the list, select nouns that can be combined with these adjectives. You have 5 minutes.

- A. economic:
- B. economical:
- C. economical:

Words: person, reform, crisis, parents, car, faculty, wife, engine, refrigerator.

Task. Read the text. Find and underline the same-root words.

You have 5 minutes.

My brother is a pilot. He went to flight school. As a child, he loved to watch the flight of migratory birds. Today, planes do not fly because the runway is icy due to severe frost.

Keys: pilot, flight, flight, flight, planes, fly, takeoff.

Thus, the presented online course allows a foreign student to form primary ideas about the grammatical structure of the Russian language and contributes to the assimilation of an elementary set of vocabulary necessary to eliminate the language barrier and successful communication in various communication situations.

The MOOC «Verbs of motion in Russian language», developed by I.A. Dinevich, contains a lexico-semantic and grammatical explanation of the features of education and use of movement verbs of imperfect and perfect form and is aimed at forming a speech base for students necessary for successful communication in a language environment using a certain set of language tools, providing the possibility of adequate communication in various communication situations.

MOOC implementation tasks:

- Development of system knowledge in the field of communicative grammar of the Russian language;
- Enriching the vocabulary of foreign students;
- Correction and development of communication skills in the use of movement verbs of imperfect and perfect form;
- Formation of an idea about the language system of the Russian language, about the rules of functioning of language units in speech and the ability to use this system orally and in writing;
- Formation of an idea about the national and cultural peculiarities of the social and speech behavior of native speakers of the Russian language: their customs, etiquette, social stereotypes, history and culture of the country;
- Increasing the availability of education regardless of the location of students.

The possibilities of the electronic educational environment make it possible to include in the MOOC a comprehensive and multidimensional explanation of the formation and use of verbs of movement, to attract phraseological units with verbs of movement not only as illustrative material, but also material for the development of types of speech activity. Such an approach in the organization of the MOOC content allows developing both linguistic and socio-cultural competencies of foreign students.

The format of MOOC assignments allows course users to choose a convenient mode of classes, monitor their educational activities, and consult

with the author of the course. Undoubtedly, the methodological advantage of the online course is that the material of the content part meets the requirements for the First certification level B1, the materials presented in the offline format in the textbook (Pomortseva, & Dinevich, 2019) and described in this study.

The MOOC «Verbs of motion in Russian language» is designed for 16 academic hours and includes seven topics: six video lectures and one video tutorial presented as a practical lesson.

The basis of MOOC are video lectures conducted by one lecturer (to a greater extent, only the lecturer's voice is heard against the background of the presentation). Video lectures and video tutorials are clearly structured and logically interconnected. The sequence of presentation of the lecture material of this online course is arranged in accordance with the study of this topic at the preparatory faculty of the Institute of the Russian Language (Table 2).

**Table 2.**  
*Content of the online course topics*

Topic name	Brief description (content) of the topics
Topic 1. Verbs of movement in the Russian language. Verbs of unidirectional and multidirectional movement. Questions to verbs of movement without prefixes. Formation and meaning of prefixed verbs of imperfect and perfect form.	Characteristics of the verbs of unidirectional movement and verbs of multidirectional movement. Prepositional-case forms of nouns, adjectives and pronouns used after verbs of movement. Features of the use of verbs of movement with prefixes. Rules for the formation of verbal nouns. The corpus of grammatical exercises. Control tasks on the content of the topic. The main meanings of the verbs of unidirectional movement and verbs of multi directional movement.
Topic 2. The main meanings of verbs of movement in the Russian language. The use of verbs of movement with prefixes.	Characteristics of the use of verbs of movement with various prefixes in the Russian language. The corpus of grammatical exercises. Control tasks on the content of the topic.
Topic 3. Types of verbs of movement. Transitive verbs of movement.	Features of the formation of specific pairs of verbs of movement. Situations of using transitive verbs of movement.
Topic 4. The meanings of verbs of movement with prefixes in- (in-), you-, vz- (vzo-), vs-, before- for-, from- (from-), is-, on- imperfect and perfect. The use of verbs of movement in a figurative sense and in phraseological units.	Verbs of movement with prefixes in- (in-), you-, vz- (vzo-), vs-, before-for-, from- (from-), is-, on- imperfect and perfect. Semantic characteristics of the use of these verbs of movement in a figurative sense and in phraseological units. The corpus of grammatical exercises. Control tasks on the content of the topic.
Topic 5. The meanings of verbs of movement with prefixes o- (about-), ot- (ot-), under- (under-), over-, under- imperfect and perfect. The use of verbs of movement in a figurative sense and in phraseological units.	Verbs of movement with the prefixes o- (ob-), ot- (ot-), under- (under-), over-, under- imperfect and perfect. Semantic characteristics of the use of these verbs of movement in a figurative sense and in phraseological units. The corpus of grammatical exercises. Control tasks on the content of the topic.
Topic 6. Meanings of verbs of movement with prefixes u-, pro-raz-, (razo-), ras-, s- (co-) of imperfect and perfect form. The use of verbs of movement in a figurative sense and in phraseological units.	Verbs of movement with prefixes u-, pro-raz-, (razo-), ras-, s- (co-) of imperfect and perfect form. Semantic characteristics of the use of these verbs of movement in a figurative sense and in phraseological units. The corpus of grammatical exercises. Control tasks on the content of the topic.
Topic 7 - video tutorial. The use of verbs of movement of an imperfect and perfect kind.	Control tasks for: - grammatical content of the course; - testing of listening skills; - checking the skills of understanding the text.

In addition to video lectures, the MOOC includes additional educational materials that can be used both in the classroom and as an independent work of the listener: presentations, annotated lectures, test tasks, a corpus of generalizing and checking grammatical tasks, lexico-grammatical

tests designed to form the skills of understanding, reading and speaking.

The organization of educational activities of students is built in accordance with the types of speech activity. To consolidate the lexical and grammatical norms of the Russian language,

followed by active production in speech practice, this online course presents a clear system of presenting grammatical material: from considering the features of education and the use of non-prepositional verbs of movement to the formation and use of verbs with various prefixes in direct and figurative meanings, as well as in phraseological units (*To back down, to drive by the nose, carry on your hands, carry on yourself and under.*).

The lexical and grammatical tasks of the training course are aimed at working out the studied material. Thus, tasks for substituting missing grammatical forms of verbs of movement contribute to the formation and automation of the skill of using these grammatical forms in the speech practice of students. For example:

Task 1. Instead of dots, put the appropriate verb of movement in the desired form, using words for reference.

Words for reference: come, run, lead, come, ride, carry, bring, go, fly, go, come, drive, go.

1. My friend's father was a pilot. He often goes to London and other European cities. 2. On Sunday, the children are all day ... at the stadium.

Task 2. Write sentences using the verbs to come – to come, to leave – to leave, to come – to come, to leave - to leave.

2. Every day students go to the university at 9 o'clock, and ... from the university at 3 o'clock. 2. Every day this student... goes to the chemical laboratory.

A special role in the online course is assigned to the consideration of the use of verbs of movement in proverbs and phraseological units

as an important component of Russian culture and folk wisdom, which contributes to the enrichment of the linguistic and cultural level of foreign students.

In the MOOC video lectures, when describing the use of verbs of movement in a figurative sense and in phraseological units, students' attention is focused on the fact that the pairing of the verbs of unidirectional and non-directional movement is lost, and the meaning of movement in a figurative sense is formed from the original meaning of the verbs (human movement in one direction or another): *the train is running; the clock is running; it is snowing; time flies; thoughts fly*. Quite often in the Russian language, verbs of movement are used in figurative meanings relating to the physical and mental states of a person: *to come to oneself, to get out of oneself*.

The author of the course gives numerous examples of proverbs and sayings in which verbs of movement are used without prefixes (*to be afraid of wolves, not to go into the forest. If you drive more quietly, you will continue. When you read a book, you fly on wings. If you like to ride, love to carry sleds*) and with various prefixes (*The word is not a sparrow, it will fly out – you will not catch it. Appetite comes with eating. To live a life is not a field to cross*). It is interesting and useful for foreign students to learn the meaning of proverbs and sayings in Russian and compare them with the meaning in their native language, which allows them to see the similarities and distinctive features of the two language pictures of the world.

To consolidate the use of verbs of movement in a figurative meaning and in phraseological units, the author of the course uses tasks in a test form. For example:

Task 3. Find the meaning of each stable expression (phraseology)

1. Enter the head	a) to make someone very angry, angry
2. Enter/bring up to date	b) to be in a hopeless situation
3. Lose your temper	c) to commit some great deed
4. Get out/get away with it	d) to reveal the truth, to expose
5. Bring to the surface	e) to remain unpunished
6. Slipped my mind	f) to figure out the issue
7. Bring to a white heat	on their own g) to arise in consciousness
8. Walk with your mind	h) to forget about something
9. Come to a dead end	and) to acquaint with something
10. Bypass the mountain	k) lose your temper



The lexical and grammatical material of the online course is fixed by performing intermediate tests after studying each topic. The final certification provides for the completion of the final test, which checks the formation of students' knowledge of the Russian language at the A2 – B1 level.

Undoubtedly, the methodological advantage of the online course is that students of the course independently choose a convenient mode of classes for themselves and have the opportunity to perform intermediate and final tests an unlimited number of times, see and analyze their mistakes, as well as ask questions to the author of the training course on the thematic forum of the online platform or during classes on various educational platforms (Teams, Zoom).

The main form of pedagogical management of students' learning activities is quality control of completed distance assignments and control of the process of passing intermediate and final certification of students, as well as the timely completion of the online training course by students.

Despite the different content and target setting of the MOOCs data, we will highlight the main points of the educational model:

1. Familiarization with the theoretical material presented in the form of video lectures with a parallel demonstration of slides with infographics and various methodological materials;
2. Study of annotated lectures for each topic/module;
3. Performing tasks for independent work and intermediate tests after each video lecture;
4. Performing mandatory final testing at the end of the training course;
5. Consultation of students by e-mail, on an interactive forum within the framework of an online course, on various educational platforms.

## Conclusions

The consideration of the features of the development and use of mass open online courses in the process of teaching Russian as a foreign language shows that MOOC has already become an alternative interactive source of knowledge for foreign students, allowing them to improve their knowledge of the Russian language. At the same time, the problem of teacher interaction with students studying educational materials in an interactive form is

one of the most important problems of the MOOC.

As practical recommendations for teachers of Russian as a foreign language on the use of remote materials of these online courses in their practical work, examples of various models of interaction can be given:

1. Organization of discussion of the material passed (listened to, read and completed) in groups of listeners in the classroom and on various educational platforms: Zoom, Teams, Pruffme, etc.
2. Quality control of completed distance tasks: analysis of errors made during the performance of various tasks and lexicogrammatical tests with a parallel explanation of the teacher.
3. Control of the process of passing the intermediate and final certification of students and the timely completion of the online training course by students.
4. Development of students' interest in the study of mass open online courses through the expansion of knowledge in the field of communicative grammar of the Russian language and the formation of an idea of the national and cultural characteristics of native speakers of the Russian language.
5. Study and implementation of interesting methodological solutions in full-time and distance learning in Russian universities, namely:
  - Use of specialized interactive technologies and learning tools,
  - The use of various methods of visualization and digital design of teaching materials,
  - Creation of an educational (within the framework of an online course) community and a feedback system,
  - Use of various elements of encouragement aimed at forming a student's rating (points, certificate).

Thus, the methodological advantage of these online courses is that independent study of various aspects of the Russian language in the format of mass open online courses allows foreign students

- It is better to assimilate and consolidate the studied lexical and grammatical material due to an unlimited number of watching video lectures and performing intermediate and final tests,
- To replenish your vocabulary and expand your knowledge in the field of

- communicative grammar of the Russian language,
- Russian speakers should form an idea of the national and cultural peculiarities of native speakers of the Russian language and the peculiarities of Russian culture,
  - To master new innovative methods of distance learning,
  - To receive training in open and free access in a convenient mode: according to the place, time and pace of classes, having the opportunity to dose training based on their individual capabilities,
  - Communicate on thematic forums with teachers and other students, since MOOC is the optimal platform for educational interethnic communication,
  - Get an official certificate upon completion of the online course.

### Bibliographic references

- Andreev, A.A. (2014). Russian open educational resources and mass open distance courses. *Higher education in Russia*, 6, 150-155
- Azimov, E.G. (2014). The use of MOOCs (mass open online courses) in teaching Russian as a foreign language (achievements and prospects). *Bulletin of the Peoples' Friendship University of Russia. Series: Questions of education. Languages and specialty*, 4, 124-144.
- Bugaichuk, K.L. (2013). Mass open distance courses: history, typology, prospects. *Higher education in Russia*, 3, 148-155. (In Russian)
- Capuano, N., & Caballe, S. (2015). Towards Adaptive Peer Assessment for MOOCs. *10th Conference on P2P, Parallel, Grid, Cloud and Internet Computing (3PGCIC)*, 64-69.
- Chichilanova, S.A., Kurzaeva, L.V., Grigoriev, A.D., & Novikova, T.B. (2015). Domestic experience of implementing mass open online courses in xMOOC format. *ES and K*, 4(29). URL: <https://acortar.link/EjhlWp>
- Downes, S. (2013). *Connective Knowledge and Open Resources*. Half an hour. URL: <https://acortar.link/V1y2qC> (date of application: 03.06.2023).
- El Khadiri, K., Labouidya, O., El Kamoun, N., & Hilal, R. (2019). Success Factors In A Mooc Massive Device: Questions And Challenges. *Journal of Theoretical and Applied Information Technology*, 97(4), 1167-1178.
- Lebedeva, M.B. (2015). Mass open online courses as a trend in the development of education. *Man and education*, 1(42), 105-108.
- Maltseva, A., Klyushnikova, E., Veselov, I., Gridchina, A., Chernova, T., & Soroko, G. (2019). Modern approaches to the assessment of massive open online courses and its implementation on the example of courses for the Russian language studying. *Amazonia Investiga*, 8(23), 222-236. Retrieved from <https://amazoniainvestiga.info/index.php/amazonia/article/view/603>
- Marijuan, S., & Sanz, C. (2018). Expanding Boundaries: Current and New Directions in Study Abroad Research and Practice. *Foreign Language Annals*, 51(1), 185-204. Retrieved April 17, 2022 from <https://www.learntechlib.org/p/192227/>
- Mozhaeva, G. (2015). ERPA International Congresses on Education 2015, ERPA Congresses 2015, 4-7 June 2015 Massive Open Online Courses: the new vector in classical university education. *ERPA International Congresses on Education 2015, ERPA Congresses 2015, 4-7 June*.
- Paesani, K. (2016). Investigating connections among reading, writing, and language development: A multiliteracies perspective. *Reading in a Foreign Language*, 28(2), 266-289.
- Parr, C. (2013) MOOC Creators Criticize Courses' Lack of Creativity. Times Higher Education URL: <https://acortar.link/8JxKIM>
- Pomortseva, N.V., & Dinevich I.A. (2019). *Verbs of motion: a textbook*. Moscow: RUDN, 2019, 98 p.
- Roschina, Ya.M., Roshchin, S.Yu., & Rudakov, V.N. (2018). Demand for mass open online courses (MOOCs): the experience of Russian education. *Questions of Education*, 1, 174-199. (In Russian)
- Salataci, R. (2002). Possible effects of strategy instruction on L1 and L2 reading. *Reading in a Foreign Language. The University of Hawaii*, 14(1), 1-17.
- Sambell, K. (2010). Enquiry-based Learning and Formative Assessment Environments: Student Perspectives. *Practitioner Research in Higher Education. University of Cambria*, 4(1), 52-61
- Sherman, Y. (2018). From "subversion" to innovation: about the future of MOOC. *Education issues*, 4, 21-43 (In Russian)
- Vlasova, E.A., Eremina, O.S., & Kultepina, O.A. (2018). On the experience of creating a mass online course in Russian as a foreign language for elementary level students. *The World of the Russian Word*, 2, 93-98 (In Russian)
- Vyushkina, E.G. (2015). Mass open online courses: theory, history, prospects of use. *Izvestia of the Saratov University*. New.

- series. Series. Philosophy. *Psychology. Pedagogy*, 15(2), 78-83 (In Ukrainian)
- Yuan, L., & Powell, S. (2013). MOOCs and Open Education: Implications for Higher Education. *Bolton: University of Bolton: CETIS*, 20 p. 2015. (In Ukrainian)
- Zakharova, U.S., & Tarasenko, K.I. (2019). MOOC in higher education: advantages and disadvantages for teachers. Questions of education. *Educational Studies Moscow*, 3, 176-202

DOI: <https://doi.org/10.34069/AI/2023.71.11.12>

How to Cite:

Samosudov, M.V., Bagrin, P.P., Matyash, A.V., Zuikov, Y.V., & Andreeva, V.A. (2023). The reflection of managerial control actions in the digital twin of the organization. *Amazonia Investiga*, 12(71), 138-148. <https://doi.org/10.34069/AI/2023.71.11.12>

## The reflection of managerial control actions in the digital twin of the organization


### Отражение управляющих воздействий руководителей в цифровом двойнике организации

Received: August 9, 2023

Accepted: October 23, 2023

Written by:

**Mikhail V. Samosudov<sup>1</sup>**

 <https://orcid.org/0000-0001-5787-2430>

**Pavel P. Bagrin<sup>2</sup>**

 <https://orcid.org/0000-0003-4714-5998>


**Arseniy V. Matyash<sup>3</sup>**

 <https://orcid.org/0000-0001-5799-9466>

**Yan V. Zuikov<sup>4</sup>**

 <https://orcid.org/0000-0001-6675-9309>

**Victoria A. Andreeva<sup>5</sup>**

 <https://orcid.org/0009-0006-4029-9176>

#### Abstract

The work carried out earlier allows us to assert that a digital twin of an organization can be created on the basis of a comprehensive agent-based mathematical model of a social system functioning in an active environment. Such a digital twin, consisting of a set of databases for recording initial data and calculated values of system parameters, as well as data collection and processing modules, allows you to automate the functions of analyzing the activities and the state of the organization to determine systemic problems, the causes of the results of activities, as well as the calculation of control actions and determining the effect of the control actions of the head.

The purpose of this work is to determine the parameters of the control action that need to be recorded in the digital twin of the organization in order, using a simulation model, to calculate the effect of the impact, the dynamics of the social system in the socio-economic space.


**Keywords:** digital twin of an organization, digital twin of a social system, comprehensive mathematical model of a social system, active


#### Аннотация


Проведённая ранее работа позволяет утверждать, что может быть создан цифровой двойник организации на основе сформированной комплексной агентной математической модели социальной системы, функционирующей в активной среде. Такой цифровой двойник, состоящий из совокупности баз данных для фиксации исходных данных и расчётных значений параметров системы, а также модулей сбора и обработки данных, позволяет автоматизировать функции анализа деятельности и состояния организации для определения системных проблем, причин полученных результатов деятельности, а также расчёт управляющих воздействий и определение эффекта от управляющих воздействий руководителя.


Цель работы – определить параметры управляющего воздействия, которые необходимо зафиксировать в цифровом двойнике организации, чтобы, используя имитационную модель, рассчитать эффект от воздействия, динамику социальной системы в социально-экономическом пространстве.

<sup>1</sup> Doctor of Science in Economics, leading researcher, The State University of Management, Moscow, Russia.  WoS Researcher ID: JOZ-8239-2023

<sup>2</sup> Junior research assistant The State University of Management, Moscow, Russia.  WoS Researcher ID: JOZ-8165-2023

<sup>3</sup> Junior research assistant The State University of Management, Moscow, Russia.  WoS Researcher ID: JHV-1217-2023

<sup>4</sup> Master's degree student The State University of Management, Moscow, Russia.  WoS Researcher ID: JOZ-8430-2023

<sup>5</sup> Undergraduate student, The State University of Management, Moscow, Russia.  WoS Researcher ID: JOZ-8226-2023

system, activeness, organization management, controlling influence.

**Ключевые слова:** цифровой двойник организации; цифровой двойник социальной системы; комплексная математическая модель социальной системы; активная система; активность; управление организацией; управляющее воздействие.

## Introduction

The term "digital twin" (DT) is often used to refer to a computer model simulating the behavior of a real object. GOST R 57700.37-2021 defines a DT as "a system consisting of a digital model and bidirectional information links with the product ... or its ... parts"<sup>6</sup>. In the context of our objective, it is important to note that such a model contains information about the values of phase variables at specific points in time and a module that calculates the system's dynamics based on this data. Strictly speaking, the DT of an object is a data set (phase variable values) that, using a simulation model, allows for the calculation of the object's dynamics and changes in its properties (i.e., the nature of the object's interaction with the environment). Applied to an organization, this involves simulating the movement of a social system in the socio-economic space (SES), implying the presence of data about the object and its operating environment.

Agent-based models are increasingly being utilized for the modeling of social systems. The development of such models is outlined in the Fundamental Scientific Research Program until 2030, approved by the Government of the Russian Federation<sup>7</sup>. To apply these models practically, there is a need for software and hardware complexes that implement the model.

Considering the above and the goals of digitizing the economy and society, the digital twin (DT) of the organization should ensure the recording and processing of data that allow tracking changes in the organization during the modeling of perturbations, managerial actions, and other influences. The data and dependencies should consider all significant cause-and-effect relationships, enabling the simulation of the organization's behavior in the market environment. To achieve this, the DT should allow:

- Recording the organization's state: capture the organization's state and the environment in the form of phase variable values.
- Recording changes in the organization's state: document changes in the organization's state (values of phase variables) in response to any events, altered circumstances, or agent actions.
- Calculating changes in the social system: calculate changes in the state and properties of the social system when modifying the values of phase variables.

The technical implementation of the digital twin (DT) involves a complex of databases and a module (or modules) for processing real-time values of phase variables to model activeness (processes), the state of the social system, calculate its behavior, and assess the consequences of management subjects' actions and the environment.

The aim of the study is to determine the parameters of managerial impacts (MI) by management subjects that need to be recorded in the DT databases. This information is crucial for assessing the effects resulting from the implementation of MI.

## Literature review

In the literature, there is a lack of comprehensive materials addressing the formalization and calculation of MI in social systems. Works related to MI in technical systems (see, for example, (Tyunkov & Bocherova, 2012)) provide strict dependencies, describe parameters, and the mechanism of MI. In the context of social systems, predominantly, individual processes and some influencing factors on the outcome are described. There are examples of practical implementation, but often these examples and processes are discussed

---

<sup>6</sup> GOST R 57700.37-2021 Computer Models and Simulation: Digital Twins of Products. General Provisions. – Moscow: Russian Institute of Standardization, 2021.

<sup>7</sup> Program of Fundamental Scientific Research in the Russian Federation for the Long Term (2021-2030). Approved by the decree of the Government of the Russian Federation dated 31.12.2020 No3684-r / <https://docs.cntd.ru/document/573319222?marker=64U0IK>



without sufficient reflection on implementation conditions, and the influencing factors are considered in an abstract manner, without fully disclosing the mechanism of influence.

The management system implies the presence of a control device (or a management subject in a social system), a managed object, the impact on which alters its functioning, MI, and the result. There should also be a controlling device or organ that determines the trajectory of movement, final and intermediate goals, etc.

When performing a management act, the subject influences the object to bring it into a new desired state. In management, methods are divided into economic (material incentives), organizational and directive (orders, directives, etc.), and socio-psychological (suggestion, imitation, etc.) (Fundamentals of management (n.d.)). It is worth noting the inaccuracy of the traditional definition: 'management method is a set of ways and means of influencing the managing subject on the managed object to achieve ... goals' (Fundamentals of management (n.d.)) – the right and left parts do not correspond to each other: the right part can be recognized as a definition of the method of influence (although it is vague), but not every influence will be management, so it is incorrect to equate the management method with 'a set of ways and means of influencing...'. The management method is a way of management. In general, there are only three main ones – without feedback, with feedback on perturbing influence, and with feedback on the result – and their combinations.

Universal methodology for calculating MI in management has not emerged. This is often explained by the fact that the impact is realized in a specific situation involving specific individuals under different conditions. However, the main reason is the lack of a strict theoretical foundation and the associated ability to reason abstractly. The tasks of automating activeness require the calculation and quantitative assessment of all influencing factors and unambiguous relationships between variables.

One of the factors is social institutions. Social institutions are often understood as a "stable complex of formal and informal rules, stereotypes, norms, attitudes, controlling various areas of society's activity and individual personality, as well as organizing the system of roles and statuses of a person" (Danilova, 2009, p. 14). While agreeing that formal and informal rules, stereotypes, etc., are social institutions, a stricter interpretation is considered here – an institution is information about actions and consequences obtained by an individual through reading regulatory documents or observing the behavior of agents. Consequences are the sum of resources gained (incentives) and resources lost (constraints) because of an action. Institutions influence the behavior of an agent (the probability of the agent performing actions) but do not "control" them.

Nevertheless, it is worth noting the existence of works attempting to define approaches to the calculation of MI. In (Verzilin & Shahygin, 2011), the authors note: "When studying the processes of managing a social system, modeling tools must fully implement the system approach principle and represent a set of formalized models ... of various scales and purposes, taking into account all the most important factors ..., providing the development of well-founded and timely recommendations when making decisions ..." (Verzilin & Shanygin, 2011, p. 83). Here, a hierarchical system is considered, requiring decisions on management tasks through "coordination selection." This refers to management where the upper-level element controls the lower-level elements through actions that influence the development of decisions in the governing bodies of these elements (Verzilin & Shahygin, 2011, p. 81).

Note that specifically, the digital twin (DT) of an organization can serve as a tool for calculating MI in the decision-making process.

Works related to modeling MI often do not consider the calculation of impact but rather describe certain actions in a specific situation. For instance, in (Alidodov A., & Averchenkov, 2022), the BPMN specification is used to describe the management process in the system 'Tajik students admitted to Russian universities' (Alidodov A., & Averchenkov, 2022, p. 87). While useful as an experiential description, it does not reveal the full set of factors influencing the decision, nor does it provide calculation algorithms, etc.

In some works, the focus is on informational impact and human perception of information. For example, in (Lieberman, 2023), the calculation of the strength of informational impact is oriented towards computer application for measurement and recording. Psychology and sociology also pay attention to how humans

perceive different types of information, including hidden MI. However, it's important to note that there is often an unjustified division of essentially the same influence based on the goals of the management subject: if it's explicit and 'well-intentioned,' it's considered management; if implicit and/or 'pursuing one's own goal,' it's considered manipulation. For instance, in (Sheynov, 2006), a technology of hidden control is defined, consisting of stages: '1) collecting information about the addressee; 2) detecting targets of influence and bait; 3) attraction; 4) compelling the addressee to act; 5) gain for the initiator of the impact' (Sheynov, 2006, p. 56). There is a somewhat negative connotation with terms like 'bait,' 'compelling'... However, viewed impartially, any influence involves informational impact, and the distinctions between these influences are based on the goals of the management subject.

From the perspective of information perception, psychology and sociology focus on the alphabet people use. In (Kara-Murza, 2017), it's demonstrated how different symbolic systems affect perception, noting that words can suggest something to a person, influencing their behavior (Kara-Murza, 2017, p. 141). A.V. Savchenko's work (Savchenko, 2008) explores latent control – covert purposeful impact where the subject of activity (management object) consciously accepts and implements decisions predetermined by the subject of latent control. Acting rationally and reasonably, individuals or groups subjected to latent impact, due to distorted information, lack of knowledge, or biased event assessment, act in the interests of the subject of latent control (Savchenko, 2008, p. 10-11). The rationale for modeling MI is emphasized. For this purpose, a DT can be used, including an imitation model of the organization.

In some works (see, for example, (Rogachev et al., 2019)), MI is presented as streams of financial resources. However, it should be noted that such representation can only be used for certain large-scale management tasks, as the calculation error becomes significant due to unjustified abstraction from all other factors influencing the behavior of the social system.

## Methodology

We utilize a mathematical agent-based simulation model of a social system, which defines the data structure required for calculating the system's dynamics and enables the computation of the social system's dynamics in the SES (Samosudov, 2021; Samosudov, 2019; Samosudov, 2019a; Samosudov, 2021a; Samosudov, 2022; Samosudov & Bagrin, 2022; Bagrin & Matyash, 2022).

The model is based on a resource-functional approach to the analysis of social systems. This approach assumes an understanding of social systems of various purposes and scales as functional systems that require a specific resource base, including material, informational, intellectual, social, spatial, and human time resources. A key condition is the ability to formulate functions correctly and consider resources in the utmost specificity (Samosudov, 2019), avoiding unnecessary generalizations. The developed methodological materials allow for precise calculation of the necessary resource base for implementing specific functions.

The creation of the model was preceded by the following fundamental scientific achievements relevant to this task (Samosudov, 2012; Samosudov, 2019; Samosudov, 2019a; Samosudov, 2021; Samosudov, 2021a; Samosudov, 2022; Samosudov & Bagrin, 2022):

- Development of a rigorous theoretical framework describing the dynamics of the social system in the SES and defining the conditions for functional stability.
- Development of a method for quantitative assessment and consideration of all types of resources, including intellectual, informational, social, organizational, etc.
- Development of a method for formalizing processes (activities) through the documentation of resource transformations using multidimensional matrices.
- Development of a method for formalizing the content of documents and informal rules (social institutions) and their influence on the likelihood of individuals performing certain actions.
- Development of a method for accounting for the systemic activeness of agents.
- Development of a method for reflecting the influence of the environment on agent behavior through the calculation of gradients at the point of SES.
- Identification of invariants and variable quantities characterizing the process of agent interaction.

This allowed defining a data structure for capturing the state of the social system in the digital twin (DT) database for dynamic system calculations. The model implements a Markov process, so modeling a specific

organization does not require a significant amount of data on past activities. It is sufficient to describe the current state of the organization and the environment to calculate its dynamics.

The work on the project "Digital Twin of a Social System: Substantiation of Content and Application Possibilities for Management" (Russian Science Foundation (n.d.)) demonstrated the possibility of describing the state of any social system with a structurally identical set of phase variables. While the values of variables may change, the structure remains the same. It also confirmed the feasibility of implementing a digital twin of a social system and identified approaches to using the digital twin in the management system.

## Results and discussions

The activity of a social system is inherently tied to its constant change and occurs in a continually changing environment. Social systems are inherently dynamic and active systems, operating in a dynamic and active environment<sup>8</sup>. Due to the system's activeness, the environment reacts to its presence by redistributing resource flows. If the system's impact is adequate, such redistribution will lead to the formation of resource flows entering the system. However, the system's activeness arises from the activeness of agents shaping the system (not only founders and organizers but also other participants in corporate relationships).

Due to the absence of stationary states for both the system and the environment, for the system to function and maintain this capability in the future, management of the system's movement in the environment is necessary – a change in its state over time. While the state will naturally change, relying on random processes and the natural course of events is not advisable in an active and, arguably, aggressive environment where economic agents seek to redirect resource flows in their favor. It is necessary to manage the change in the system over time to ensure the necessary incoming resource flow from the environment for the social system's existence.

MI should lead to a change in the system's trajectory towards a target state. Its consequence is the alteration of the values of phase variables (system parameters), leading to a change in the state and properties of the system.

In the context of social systems, we might be interested in the functional stability of the system (the ability to maintain functionality in changing conditions); the attractiveness of the system to certain agents and, if necessary, unattractiveness to others (e.g., raiders, dishonest employees, clients, etc.); the ability to adapt to operating conditions (directly related to manageability); as well as other similar properties.

The change in the system is determined by the actions of interacting agents – if their actions lead to a change in the system's resource base, functional concentration of resources, then the properties of the system change.

Let's introduce the theorem: to correct the movement of a social system in a SES, it is necessary to appropriately change the behavior of agents by transmitting flows of messages and resources to them.

Let  $\Omega$  be a system moving in the SES  $\Theta$ . A functional social system can be considered as a subset of the SES, with a sufficient concentration of resources and structured activeness by agents to maintain the functionality of the system ( $\Omega \subset \Theta$ ). It is precisely the combination of resources in an active form that provides the possibility of implementing a function. However, for the activities of social systems, resources inseparable from humans (intellectual resources, some social resources, etc.) are also necessary, requiring structured activeness of agents.

The combination of the states of the system and the environment determines the system's situation, characterized by incoming resource flows from agents interacting with it (resources should be considered broadly – not only financial but also other resources that are significant).

---

<sup>8</sup> That is, at any given moment in time, there is at least one parameter of the system and the environment, the rate of change of which is not equal to zero.

If the incoming resource flows (IRF) are sufficient, in the SES corresponding to the considered social system, a certain spatiotemporal concentration of resources in an active form will emerge, enabling the realization of necessary functions, and the system will be capable of functioning<sup>9</sup>.

The movement of the social system  $\Omega$  in the SES is characterized by the rate of change of the system,  $d\Omega/dt$ , and its trajectory is described by the following equation<sup>10</sup>

$$\Omega(t) = \Omega(t_0) + \int_{t_0}^t \frac{d\Omega}{dt} dt \quad (1)$$

The management subject's task is to minimize the deviation of the actual trajectory from the calculated trajectory of the system's movement towards a specific target state.

The target state is the condition of the system that ensures functioning results aligned with the expectations (desires) of key participants in corporate relationships. This could involve the system's ability to generate sufficient IRF or other properties such as functional sustainability, the capability to produce the required products in the desired quantity, attractiveness to specific agents, etc.

The rate of change of the system depends on the flows of resources  $\hat{R}_j^k(t)$  and messages  $\hat{M}_j^k(t)$ , emanating from the points of the SES. If the  $k$ -th point of the SEP (receiver) is within the region corresponding to the system  $\Omega$ , the system changes – the resource base changes, the information received by agents changes, and their activeness changes. As a result, the properties of the system change.

In other words, the system undergoes movement, more or less aligned with the management task. If the Inflowing Resource Streams correspond to what is necessary for the adaptation of system  $\Omega$  to changing conditions, the trajectory of movement will change accordingly. If not, the mismatch between the system and the environment will increase.

The resource flow  $\check{R}_\Omega^\Theta$  entering the system  $\Omega$  from the SES  $\Theta$  is determined by the actions of SES agents – by performing actions  $o_x$ , the  $j$ -th agent transforms the resource base under its control<sup>11</sup>  $R_j(t)$  into  $R_j'(t)$  and creates outgoing flows of resources  $\hat{R}_j^k(t)$  and messages  $\hat{M}_j^k(t)$  from the  $j$ -th point of the SES to the  $k$ -th point of the SES:

$$R_j(t) \xrightarrow{o_x} \{R_j'(t), \hat{R}_j^k(t), \hat{M}_j^k(t)\} \quad (2)$$

Note: In general, the possibility of zero flows of messages and resources emanating from point  $j$  of the SES should be taken into account, but the transformation of the resource base always occurs.

However, as shown earlier in (Samosudov, 2021a; Samosudov, 2022), the set of actions of the  $j$ -th agent  $O_j(t)$ , performed by him at time  $t$ , is determined by the value of his behavior vector (BV)  $B_j(t)$  – its components equal to 1 are elements of this set:

$$O_j(t) = B_j(t) | p(o_k) = 1 \quad (3)$$

As a result of the agent's interpretation in accordance with the alphabet  $\mathcal{M}_j$  of the received streams of messages  $\check{M}_j^k(t)$  and resources  $\check{R}_j^k(t)$  the BV of the agent changes under the influence of the received information  $\check{I}_j(t)$  – a set of stimuli, constraints, and the probability of the consequences of certain actions occurring, which in the model is taken into account by means of a matrix of size  $k \times (2[n+m]+1)$ :

<sup>9</sup> That is, at any given moment in time, there is at least one parameter of the system and the environment, the rate of change of which is not equal to zero.

<sup>10</sup> The system's state is described by a state vector, each element of which is the value of a phase variable (system parameter). However, for the sake of simplicity, we do not detail the change in state by individual parameters here.

<sup>11</sup> For simplicity, we do not consider here that the transformation of the resource base takes some time, and we write  $R_j(t) \xrightarrow{o_x} \{R_j'(t), \hat{R}_j^k(t), \hat{M}_j^k(t)\}$ , as if assuming instant transformation.

$$\left\{ \begin{matrix} \tilde{R}_j^k(t) \\ \tilde{M}_j^k(t) \end{matrix} \right\} \xrightarrow{\mathcal{M}_j} \tilde{I}_j(t)$$

$$\tilde{I}_j = \begin{pmatrix} o_x & s_1^1 & \dots & s_n^1 & p(s_1^1) & \dots & p(s_n^1) & l_1^1 & \dots & l_m^1 & p(l_1^1) & \dots & p(l_m^1) \\ \vdots & \vdots & & \vdots & \vdots & & \vdots & \vdots & & \vdots & \vdots & & \vdots \\ o_x & s_1^k & \dots & s_n^k & p(s_1^k) & \dots & p(s_n^k) & l_1^k & \dots & l_m^k & p(l_1^k) & \dots & p(l_m^k) \end{pmatrix} \quad (4)$$

$o_x$  –  $x$ -e conditional action;  
 $s_n^x$  – stimuli for action  $o_x$  (resources of type  $n$  obtained when performing the action);  
 $l_m^x$  – constraints for action  $o_x$  (resources lost when performing the action of type  $m$ );  
 $p(s_n^x)$ , – probability of obtaining resources of type  $n$  and losing resources of type  $m$  when  
 $p(l_m^x)$  performing action  $o_x$ .

Under the influence of the received information, there arises a divergence of the component of the potential that corresponds to the action  $o_x$ :

$$\begin{aligned} \text{div} B_j^x(\tilde{I}_j(t)) = & \left( \frac{\partial B_j}{\partial s_1(o_x)} + \dots + \frac{\partial B_j}{\partial s_m(o_x)} + \frac{\partial B_j}{\partial l_1(o_x)} + \dots + \frac{\partial B_j}{\partial l_n(o_x)} + \frac{\partial B_j}{\partial s_1(\neg o_x)} + \dots \right. \\ & \left. + \frac{\partial B_j}{\partial s_m(\neg o_x)} + \frac{\partial B_j}{\partial l_1(\neg o_x)} + \dots + \frac{\partial B_j}{\partial l_n(\neg o_x)} \right) \end{aligned} \quad (5)$$

The BV of an agent at time  $t$  is determined as follows:

$$B_j(t) = B_j(t_0) + \left( \int_{t_0}^t \text{div} B_j^1(\tilde{I}_j(t)) dt, \int_{t_0}^t \text{div} B_j^2(\tilde{I}_j(t)) dt, \dots, \int_{t_0}^t \text{div} B_j^x(\tilde{I}_j(t)) dt \right) \quad (6)$$

Thus, considering (2), the change in the behavior of agents in the social system  $\Theta$  alters the outgoing flows of resources  $\hat{R}_j^k(t)$  and messages  $\hat{M}_j^k(t)$ , from them, thereby changing the state of the system evolving in the SES.

The theorem is proven.

Considering the foregoing, MI is an influence on agents that alters their resource flows, leading to changes in system parameters to adapt the system to a changing environment<sup>12</sup>.

In a social system, the following entities exist, determining information that influences the behavior of agents:

- Message flows from one agent to another (or from the organization to agents) – they are interpreted by agents, and in their subjective subspace, subjective assessments of stimuli and constraints related to actions arise.
- Resource flows are also interpreted by agents as information influencing behavior – signals that define subjective assessments of the probability of gaining or losing benefits from interaction in SES, and the existing (accumulated) resource base of the agent affects the subjective assessment of the value of the proposed benefits.
- Institutional environment – formal and informal rules transmitting information about stimuli and constraints associated with actions.

It is important to note that for changing the probability of an agent performing actions, the subjective assessments that arise due to the interpretation of received messages and resources are crucial. Information (a variable entity) between agents is not transmitted; messages and resources (invariant entities,

<sup>12</sup> This should not be regarded as a strict definition of MI, rather as additional information specifying the peculiarities of MI for the tasks of managing social systems.



independent of the SES point in which they are considered) are transmitted. These are interpreted on the receiving end based on the agent's alphabet, considering the resources available and needed by the agent.

In general, in the management process, the subject needs to ensure that, considering the influence of the environment and the subject of management, the BV of the target agent provides the transmission of the necessary resources and messages to the system. Since the influence of the environment and individual subjects on the agent is formalized by calculating the gradient at the SES point corresponding to the agent, this condition can be expressed as follows:

$$\text{grad}\{\tilde{R}_j^\theta(t), \tilde{M}_j^\theta(t)\}: B_j(t) \geq B_{j \text{ needed}}(t) \quad (7)$$

In light of the above, let's consider some "typical" actions of the leader to manage the organization (Table 1).

**Table 1.**

*Comparing the actions of the leader with the content in accordance with the discussed concept.*

Manager's actions	Contents
	<p>The change in the institutional environment of the company, as a result, affects the utility functions of agents and their future activeness:</p> <p>Prescribed actions are determined – actions that need to be performed in specific situations.</p> <p>Stimuli and constraints associated with the performance of such actions are identified.</p>
Approval by the governing body of a document regulating activities (regulation, provision, etc.)	<p><math>H_\Omega(t_1) = H_\Omega(t) + H_{document}</math></p> <p>Having read the document, the agent obtains information about the stimuli and constraints specified in the document:</p> $\tilde{M}_j^\Omega(H_{document.}) \xrightarrow{\mathcal{M}_j} \tilde{I}_j \rightarrow \Delta B_j =$ $= \left( \int_{t_0}^t \text{div} B_j^1(\tilde{I}_j(t)) dt, \quad \dots, \quad \int_{t_0}^t \text{div} B_j^k(\tilde{I}_j(t)) dt \right)$
Order (oral or written)	<p>Another way to obtain this information is by observing the actions of agents whose behavior has changed as a result of reading the document.</p> <p>Changes in the institutional environment can also alter resource flows, which may affect agents' subjective assessments and their behavior.</p> <p>Information about incentives and constraints associated with specific actions, and a flow of resources towards particular participants.</p> <p>This also leads to a change in the institutional environment – the formation of formal social institutions in the case of a written order.</p>
Official conversation between a leader and a subordinate	<p>Targeted direct or indirect (depending on the form and signals) communication about the possibility of taking certain actions and gaining certain benefits.</p> <p>Properly calculated signals will appropriately modify the agents' activeness.</p> <p>Informing specific agents, transmitting signals that influence behavior, as a result of interpreting which agents will receive information about necessary actions, incentives, and constraints associated with them.</p>
Informal conversation between the leader and subordinate(s)	<p>Subjective assessments of expected and desired benefits are formed, and as a result, their activeness changes, leading to the emergence of the necessary outgoing flows of messages and resources if the leader has calculated everything correctly.</p> <p>Informing a group of participants (information flow towards the group of participants).</p>
A meeting or assembly with subordinates organized by a leader	<p>During a meeting or assembly, subordinates receive information about necessary actions, stimuli, and constraints associated with them. Informational resources that facilitate work and consequently reduce the significance of constraints (resources lost by a person in the process of activity) related to task execution can also be conveyed.</p>

Besides the impacts listed in the table, tasks, advice, recommendations, instructions, etc., can be considered. However, essentially, they do not differ from the ones discussed.

To reflect (record) the MI in the DT of the organization, it is necessary to record the following information in the database:

- Identifier of the Impact – a unique code for the impact. It is advisable for the code to reflect the type of impact and possibly the functional direction, but the main requirement is uniqueness.
- Subject of management creating the impact (active agent).
- Agent or agents for whose behavior the impact is intended.
- Content of the message implementing the impact:
- Transmitted signals;
- Translated meaning – a combination of actions, stimuli, constraints, and probabilities of consequences that the agent will "see" when interpreting the impact in accordance with (4).
- Parameters related to the selected channel and method of message transmission:
- Probability of the agent receiving a message transmitted through the channel, or better yet, the distribution of this probability over time if possible. For example, the approved document may be read<sup>13</sup> by the agent with a low probability within the first day of its validity, with a slightly higher probability within a week, and with a high probability within a month. However, the distribution of probability can be reversed – for example, in messengers, the likelihood that the agent will see the message may decrease over time. An option is to fix the time of guaranteed acquaintance with the transmitted message and calculate the effect for the worst-case scenario, but this may reduce the number of possible actions for the manager.
- Information background of receiving the message by the agent – against the background of which messages the agent will interpret the message.

From the perspective of organizing the activities of a social system, it is advisable to record additional accompanying information – the purpose of this impact (i.e., the expected change in agent behavior); the result of the agents' functioning with changed BV (system effect). However, this is more needed for organizing activities, subsequent analysis, etc. For the operation of the DT, this is additional information. The DT's computational block will process this information and calculate the effect of the MI:

- Using the agent's alphabet<sup>14</sup>  $\mathcal{M}_j$  the information that the agent will receive as a result of the impact is calculated.
- In accordance with (5), the divergence of the agent's BV is calculated, taking into account information about the agent's existing resources and needs, as well as considering the gradient of the environmental impact at this point in the SES.
- Based on the calculation of the divergence of the agent's utility function, its resulting utility function is determined in accordance with (6).

Based on the value of MI, it is determined whether the agent will perform the actions necessary to generate the required message and resource flows in accordance with (3).

For this, accordingly, the parameters of the agents receiving the message implementing MI must be recorded in the DT:

- Agent identifier<sup>15</sup>.
- The agent's BV in the context of actions related to obtaining information. This includes determining the probability of the agent receiving information<sup>16</sup> through the communication channels used for the impact.
- Alphabet of the agent.
- The resources available to the agent and its needs.

In addition to information about the agent, to calculate MI in the DT, information about the environment in which interaction occurs, more precisely, about the impact that the environment has on the agent (the gradient of the environmental impact at the point of SES corresponding to the agent) must be recorded.

<sup>13</sup> The receipt of a document should be taken into account based on the actual reading, not just its delivery through the transmission channel.

<sup>14</sup> In a simple implementation, the alphabet is a table that corresponds signals to a set of stimuli and constraints related to the action that the agent will "see" when interpreting the message.

<sup>15</sup> In general, the model used allows calculating dynamics at any level of detail, down to individual agents. However, it is often appropriate to detail it to the level of subsets of agents with similar characteristics.

The ability to use the same approach for calculations at any level of detail is a fundamental feature of the employed model.

<sup>16</sup> Notice: obtaining information, not messages. Obtaining information implies the agent's familiarity with the content of the message.

This can be calculated through modeling the behavior of agents or, if appropriate to the task conditions, obtained through expert assessments.

## Conclusion

The ability to mathematically model the dynamics of social systems in SES, creating a DT for an organization, enables solving a wide range of applied and scientific tasks.

For practical applications, it opens the possibility to calculate the MI of leaders, significantly increasing the efficiency of organizational work. Traditional decision-making often proves inadequate to the situation, leading to resource losses and reduced efficiency. This approach also transforms the organization of marketing research, allowing for precise calculations of agent impact and capturing results, providing much more information about the market using significantly smaller data volumes. For many small and medium-sized companies, traditional methods based on processing extensive customer data are not feasible.

The DT of a social system can be a powerful tool for fundamental research in social sciences.

The model underlying the DT allows representing research results from various fields in a unified format. The work conducted demonstrates that most observed phenomena in social systems (if not all) can be described using the variables used in the model. Essentially, a model of a social system (similar to a "standard model" in physics) can be created, enabling the formulation of hypotheses and the calculation of experiments. This addresses the methodological problem of social sciences, as traditional methods relying on statistical processing of observational results provide sufficient data only with the repeatability of experimental conditions, which is practically impossible in social systems.

The presence of a "standard model of a social system" creates the possibility of coordinating research efforts among different groups and contributes to the development of a theory and model anticipated in the Program of Fundamental Scientific Research until 2030, approved by the Government of the Russian Federation, as one of the expected promising results of scientific activity.

In this work, we demonstrate the feasibility of recording a leader's decisions in the DT of an organization and calculating the effect of implementing such a decision, which is one step towards creating a fully-fledged digital twin of an organization.

## Acknowledgments

The research was conducted with the support of the Russian Science Foundation grant No 22-28-20458, available at <https://rscf.ru/project/22-28-20458/>.

The authors express their gratitude to the "Delicate Moving" group of companies, with whom they have established long and fruitful relationships. This group essentially served as a laboratory, providing the opportunity to refine solutions, approaches, and tools. It also allowed for the testing of organizational decisions during the research on the organization and management of social systems.

## Bibliographic references

- Alidodov A., & Averchenkov, A. (2022) Managing Impact on the Social System of Tajik Students Studying in the Russian Federation: Formalization of the Management Process. *Automation and Modeling in Design and Management*, 2, 82-91. <https://doi.org/10.30987/2658-6436-2022-2-82-91>
- Bagrin, P.P., & Matyash, A.V. (2022) Description of the Institutional Environment in the Digital Twin of the Socio-Economic System. *Economics and Entrepreneurship*, 7, 306-311. DOI: doi: 10.34925/EIP.2022.144.7.056
- Danilova, I.A. (2009) *Sociology and Psychology of Management: Scientific Book*. Moscow: LitRes. <https://www.litres.ru/book/i-danilova/sociologiya-i-psihologiya-upravleniya-177676/>
- Fundamentals of management (n.d.) *Mechanism and methods of management. The system of management methods, their content, interrelation and interaction*. <https://acortar.link/Tx4VSs>
- Kara-Murza, S.G. (2017) *Manipulation of Consciousness. XXI Century: Publicistic Book*. Moscow: TD Algorithm LLC. ISBN 5926500036

- Liberman, Y.L. (2023) On the Definition of the Strength of Information Impact on a Person When Studying the Level of His Mental Reaction. *Symbol of Science: International Scientific Journal*, 2-1, 53-58. <https://os-russia.com/SBORNIKI/SN-2023-02-1.pdf>
- Russian Science Foundation. (n.d.). *The digital twin of the social system: substantiation of the content and the possibility of use in the process of enterprise management*. Retrieved from <https://www.rscf.ru/project/22-28-20458/>
- Rogachev, A.F., Briskin, E.S., & Kozlova, L.E. (2019) Mathematical Modeling of the Dynamics of Development of Socio-Economic Systems in the Conditions of State Regulation. In: Briskin E.S., Kozlova L.E. (eds.) *Proceedings of the XIII All-Russian Conference on Management Issues VSPU-2019*, 1804-1812. <https://doi.org/10.25728/vspu.2019.1804>
- Samosudov, M.V. (2012) Theory of Corporate Interaction as a Tool for Analysis in the Process of Corporate Governance. *Management Sciences*, 2(3), 24-30. (In Russian)
- Samosudov, M.V. (2019) Resource Footprint of Activity as an Element of the Digital Twin of an Enterprise. *E-Management*, 2(3), 38-47. (In Russian) <https://doi.org/10.26425/2658-3445-2019-3-38-47>
- Samosudov, M.V. (2019a). The Model of The Incoming Resource Flow of The Social System for Digitalization of Management. *Journal of Advanced Research in Dynamical & Control Systems*, 11(08), 2892-2900. <http://jardcs.org/abstract.php?id=3053>
- Samosudov, M.V. (2021) Reflection of Documents in the Digital Twin of an Enterprise and Calculation of Their Impact on Human Behavior in an Simulation Model. *E-Management*, 4(3), 50-60. <https://doi.org/10.26425/2658-3445-2021-4-3-50-60>
- Samosudov, M.V. (2021a) Formalization of the impact of information on human behavior for the automatization of the calculation of marketing influence. *International Journal of Engineering Research and Technology*, 13(12), 4849-4854. [http://www.irphouse.com/ijert20/ijertv13n12\\_113.pdf](http://www.irphouse.com/ijert20/ijertv13n12_113.pdf)
- Samosudov, M.V. (2022) Comprehensive mathematical agent-based model of the social system for management automation purposes. In: Ashmarina S.I., Mantulenko V.V., Vochozka M. (eds) *Proceedings of the International Scientific Conference "Smart Nations: Global Trends In The Digital Economy"*. *Lecture Notes in Networks and Systems*, vol 397. Cham: Springer, pp. 346-353. [https://doi.org/10.1007/978-3-030-94873-3\\_43](https://doi.org/10.1007/978-3-030-94873-3_43)
- Samosudov, M.V., & Bagrin, P.P. (2022) Matrix method of reflecting activity in the digital twin of the social system. *Amazonia Investiga*, 11(57), 181-188. <https://doi.org/10.34069/AI/2022.57.09.19>
- Savchenko, A.V. (2008). *Latent Management: Essence and Mechanism of Use: spec. 08.00.05 "Economics and Management of the National Economy"* (author's abstract of the thesis for the degree of candidate of economic sciences). Department of Management of State University, Moscow.
- Sheynov, V.P. (2006). *Hidden Control of a Person (Psychology of Manipulation)*. Moscow: AST Harvest (In Russian)
- Tyunkov, V.V., & Bocherova, O.A. (2012). On the model of adaptation of control actions to ensure the reliability of a complex structure under probable extreme influences. *Proceedings of the Irkutsk State Economic Academy (Baikal State University of Economics and Law)*, 2, 1-9. <https://acortar.link/trCZCJ>
- Verzilin, D.N., & Shanygin, S.I. (2011) Management of Target Processes in Organizational Modeling of Social Systems. *Economics and Management*, 9, 79-83. <https://acortar.link/GDO1XB>

DOI: <https://doi.org/10.34069/AI/2023.71.11.13>

How to Cite:

Mamchur, L., Shuppe, L., Barkasi, V., Bykova, M., & Bodnaruk, I. (2023). The essence and specifics of organizing the teachers training for children with disabilities. *Amazonia Investiga*, 12(71), 149-161. <https://doi.org/10.34069/AI/2023.71.11.13>

## The essence and specifics of organizing the teachers training for children with disabilities

Сутність та специфіка організації підготовки педагогів з дітьми з обмеженими можливостями

Received: August 15, 2023

Accepted: October 19, 2023

Written by:

**Lidia Mamchur<sup>1</sup>** <https://orcid.org/0009-0006-2007-8149>**Liudmyla Shuppe<sup>2</sup>** <https://orcid.org/0000-0002-0694-2563>**Viktoriya Barkasi<sup>3</sup>** <https://orcid.org/0000-0003-1112-2209>**Mariia Bykova<sup>4</sup>** <https://orcid.org/0000-0002-0386-1856>**Iryna Bodnaruk<sup>5</sup>** <https://orcid.org/0000-0002-2157-9491>


### Abstract


In the article, to research the place of inclusive competence in the professional training of future teachers, the ways of forming inclusive competence in the professional training of future teachers, and the development of pedagogical conditions for the formation of inclusive competence, we found out the state of inclusive readiness of future students for inclusive activities among students. The results of the ascertainment experiment showed the need for the formation of inclusive competence in future teachers as early as possible and to continue throughout their lives with the aim of high-quality inclusive education of students. For the formation of inclusive competence of future teachers, we identified the components of inclusive competence, clarified the place of inclusive competence in society and the teacher's professional activity, revealed the content of axiological, anthropological, holistic, personal, activity, differentiated, competence approaches, clarified important principles and developed and implemented pedagogical conditions for the


### Анотація


У статті, з метою дослідження місця інклюзивної компетентності у професійній підготовці майбутніх учителів, шляхів формування інклюзивної компетентності у професійній підготовці майбутніх учителів та розробки педагогічних умов формування інклюзивної компетентності ми з'ясували стан інклюзивної готовності майбутніх студентів до інклюзивної діяльності у студентів. Результати констатувального експерименту показали необхідність формування інклюзивної компетентності у майбутніх вчителів якомога раніше і продовжувати протягом життя з метою якісного інклюзивного навчання учнів. Для формування інклюзивної компетентності майбутніх вчителів нами виокремлено компоненти інклюзивної компетентності, з'ясовано місце інклюзивної компетентності в соціумі та у професійній діяльності учителя, розкрито зміст аксіологічного, антропологічного, цілісного, особистісного, діяльнісного, диференційованого, компетентнісного підходів, з'ясовано вагомі

<sup>1</sup> Doctor of Pedagogical Sciences, Professor, Professor of the Department of Training Technologies, Labor and Design, Bila Tserkva Institute of Continuous Professional Education, Ukraine.  WoS Researcher ID: JRW-8034-2023

<sup>2</sup> Ph.D., Associated Professor, Masaryk University Brno, Czech Republic.  WoS Researcher ID: JQI-2417-2023

<sup>3</sup> Doctor of Philosophy in Pedagogical Sciences, Associate Professor (Docent) of German Philology Department (Philology Faculty), V.O. Sukhomlynsky Mykolayiv National University, Ukraine.  WoS Researcher ID: JNS-8678-2023

<sup>4</sup> Candidate of Pedagogical Sciences, Associate Professor, Sumy State Pedagogical University named after A. S. Makarenko, Ukraine.  WoS Researcher ID: IWU-4403-2023

<sup>5</sup> Candidate of Pedagogical Sciences, Associate Professor, Associate Professor of the Department of Music, Yuriy Fedkovych Chernivtsi National University, Ukraine.  WoS Researcher ID: ITV-0015-2023



formation of inclusive competence with the aim of quality inclusive education of students. As a result of the conducted research, we observe a higher formation of inclusive competence in the experimental groups than in the control groups.

**Keywords:** inclusive competence, professional training of future teachers, components of inclusive competence, teacher's professional activity, pedagogical conditions.

## Introduction

In the context of the tolerant attitude of the universe to the problems of comprehensive development of people with mental, physical, social, and emotional health disabilities, the gradual educational spatial position of the worldview paradigm of society has been changed Shevchenko (2023). In particular, we are observing a change in the attitude of society and the entire world community to the problems of people with health disabilities and a new approach to realizing the need for their broad integration into society. (Klochko et al., 2022).

The development of an inclusive educational system requires the determination of methodological principles for the training of psychological and pedagogical specialists who take a direct part in the organization and ensuring the effective functioning of an inclusive educational environment based on the formation of the professional ability to perform the functions of a mentor, tutor, moderator and determine the individual educational trajectory of a child with special educational needs (Voloshyna & Dmytrenko, 2016).

At the same time, as practice shows, the readiness of psychological and pedagogical specialists to work in an inclusive educational environment is extremely insufficient. One of the obvious reasons is the lack of systematic training of psychological and pedagogical personnel in institutions of higher education to work with children with disabilities.

The relevance of training and retraining of psychological and pedagogical personnel to work with children with disabilities is determined, in particular, by the following factors: accelerated implementation of inclusive education in recent years; insufficient awareness of specialists with methodological principles for working with children with disabilities, technological and

принципи та розроблено і впроваджено педагогічні умови формування інклюзивної компетентності з метою якісного інклюзивного навчання учнів. У результаті проведеного дослідження спостерігаємо вищу сформованість інклюзивної компетентності в експериментальних групах ніж в контрольних.

**Ключові слова:** інклюзивна компетентність, професійна підготовка майбутніх учителів, компоненти інклюзивної компетентності, професійна діяльність учителя, педагогічні умови.

methodical means of implementing inclusive education; increasing the academic component in the formation of students' practical professional competencies necessary for working with children with disabilities; insufficient awareness of the professorial staff of higher education institutions of the significance, features and content of the activities of psychological and pedagogical personnel in the conditions of an inclusive educational environment (Bondar, 2014).

Summarizing the experience of implementing an inclusive model of education in the pedagogical practice of preschool and general secondary education institutions made it possible to determine the theoretical problems of training personnel for inclusive education in the form of the following contradictions:

- at the socio-pedagogical level: between the social order to introduce an inclusive model of education into modern pedagogical practice and the insufficient number of qualified psychological and pedagogical personnel capable of working with children with disabilities;
- at the scientific and theoretical level: between the need to train specialists for children with disabilities and the lack of an effective system of such training and theoretical justification of its content;
- at the practical-methodical level: between the need to implement inclusive practice and personnel training and the lack of programmatic-methodical materials to ensure the development of professional competencies of relevant specialists.

Therefore, the insufficient development of the problem of training specialists to work with children with special educational needs in the conditions of an inclusive educational

environment led to the choice of the topic of the article.

In order to determine the problem of organizing the training of teachers with children with disabilities, in the article we identified the following issues: the actualization of teacher training for the formation of inclusive competence in his professional training was determined; the state of inclusive competence of 1st-2nd year students for inclusive activities has been clarified; the components of inclusive competence are defined; approaches and principles that contribute to the successful formation of teacher training to work with children with disabilities; the state of formation of the inclusive competence of future teachers (3-4 years) for inclusive activities was clarified; an experiment was conducted to determine the problem of organizing the training of teachers with children with disabilities

### Literature Review

The essence of the concept of "inclusive competence" is interpreted in the works of various scientists. In particular, inclusive competence is considered "the level of knowledge and skills necessary for the performance of professional functions in the conditions of inclusive education" (Maksymyuk, 2005); as "an integral characteristic of a pedagogue (teacher, assistant), which affects the ability to solve professional tasks in the conditions of an inclusive approach to educational activity" (Pyatakov, 2012); as "the necessary amount of knowledge and skills embodied in the ability to perform professional functions, taking into account the special needs of youth with health disabilities, and to integrate them into the environment of a general educational institution, creating conditions for development and self-development" (Solovei & Tchaikovsky, 2013). Bondar (2014) characterized the essence of the concepts "professional competence", "competence", "inclusive competence". The connection between the components of professional competence and inclusive competence is shown. The author focused in detail on the analysis and clarification of the essence of each component of inclusive competence. The need to include professional competencies and key (vital) inclusive competence as a special competence is emphasized. Shevchenko (2023) considers the problem of forming the inclusive competence of future physical education teachers. The concept of "inclusion" has an innovative content, in particular: "a complex and systematic process of

ensuring equal access to quality education (at all levels) for children with special educational needs by constructing a system of their education in institutions of general secondary education on the basis of person-oriented teaching methods, taking into account the individual characteristics of the educational and cognitive activities of such students. But scientists Lazarenko, & Pylypenko (2022) consider the essence of not only the concept of "inclusive competence", but also "volunteer", "volunteer activity", "volunteer assistance", "volunteer movement", "volunteership", and formulate the definition of "inclusive competence of future volunteer teachers" as "a complex system of abilities of future teachers for volunteering in the conditions of an inclusive educational environment, which is manifested in their value attitude to inclusive education and implies the presence of emotional and volitional, empathetic, socio-economic, communicative skills in working with people with disabilities special educational needs".

Zobenko (2022) examines the professional readiness of the future primary school teacher in the conditions of inclusive education, in particular, substantiates and analyzes the theoretical aspects within the framework of a higher education institution. The author raises questions in institutions of higher education about the possibility of updating the conditions for the entire system of training of pedagogical personnel, special education, and restructuring of professional training of teachers.

Great importance is attached to research on the professional training of future teachers of the basics of health, who must develop inclusive competence and readiness for professional activity in the conditions of inclusive education. Boychuk, Borodina, & Mykytiuk (2015) raise this problem in their research. In their works, the scientists show the result of preparing the future teacher of the basics of health for professional activity in the conditions of inclusive education. The structural components of the inclusive competence (cognitive-operational, motivational-valuable, reflective-evaluative) of the future teacher of the basics of health and its functions (analytical-corrective, educational-educational, constructive-communicative) have been reasonably developed.

Voloshyna & Dmytrenko (2016) deals with issues of work in inclusive classes of future foreign language teachers, their professional training, and the organization of inclusive education at school, clarifying the role of the teacher in the process of introducing inclusion.

The scientist researched not only the theoretical basis but also the methodological basis of training a future foreign language teacher, substantiated the need for separate approaches in the professional training of teachers to work in inclusive classes (anthropological, axiological, personally oriented, holistic, differentiated, competence-based, activity-based). Pedagogical conditions for the formation of inclusive competence of the future foreign language teacher have been developed.

In the conditions of an inclusive educational environment, Chupakhina, Potapchuk, & Liakisheva (2022) deal with the issues of training future speech therapists for pedagogical activity. The researchers singled out significant approaches to the training of specialists in the field of speech therapy and special education. In the conditions of the inclusive environment of the educational institution, the main aspects of the training of future speech therapist teachers for pedagogical activities were revealed. In the research, professional competencies are considered by the authors through the prism of inclusive educational processes.

We see that the essence of the concept of "inclusive competence" is revealed in the works of various scientists. Many scientists deal with issues of work in inclusive classes of future teachers, their professional training, and the organization of inclusive education at school, clarifying the role of the teacher in the process of introducing inclusion and identifying the reasons that inhibit the introduction of inclusive education. There is a need to investigate the place of inclusive competence in the professional training of future teachers.

**The aim of the study.** To distinguish the components of inclusive competence, to find out the place of inclusive competence in society and the professional activity of a teacher, to reveal the content of approaches, principles and to develop, implement, and test the effectiveness of pedagogical conditions for the formation of inclusive competence of teachers for high-quality inclusive education of students.

### Methodology

To achieve the goal, research methods were used: theoretical – study and analysis of psychological-pedagogical, philosophical, methodical literature to delineate the conceptual boundaries of teachers' inclusive competence; classification, system analysis, induction, analogy, deduction, generalization of data to determine pedagogical

conditions for the formation of inclusive competence of future teachers; comparison of the obtained data to clarify the connections; empirical – questionnaires, observations, surveys to find out the effectiveness of the implementation of pedagogical conditions; a pedagogical experiment (declarative, formative) to determine the levels of formation of the inclusive competence of future teachers and to check the effectiveness of the developed pedagogical conditions.

The scientific novelty lies in the fact that the pedagogical conditions for the formation of inclusive competence of students have been developed, implemented and experimentally tested for the purpose of high-quality inclusive education of students.

In order to implement the pedagogical conditions for the formation of students' inclusive competence for the purpose of high-quality inclusive education of students, we have built a system for evaluating the levels of formation of students' inclusive competence.

In our opinion, during the educational process, the formation of students' inclusive competence occurs at four levels: low, medium, sufficient and high.

Let's take a closer look at all four levels of formation of students' inclusive competence.

Let's list the signs of a low level of formation of students' inclusive competence: lack of motivation to study theory and take part in activities; fragmentary assimilation of knowledge about the theory of inclusive education; lack of ability to perform the simplest tasks in the inclusive field, performing them only with the help of a teacher; inability to plan, control one's own work related to inclusive activities; does not show responsibility and does not conduct introspection.

The formation of students' inclusive competence at the secondary level can be characterized as: insufficient motivation to study the theory and take part in students' inclusive activities; partial assimilation of knowledge about inclusive human education; the ability to perform elementary tasks related to inclusive activities by example; partial ability to plan, monitor one's own work related to inclusive activities and carry out introspection.

Signs of a sufficient level of formation of inclusive competence of students are: the

presence of motivation to study the theory of inclusive competence of students and acceptance of participation in inclusive activities; systematic assimilation of knowledge about inclusion; the ability to perform tasks related to inclusive activities; the ability to plan, monitor one's own work related to inclusive activities, show responsibility and carry out introspection.

Future specialists with a high level of inclusive competence development show the following indicators: the presence of constant motivation to study the theory of inclusion and active participation in inclusive activities; have a high

level of independence in the systematic assimilation of knowledge about inclusion; the ability to perform tasks related to inclusive activities in conditions of uncertainty, great complexity or limited time; the ability to systematically plan, monitor one's own work related to inclusive activities, show responsibility, carry out self-analysis and constantly look for ways to improve.

We also distributed the limits of evaluations of the levels of formation of inclusive competence of higher education students (Table 1).

**Table 1.**

*Limits of assessments of the levels of formation of inclusive competence of future specialists.*

Limits of integral estimates	The level of formation of inclusive competence of future specialists
4,20 – 5,00	I (high)
3,60 – 4,19	II (sufficient)
3,00 – 3,59	III (average)
1,00 – 2,99	IV (low)

The implementation of the pedagogical experiment was carried out in three stages: preparatory, main and final.

At the preparatory stage, the purpose and tasks of the research were determined, the experimental plan was developed, methods of measurement and processing of results were selected, control and experimental groups were selected, and their homogeneity was checked.

At the main stage, an experiment was conducted.

At the final stage, the results of the experiment were analyzed, their reliability was confirmed, and conclusions were drawn about the pedagogical effect of the experiment.

During the ascertainment experiment, the state of inclusive competence of future students for inclusive activities among students of the 1st and 2nd years was clarified. The diagnosis of the levels of inclusive competence described in the ascertainment experiment was carried out using the method of generalization of independent characteristics.

To form the inclusive competence of higher education students, during the experimental work, we identified the components of inclusive competence, clarified the place of inclusive competence in society and the professional activity of the teacher, revealed the content of axiological, anthropological, holistic,

personality-oriented, activity, differentiated, competence approaches, effective principles were clarified and pedagogical conditions for the formation of inclusive competence were developed and implemented for high-quality inclusive education of students.

The purpose of the formative experiment was to find out the state of formation of inclusive competence of future teachers (3rd and 4th-year students) for inclusive activities. As a result of the conducted research, we claim that the formation of inclusive competence through the implementation of developed pedagogical conditions in the experimental groups is higher than in the control groups.

To improve the quality of education, we surveyed the formation of inclusive competence in the professional training of future teachers with the help of separate pedagogical conditions. a survey among students of higher education showed that 80% of students claim that the implementation of pedagogical conditions is effective and necessary, and meets the requirements of education; 11% believe that it "completely corresponds" and 9% of respondents are inclined to the opinion that it "does not correspond at all".

Students' opinions on ensuring equal access to quality education for children with special educational problems in educational institutions were interesting. They were distributed as

follows: yes – 75%, no – 5%, partially – 20%.

In institutions of higher education, respondents propose to improve inclusive education: the creation of all necessary innovative conditions for education (61%), comprehensive development of this area (24%), and recognition of the rights of children with special educational problems (20%).

To assess the homogeneity of experimental and control data, statistical processing was performed using MS Excel and SPSS (Statistical Package for Social Science).

## Results and Discussion

### Updating the professional training of the future teacher to form inclusive competence in his professional training

In the context of the innovative development of education in institutions of higher education, the actualization of the professional training of the future teacher, the formation of inclusive competence in his professional training, that is, the training of such a specialist who can effectively work with children who have special educational needs in the conditions of a general education environment, comes to the fore (Kuchai et al., 2019). Taking into account the innovative changes in various spheres of the social life of mankind, to successfully introduce inclusive education in educational institutions, it is the higher education of the world format that should optimize the transition of the educational sector to a new innovative paradigm of education, according to which the training of teachers, the formation of inclusive competence in them in the process of professional training will allow to implement tasks of inclusive content based on competence (Bondar, 2014).

The training of the teacher, the formation of his inclusive competence becomes dominant, allows him to go beyond the limits of his educational subject, to realize professional knowledge in the system of culture, to make interdisciplinary connections, and realize the tasks of inclusive content (Bakhmat et al., 2022). The teacher's ability to engage the personal resources of students and organize the educational process as a social interaction is important for solving life-creating tasks. The teacher as an educator and organizer of the educational process, realizing the humanitarian nature of his profession, stimulates the personal achievements of children, does not limit himself to the assessment of students' learning, while sharing responsibility

for the results of cooperation with the child, and not controlling his activities (Voloshyna, & Dmytrenko, 2016).

### Confirmatory experiment. Finding out the state of inclusive competence of future teachers (1st and 2nd-year students) for inclusive activities

To study the place of inclusive competence in the professional training of future teachers, the ways of forming inclusive competence in the professional training of future teachers, and the development of pedagogical conditions for the formation of inclusive competence, we found out the state of inclusive readiness of future students for inclusive activities among students of the 1st and 2nd years. For this purpose, we conducted a survey. The questionnaire included the following questions:

1. What do you mean by the term "Inclusion"?
2. To reveal the meaning of the concept "Children with special educational needs"?
3. Express your opinion: Is it necessary to introduce inclusive education in all general education institutions?
4. Is the implementation of inclusive education justified worldwide?
5. Are you familiar with forms and methods of work in an inclusive class?
6. Are you ready to work in an inclusive class?

The results of the study indicate insufficient informational knowledge of students about inclusive education and not all students of higher education are familiar with the basic provisions of inclusive education, with the forms and methods of work in an inclusive class, are not ready to work in it, and cannot provide arguments in support of the implementation of inclusive education in all the world.

Based on the results of the conducted research, we have developed the levels of formation of inclusive competence of future students for their inclusive activities.

Low level of formation of inclusive competence. Students with a low level of inclusive competence exclude children with special educational needs in a general educational institution but show interest in the problem of integration into society of children with disabilities.

Average level of formation of inclusive competence. Students who have mastered the average level of formation of inclusive

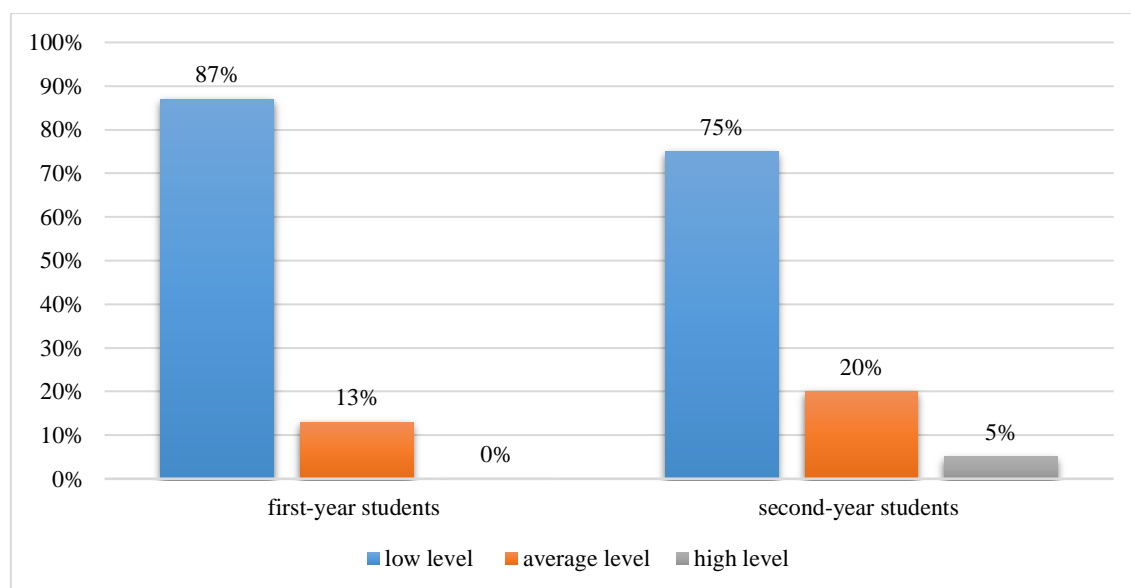


competence recognize the possibility of including children with special educational needs in a general educational institution, show interest in the problem of accessible education for this category of children, but looking at the psychophysical development of children and taking into account the level of deviation of children. Students of this level recognize the importance of obtaining systematized knowledge of inclusive pedagogy at a higher education institution and know the specifics of working in the conditions of inclusive education with different categories of children.

High level of formation of inclusive competence. Students with a high level of formation of inclusive competence are aware of the importance of inclusive education, the importance of including children with special educational needs in society, and the need for

socialization of children in the life of society, they clearly show the position of employment in an inclusive school, even though they have insufficient systematic knowledge of inclusive pedagogy.

According to the results of the experiment, we note that 87% of first-year students have a low level of formed inclusive competence, 13% of students have an average level, and not a single student showed a high level at all. In the second year, students showed the following results: low level in 75% of students, average level in 20% of students, and high level in 5% of students (Graph 1). The results of the ascertainment experiment showed the need for the formation of inclusive competence in future teachers as early as possible and to continue throughout their lives with the aim of high-quality inclusive education of students.



**Graph 1.** The state of inclusive readiness of future students for inclusive activities among students of the 1st and 2nd years

Therefore, we conclude that to form the inclusive competence of future teachers, it is necessary to distinguish the components of inclusive competence, to find out the place of inclusive competence in society and the teacher's professional activity, to reveal the content of axiological, anthropological, holistic, personal, activity, differentiated, competence approaches, with to clarify important principles and develop and implement pedagogical conditions for the formation of inclusive competence for high-quality inclusive education of students.

### Components of inclusive competence

We will highlight the main components of

inclusive competence of future teachers with the aim of quality inclusive education of students.

The motivational component of inclusive competence provides educational activities in the conditions of inclusion of children with special needs in the environment of healthy peers, which promotes their social adaptation; focuses on humanistic value orientations, a system of needs, motives (personal development, social, professional, cognitive, self-affirmation, etc.), values of the teacher's personality aimed at the process of inclusion and is a determinant of professional competence and ensures its successful formation. The student's motivation is formed, its high level implies a positive

orientation towards the totality of human motives and affects the development of all other components of inclusive competence.

The operational component of inclusive competence provides resolution of socio-pedagogical situations; application of successful experience and methods of promoting the process of inclusion of children with special needs in the society of an educational institution; the ability to perform specific professional tasks of socio-pedagogical activity; using techniques of independent work to perform professional tasks; search and research activities.

The cognitive component of the future teacher's inclusive competence activates cognitive work, contributes to holistic ideas about professional activity, and contributes to the enrichment and development of cognitive experience. It is this component that gives teachers the ability to mentally process and perceive the material, store it in memory and, if necessary, reproduce information at the right time to solve both theoretical and practical tasks. The cognitive component of inclusive competence is based on professional scientific knowledge about the foundations of socio-pedagogical influence on the process of children's self-development; basics of personality development; innovations in the education of people with special needs; age, anatomophysiological, individual, and psychological features of healthy children and children with developmental disorders; stimulation of positive self-realization of a person in all possible spheres of activity; patterns of interaction between society and individuals with special needs.

The reflective component of inclusive competence promotes self-knowledge, self-control, the ability to be aware of professional activity, own self-development during which future teachers rethink and evaluate their personal achievements and abilities; self-regulation, analysis of real situations, and control of the results of professional actions. "In the system of inclusive competence, reflection is interpreted as the ability to analyze in the process of professional activity, which is aimed at the inclusion of children and youth with special needs in the society of a general educational institution and involves the analysis of the state of implementation of the ideas of the inclusion process, one's own experience and the experience of colleagues in achieving the inclusion of children and youth with special needs in the society of a comprehensive educational institution in the process of professional activity,

choosing the optimal option for solving various socio-pedagogical situations in the process of inclusion; adequate evaluation of the results of one's socio-pedagogical activity, the ability to recognize one's own mistakes and the ability to overcome them; need for professional and personal growth and increasing the level of inclusive competence" (Solovei & Tchaikovsky, 2013).

The methodological component of inclusive competence contributes to the formation of students' understanding of special pedagogy and its methodological problems.

The psychological component of inclusive competence provides an opportunity for personality development and contributes to the formation of psychological, and moral capabilities and qualities of future teachers.

The scientific and theoretical component of inclusive competence provides professional theoretical knowledge.

Practical contributes to the acquisition by students in the educational space of the ability to professionally use corrective and pedagogical methods and techniques that will be important in the professional life of a teacher.

The special component of inclusive competence provides an opportunity for professional mastery of skills and knowledge of special pedagogy.

The methodological component of inclusive competence provides future teachers with the necessary knowledge of effective and modern technologies and methods of inclusive education.

The personal component of inclusive competence provides a reflective attitude, a motivational orientation of the will, consciousness, and feelings of the future teacher towards the inclusive education of children.

The creative component of inclusive competence gives the teacher personal qualities and creative activity that allows them to create new spiritual and material values, develop the creative potential of children with special psychophysical development, and take into account their capabilities.

The active component of inclusive competence includes a system of professional and pedagogical knowledge about the problem (Zobenko, 2022).

### **The place of inclusive competence in society and the teacher's professional activity**

To train a new generation of specialists, it is necessary to update the system of training of pedagogical personnel. All the work of a teacher of a higher educational institution should be aimed at training a teacher capable of working in an inclusive educational environment, and this needs to be included in the professional competence of a teacher, precisely inclusive competence (Verovkina, et al., 2023). Therefore, we see the logic of supplementing the list of subtypes of professional competence with inclusive competence. In the conditions of an inclusive environment, the system of components of professional competence should contain the necessary knowledge, skills, abilities, and the ability to implement professional functions, and it is also necessary to ensure the appropriate level of readiness of the participant in the educational process to carry out professional activities in the conditions of an inclusive educational environment. Professional competence, as well as its structure, in all members of the team of an educational institution, recognizes the need for the formation of inclusive competence, intensifies the process of creating an inclusive educational environment, is a dynamic educational phenomenon that involves constant updating of technologies and content to implement tasks at all stages of personality development (Bondar, 2014).

### **Approaches that contribute to the successful formation of inclusive competence**

We will single out the most effective approaches for preparing a future teacher to work in the conditions of inclusive education. The methodological and theoretical basis of innovative pedagogical work is competence, axiological, holistic, personal, anthropological, activity, and differentiated approaches.

The competence approach that contributes to the successful formation of the teacher's inclusive competence is represented by a system of socio-personal, professional, and academic competencies, which determine the readiness and ability to successfully implement the achievement of educational results and professional-pedagogical activities, taking into account the needs of all subjects of the inclusive educational space (Stepanova et al., 2020).

The methodological basis of the educational and social position is the axiological approach. It allows you to determine the value position of the

future teacher, defines a system of pedagogical views based on the affirmation and understanding of the value of human life, makes it possible to influence the student's value position, and helps to prevent negative attitudes towards children with special needs.

A holistic approach is related to a personal approach and contributes to the establishment of integrative system-forming relations and connections in the educational system, the formation and study of permanent, variable, main, and secondary in the education system. It involves finding out, as a systemic whole, the contribution of individual component processes to the development of the individual.

The personal approach takes into account the individual and age characteristics of children in the conditions of inclusive education, contributes to the disclosure of the possibilities and abilities of the individual, the creation of conditions for the personal development of the child, the education of his willpower, etc.

The anthropological approach systematically presents the data of human sciences as a subject of inclusive education and takes them into account in the implementation and organization of activities in the conditions of inclusion. Physiology, anatomy, human pathology, logic, philosophy, psychology, etc. can be attributed to the sciences that help the teacher in inclusive activities (Kolbina et al., 2023).

An active approach allows you to study the content of readiness in the conditions of inclusive education of the future teacher to work with students; to optimize methods of its development and formation of inclusive competence; to determine the ways of practical improvement of the teacher and is a theoretical and methodological strategy of the educational space (Hordiichuk et al., 2022).

One of the ways to solve educational tasks, taking into account the socio-psychological characteristics of children with special educational needs, is a differentiated approach to education and training. It is this approach that optimizes the educational activities of the teacher and determines the forms and content of the educational process not for every child (which is impossible in the conditions of large classes), but for students of a certain category (Voloshyna & Dmytrenko, 2016).

### **Principles that are important in the formation of inclusive competence**

It is important in the teacher's work to observe the following principles: an individual approach, active inclusion of all participants in the educational process, support for the independent activity of the child, the principle of an interdisciplinary approach, the principle of partnership with the family, the principle of variability in the organization of learning and upbringing processes in the formation of inclusive competence (Myronova, 2016).

### **Formative experiment. Finding out the state of formation of inclusive competence of future teachers (3rd and 4th year students) for inclusive activities**

To form the inclusive competence of higher education students, we identified the components of inclusive competence, clarified the place of inclusive competence in society and the professional activity of the teacher, revealed the content of axiological, anthropological, holistic, personal, activity, differentiated, competence approaches, clarified effective principles and pedagogical conditions for the formation of inclusive competence were developed and implemented for high-quality inclusive education of students (Knysh et al., 2022).

In the process of experimental training of future teachers (students of the 3rd and 4th years), the following was introduced:

- a complex of educational training "Inclusive Education" for work in the conditions of inclusive education, which includes the following main components: study of the "Inclusive Education" course; pedagogical practice in institutions of various types; use of socio-psychological training and innovative learning technologies during practical classes;
- during the study of mandatory disciplines by future teachers, it is taken into account that the formation of inclusive competence involves adaptation to the needs of a child with special educational needs in the educational space. Therefore, differentiating the educational process of a higher school is a mandatory task. Therefore, students were taught to select appropriate educational and didactic support for each student of the inclusive class, to develop an individual curriculum for each child, and to use the latest and most effective learning technologies. A methodical approach to the

training of future teachers along with the mastery of pedagogical technologies was carried out in combination with the formation of inclusive competence in future teachers, knowledge of creative techniques used to overcome children's speech disorders, production of visual aids for working with such techniques; practical skills; mastering corrective and developmental technologies. During practical classes, future teachers organized work in a complex manner in the following areas: work with facial expressions; training the child to breathe properly; improvement of phonemic hearing; development of general motor skills and fine motor skills; performance of articulation exercises; formation of coherent speech, etc.;

- formation of inclusive competence in working with children with speech disorders was facilitated by the study of selective disciplines. Each student took into account the peculiarities and needs of each student of the inclusive class, ensured the further development of the child, prevented the increase in health disorders of students with special educational needs, and made the educational process successful and effective. The study of subjects of free choice was aimed at the formation of inclusive competence of students of higher education. Systematic significant and systematic work is carried out in this direction. The goal was to study the disciplines, to form students' ability to develop the processes and functions of cognitive activity in students with speech disorders; sensorimotor working memory, and speech functions; students' ability to perform logical operations (establishing cause-and-effect relationships, synthesis, analysis); visual and figurative and verbal and logical speech and thinking. Therefore, in the classes, students of higher education mastered the diagnosis of children's speech disorders, got acquainted with sand animation, and breathing exercises, analyzed lessons in an exclusive environment, developed mental maps in an inclusive class based on video plots, etc. During practice in an inclusive educational environment, future teachers worked with children with speech disorders, as teacher assistants. Students voluntarily worked as volunteers in inclusive classes, as child assistants (tutors), and communicated with families of children with special needs.

Among higher education seekers, great importance was attached to means of organizing

educational work (online meetings with specialists in special education and inclusive education, webinars, curatorial hours, participation in volunteer projects, etc.).

The verification of the developed and implemented pedagogical conditions for the formation of inclusive competence for high-quality inclusive education of students was carried out experimentally. 98 students of the 3rd and 4th years at the first (bachelor's) level were involved in the experiment. In the experimental groups, where pedagogical conditions were implemented, we relied on the components of inclusive competence that we singled out, the content of axiological, anthropological, holistic, and personal, activity, differentiated, competence approaches, and effective principles to form the inclusive competence of teachers. The students of the control group worked according to the usual program, and for the respondents of the experimental group, we developed an experimental program that included the above activities.

The diagnosis of the levels of inclusive competence described in the ascertainment experiment was carried out using the method of generalization of independent characteristics. We observe the following results. The number of CG students who were found to have a high level increased by 2%, in EG the number of such students increased by 18%; the number of students with an average level in CG increased by 4%, and in EG the number of students with this level increased by 28%; the number of students who were found to have a low level of formation of inclusive competence regarding activities in the conditions of an inclusive educational environment decreased by 6% in CG, and the number of respondents decreased by 29% in EG.

As a result of the conducted research, we claim that the formation of inclusive competence in the experimental groups is higher than in the control groups. The formation of inclusive competence should be carried out by the components of inclusive competence that we have identified, the content of axiological, anthropological, holistic, personal, activity, differentiated, competence-based approaches, effective principles that provide the ability to communicate with different categories of children, the ability to build an educational process taking into account the differences of children; the ability to design situations that contribute to the child's emotional and value sphere; maintain a friendly, business atmosphere in the children's team.

To improve the quality of education, we surveyed the formation of inclusive competence in the professional training of future teachers with the help of separate pedagogical conditions. a survey among students of higher education showed that 80% of students claim that the implementation of pedagogical conditions is effective and necessary, and meets the requirements of education; 11% believe that it "completely corresponds" and 9% of respondents are inclined to the opinion that it "does not correspond at all".

Students' opinions on ensuring equal access to quality education for children with special educational problems in educational institutions were interesting. They were distributed as follows: yes – 75%, no – 5%, partially – 20%.

In institutions of higher education, respondents propose to improve inclusive education: the creation of all necessary innovative conditions for education (61%), comprehensive development of this area (24%), and recognition of the rights of children with special educational problems (20%).

We fully share the opinion of H. Vasylieva, who states that "it is the organization of the process of learning about professional activity by future teachers of the inclusive form of education at the pedagogical university that depends on the effectiveness of the formation of the methodical competence of the teacher", which is: a significant factor of influence on the process of educating young people, a component of professional competence; "an integrative professional and personal characteristic that ensures the ability to perform methodical functions in the system of inclusive education by the teacher's professional standard" (Vasylieva, 2021).

So, for the formation of inclusive competence of future teachers, we identified the components of inclusive competence, clarified the place of inclusive competence in society and in the teacher's professional activity, revealed the content of axiological, anthropological, holistic, personal, activity, differentiated, competence approaches, clarified important principles and pedagogical conditions for the formation of inclusive competence of future teachers who, with high-quality professional training, will be able to conduct high-quality inclusive education of students, have been developed and implemented. As a result of the conducted research, we observe a higher formation of inclusive competence in the experimental groups



than in the control groups.

As a result of the conducted experimental research, we deliberately conducted an experiment with future teachers, on whom depends not only the education of children with disabilities, but also their entire life path.

## Conclusions

To study the place of inclusive competence in the professional training of future teachers, the ways of forming inclusive competence in the professional training of future teachers, and the development of pedagogical conditions for the formation of inclusive competence, we found out the state of inclusive readiness of future students for inclusive activities among students. The results of the ascertainment experiment showed the need for the formation of inclusive competence in future teachers as early as possible and to continue throughout their lives with the aim of high-quality inclusive education of students.

For the formation of inclusive competence of future teachers, we identified the components of inclusive competence, clarified the place of inclusive competence in society and the teacher's professional activity, revealed the content of axiological, anthropological, holistic, personal, activity, differentiated, competence approaches, clarified important principles and developed and implemented pedagogical conditions for the formation of inclusive competence with the aim of quality inclusive education of students.

As a result of the conducted research, we observe a higher formation of inclusive competence in the experimental groups than in the control groups.

As a result of the experiment, we found out the state of formation of inclusive competence of future teachers (students of 3-4 years) to work with children with disabilities. As a result of the conducted research, we determined the improvement of the formation of inclusive competence through the implementation of developed pedagogical conditions in experimental groups for quality education of children with disabilities.

Further research will be aimed at clarifying the principles that are important for the formation of inclusive competence for high-quality inclusive education of students.

## Bibliographic references

- Bakhmat, N., Vyshnyk, O., Moskaljova, A., Fediy, O., & Lisovska, K. (2022). Organization of an inclusive educational environment for the development of children with special educational needs. *Revista Eduweb*, 16(3), 9-22. <https://doi.org/10.46502/issn.1856-7576/2022.16.03.1>
- Boychuk, Yu. D., Borodina, O. S., & Mykytiuk, O. M. (2015). *Inclusive competence of the future teacher of the basics of health: monograph*. Kharkiv, Ukraine: KhNPU. (In Ukrainian)
- Bondar, T. I. (2014). Formation of inclusive competence in the conditions of innovative education paradigm. *Pedagogical sciences: theory, history, innovative technologies: scientific journal*, 7(41), 153-162. (In Ukrainian)
- Chupakhina, S. V., Potapchuk, T. V., & Lyakisheva, A. V. (2022). Preparation of future teachers-speech therapists for pedagogical activities in the conditions of an inclusive educational environment. *Academic studies. Series "Pedagogy"*, 1, 159-167. <https://doi.org/10.52726/as.pedagogy/2022.1.23>. (In Ukrainian)
- Hordiichuk, O., Nikolenko, L., Shavel, K., Zakharina, M., & Khomyk, T. (2022). Analysis of models of inclusive education in European countries (experience for Ukraine). *Revista Eduweb*, 16(4), 32-41. <https://doi.org/10.46502/issn.1856-7576/2022.16.04.3>
- Klochko, O., Pohoda, O., Rybalko, P., Kravchenko, A., Tytovych, A., & Kondratenko, V. (2022). Features of the implementation of inclusive education: The role of the teacher. *Revista Eduweb*, 16(4), 131-140. <https://doi.org/10.46502/issn.1856-7576/2022.16.04.11>
- Kolbina, L., Kasianenko, O., Sopivnyk, I., Karskanova, S., & Chepka, O. (2023). The role of inclusive education in the personal growth of a child with special educational needs. *Amazonia Investiga*, 12(64), 156-164. <https://doi.org/10.34069/AI/2023.64.04.15>
- Knysh, I., Drachuk, O., Kasianenko, O., Chepka, O., Tverezovska, N., Matveieva, N., & Kuchai, O. (2022). Practices of Inclusive Education in the Modern Innovation Space. *International Journal of Computer Science and Network Security*, 22(11), 445-452. <https://doi.org/10.22937/IJCSNS.2022.22.11.64>
- Kuchai, O.V., Shinkaruk, V.D., Bida, O.A., & Kuchai, T.P. (2019). Current state of

- inclusive education in the countries of the European Union. *Educational space of Ukraine*, 1(17), 19-23. <https://journals.pnu.edu.ua/index.php/esu/article/view/2581>. (In Ukrainian)
- Lazarenko, N., & Pylypenko, Ya. (2022). The structure of inclusive competence of future volunteer teachers. *Modern information technologies and innovative teaching methods in training specialists: methodology, theory, experience, problems*, 64, 108-116. (In Ukrainian)
- Maksymyuk, S. P. (2005). *Pedagogy: scientific manual*. Kyiv, Ukraine: Condor. (In Ukrainian) ISBN 966-8251-36-9
- Myronova, S. P. (2016). Realities and prospects of providing inclusive education by specialists. *Scientific journal of the National Pedagogical University named after M. P. Drahomanov: Correctional pedagogy and special psychology*, 32(2), 5-10. (In Ukrainian)
- Pyatakov, T. S. (2012). Development of inclusive teacher competence: Swiss experience. *Comparative pedagogical studies*, 1(11), 93-98. (In Ukrainian)
- Shevchenko, M. (2023). Formation of inclusive competence of future teachers of physical education as a psychological and pedagogical problem. *Scientific bulletin of South Ukrainian National Pedagogical University named after K. D. Ushynsky*, 3(144), 78-84. (In Ukrainian) <https://doi.org/10.24195/2617-6688-2023-3-12>
- Solovei, T. V., & Tchaikovsky, M. Ye. (2013). Substantive components of the professional competence of a social worker of an inclusive educational institution. *Collection of scientific works of the Khmelnytskyi Institute of Social Technologies of the University "Ukraine"*, 1(7), 220-224. (In Ukrainian)
- Stepanova, T., Shapochka, K., Vdovychenko, R., Babaian, Y., & Ivanets, N. (2020). Formation of inclusive values as development of democratic values. *Amazonia Investiga*, 9(29), 107-115. <https://doi.org/10.34069/AI/2020.29.05.13>
- Vasylieva, H. (2021). Organizational and pedagogical conditions for the formation of methodological competence of teachers of inclusive education. *Pedagogical sciences: theory, history, innovative technologies*, 2(106), 193-210. (In Ukrainian)
- Verovkina, Z., Martsinovska, I., Vasylieva, H., Savinova, N., & Chopyk, L. (2023). Organization of inclusive education for schoolchildren with special needs in modern school practice. *Revista Eduweb*, 17(2), 54-65. <https://doi.org/10.46502/issn.1856-7576/2023.17.02.5>
- Voloshyna, O., & Dmytrenko, N. (2016). Preparation of future foreign language teachers to work in inclusive classes. *Scientific notes of Ternopil National Pedagogical University named after Volodymyr Hnatyuk. Ser. Pedagogy*, 4, 142-149. (In Ukrainian)
- Zobenko, N. (2022). To the issue of professional readiness of future primary school teachers to work in the conditions of inclusive education. *Scientific Bulletin of the Uzhhorod National University. Series: Pedagogy, Social work*, 1(50), 98-102. (In Ukrainian)

DOI: <https://doi.org/10.34069/AI/2023.71.11.14>

How to Cite:

Leleka, V., Khrolenko, M., Kushnir, A., Protsenko, I., & Petriv, A. (2023). Theoretical and methodological approaches to the educational potential of students in higher education institutions. *Amazonia Investiga*, 12(71), 162-174. <https://doi.org/10.34069/AI/2023.71.11.14>


## Theoretical and methodological approaches to the educational potential of students in higher education institutions

Теоретико-методологічні підходи виховного потенціалу студентів у закладах вищої освіти

Received: September 5, 2023

Accepted: October 26, 2023

Written by:

**Vitalii Leleka<sup>1</sup>** <https://orcid.org/0000-0001-5680-7784>**Maryna Khrolenko<sup>2</sup>** <https://orcid.org/0000-0002-2118-1977>**Antonina Kushnir<sup>3</sup>** <https://orcid.org/0000-0001-9041-7691>**Iryna Protsenko<sup>4</sup>** <https://orcid.org/0000-0003-1792-7200>**Andrii Petriv<sup>5</sup>** <https://orcid.org/0000-0001-7022-0656>


### Abstract


The article examines the effective aspects of the identified necessary theoretical and methodological approaches that are most important for the theory of development and the process of personality education in institutions of higher education – ontological, anthropological, valuable, axiological, regional, acmeological, cultural, competence, humanistic, synergistic, environmental, praxeological, systemic, personal approaches. In the context of the formation of theoretical and methodological humanitarian approaches to upbringing and education, there is a revival of the value attitude to upbringing, actualization of the human-creating function. An exploratory and experimental study was conducted, the purpose of which was to identify and verify the effectiveness of theoretical and methodological approaches in the institution of higher education to the process of education, which contribute to dynamic changes in the field of education on a global scale, occurring in the life of mankind and in all spheres of professional activity of modern specialists and

### Анотація


У статті розглянуто дієві аспекти виокремлених необхідних теоретико-методологічних підходів, що є найбільш важливими для теорії розвитку й процесу виховання особистості у закладах вищої освіти – онтологічний, антропологічний, ціннісний, аксіологічний, регіональний, акмеологічний, культурологічний, компетентнісний, гуманістичний, синергетичний, середовищний, праксеологічний, системний, особистісний підходи. У контексті становлення теоретико-методологічних гуманітарних підходів до виховання і освіти відбувається відродження ціннісного ставлення до виховання, актуалізація людинотворчої функції. Проведено дослідно-експериментальне дослідження, мета якого полягала у виокремленні та перевірці дієвості теоретико-методологічних підходів у закладі вищої освіти до процесу виховання, які сприяють динамічним змінам у виховній галузі світового

<sup>1</sup> Doctor of Philosophy in the field of Education, Associate Professor of the Department of Physical Culture and Sports, V. O. Sukhomlynskyi National University of Mykolaiv, Ukraine.  WoS Researcher ID: IWU-4464-2023


<sup>2</sup> Doctor of Pedagogical Sciences, Associate Professor of the Department of Biology, Human Health and Science Methods, Oleksandr Dovzhenko Hlukhiv National Pedagogical University, Ukraine.  WoS Researcher ID: AAS-9646-2021

<sup>3</sup> Candidate of Pedagogical Sciences, Senior Lecturer of the Department of Pedagogy, Professional Education and Management of Educational Institutions, Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Ukraine.  WoS Researcher ID: HZM-0919-2023

<sup>4</sup> Candidate of Pedagogical Sciences, Associate Professor, Sumy State Pedagogical University named after A. S. Makarenko, Ukraine.

 WoS Researcher ID: IRZ-1584-2023

<sup>5</sup> Postgraduate Student, Department of Pedagogy, National University of Life and Environmental Sciences of Ukraine, Ukraine.

 WoS Researcher ID: JKI-7378-2023



require changes in the educational paradigm for innovative professional training of specialists. The experiment showed that the developed educational and pedagogical foundations of the interaction of teachers and students, ways of forming professional educational influences based on the effective theoretical and methodological approaches to the education process that we identified, increase the quality of professional training of future specialists.

**Keywords:** educational process, theoretical and methodological approaches, institutions of higher education, students, educational paradigm.

## Introduction

New challenges of civilization caused by the development of the scientific field and information technologies in education; radical changes taking place in the modern information society; the magnitude of the tasks facing the educational sector require a new way of thinking, a new quality of innovative activity (Kolomiets & Lazarenko, 2016).

Dynamic changes occurring in all areas of professional activity of modern specialists require the determination of methodological approaches and changes in the educational paradigm in institutions of higher education for innovative professional training of specialists and education of leadership qualities in specialists (Cherkashyn, 2019).

One of the oldest and most important tasks for the development of an "intelligent" society is personality education. When training specialists in the field of education at the current stage of education development, various theoretical and methodological approaches should be used as a priority. For the future specialist, the integration of theoretical and methodological approaches contributes to the optimization of the mechanisms of his professional formation and the development of the pedagogical sphere in general, the process of nurturing a valuable attitude to life and society of future specialists, in particular (Molchaniuk, 2018).

## Literature Review

H. Tarasenko & T. Halych (2022) substantiated the new educational priorities of education from a methodological perspective; analyzed the peculiarities of reforming the educational sector, showed the importance of education based on a

масштабу, що відбуваються в житті людства та у всіх сферах професійної діяльності сучасних спеціалістів і вимагають змін виховної парадигми для інноваційної фахової підготовки фахівців. Експеримент показав, що розроблені виховні педагогічні основи взаємодії викладачів та студентів, шляхи формування професійних виховних впливів на основі виокремлених нами дієвих теоретико-методологічних підходів до процесу виховання підвищують якість професійної підготовки майбутніх фахівців.

**Ключові слова:** процес виховання, теоретико-методологічні підходи, заклади вищої освіти, студенти, виховна парадигма.

cultural approach. The methodology of the research of the education process is based on the use of activity, competence, cultural, axiological approaches in the study of educational phenomena. It shows the ways in the modern educational process of the cultural paradigm, which is based on a number of such dominant axiology, which are consonant with human universal values. Ensuring the technological and axiological culture of the educational process in the individual during the acquisition of education will allow raising education and society to the appropriate level of competence, which will meet the standards of world education.

N. Todosiienko & T. Marynychuk (2020) devoted their research to the current problems of educating younger schoolchildren, substantiated the possible ways of aesthetic perception in primary school children and revealed their methodological approaches, showed the peculiarities of their implementation in the educational process of the modern school. In order to use the creative potential of the students of education, the testing and selection of a set of innovative methods for activating the perception of society in primary school children was carried out as much as possible. In the context of the formation of a highly spiritual, creative personality, a complex of cultural arts is applied with the aim of aesthetic perception by the individual of the educational space and mastering the system of holistic knowledge about art in classes.

H. Lialiuk (2020) studied the problem of raising orphaned children during their stay in state care institutions. In the conditions of transformational changes, the need to strengthen the relevance of personal support for the growth of orphans is

shown. In the context of the personal paradigm, the theoretical and methodological principles of the educational process of orphans are substantiated. Methodological approaches (personal-active, personal, subjective, humanistic, synergistic) necessary for organizing the education of orphans were analyzed. In the context of the personal paradigm, the strategy of humanistic education of the acquirer of the educational space determines the load of humanistic technological means of its implementation, while characteristic important features are pedagogical support and assistance; dialogicity, empathic attitude towards the child as an individual, etc.

A. Kolomiets, & N. Lazarenko (2016) concluded about the importance and necessity of a new pedagogical methodology of professional education based on the analysis of changes in the innovative society. The methodological basis of the organization of activities of higher education institutions is disclosed; the process of symbiosis of various methodological approaches is shown in the organization of the educational process. The main methodological approaches that require the implementation of a holistic educational process in institutions of higher education (synergistic, systemic, activity, personal, axiological, competence, cultural) are defined. Scientists have proven by examples that a graduate of a modern innovative higher school, on the basis of acquired knowledge and values, should be ready to construct their own behavioral programs, possess information flows, be ready for personal life and self-realization in society, be able to analyze life-practical situations.

A. Cherkashyn (2019) shows the main methodological approaches in institutions of higher education regarding the formation of the personality of future specialists-leaders. In all spheres of professional activity, the dynamism of changes of modern specialists has been proven, which require changes in the educational paradigm and the definition of innovative, methodological approaches with the aim of educating leading specialists and quality professional training in higher education institutions. The ways that ensure the functioning and organization of social production of a competitive specialist and the formation of the phenomenon of leadership, which is one of the main system-forming factors in society, are shown. It has been proven that in order to promote the formation of a high level of professionalism in higher education institutions, it is necessary to take into account approaches (personal, cultural, axiological, activity,

synergistic, systemic, competence).

O. Molchaniuk (2018) revealed and proved the significance of the methodology; substantiated methodological approaches for the educational and educational field: axiological (value), ecopsychological, competence, cultural, noospheric, etc.; revealed the content of the conceptual development of the foundations of upbringing and education. The paradigm of personal education is presented by the researcher as one that affirms and declares the child as the highest value in life, implies the recognition of his originality, individuality, self-worth. The student is presented as an individual who can independently choose such a path and direction of education and upbringing, which will help the individual achieve the best significant results.

L. Butenko (2015) presented, as a component of methodological support, the essence of the regional approach to the study of the problem of the educational process in the socio-cultural modern conditions of the educational space. The importance for the educational space of the interdisciplinary context of the definition of the basic theoretical foundations for the regional approach has been revealed and proven. The author's developed complex of concepts representing the scientific innovative core of the regional approach for the educational space is presented. The relationship between the concepts of "regionalization" and "globalization" is highlighted in the scientific and pedagogical discourse. The main principles and conditions of use in scientific and pedagogical research of the regional approach in general and in the study of the problems of the educational process in particular are characterized.

N. Dira (2020) revealed the essence of the methodology; considered the main methodical approaches of secondary school students to the education of a valuable attitude to nature; substantiated the content of education of ecological culture in secondary school students, showed ways of forming a valuable attitude to living nature as a separate component that should be used, focusing on modern methodological approaches, in particular cultural, competence, noospheric, ecopsychological, valuable (axiological), etc.; noted that the level of ecological culture lies in the improvement of human qualities. She proved that the educational sector is the main influential instrument on human consciousness.

So, our analysis of the sources testifies to various aspects of the ways to the formation of the



educational phenomenon. The main substantive dominants of the education of future specialists in the educational process of the higher school are shown; the significance of the methodology is proven; a conclusion is made about the importance and necessity of a new methodology of professional education based on the analysis of changes in the innovative society. But the theoretical and methodological approaches to the educational process in the higher education institution have not been considered enough.

**The aim of the study.** To consider and single out theoretical and methodological approaches in institutions of higher education to the process of education, which require dynamic changes in the world that occur in all spheres of professional activity of modern specialists and require changes in the educational paradigm for innovative professional training of specialists.

### Methodology

At various stages of scientific work, we used a set of methods of scientific and pedagogical research: *general scientific*: analysis of monographic studies of experts on the theoretical component of education, sociological, philosophical, psychological, pedagogical literature on the problems of globalization, reforming education to determine the main approaches to the process of education in institutions of higher education; synthesis and analysis of educational materials to achieve a holistic understanding of theoretical and methodological approaches to the process of education as a pedagogical phenomenon; specification and generalization of theoretical provisions – to determine the research methodology of the education process in institutions of higher education; deduction and induction – to establish the ratio of specific and general in the process of education, substantiation of trends in personality development in institutions of higher education; *concrete-scientific*: terminological analysis – with the aim of studying educational sources that report on the activities of higher education institutions in the process of improving the education process, with the aim of comparing the content of educational concepts and terms; comparative-typological method – with the purpose of explaining the identity of processes and phenomena of theoretical-methodological approaches to education in institutions of higher education; comparative-comparative method – to identify the nature of heterogeneous objects in the process of education in higher education institutions; *exploratory and experimental* – with

the aim of checking the effective aspects of the necessary theoretical and methodological approaches identified by us, which are the most important for the theory of development and the process of personality education in institutions of higher education.

Pedagogical research covered three stages of scientific research:

- 1) analytical-methodological – the evolution of theoretical-methodological approaches to the education process was studied in institutions of higher education; the source base of the research was formed; sociological, philosophical, pedagogical scientific literature was analyzed; methodological principles were theoretically substantiated; research problem;
- 2) evaluative and summarizing – researched sources; a comparative-typological, comparative-historical, comparative-comparative analysis of the main concepts and ideas was carried out; specific and general characteristics of the educational process in institutions of higher education, problems of the functioning of the educational process, trends in the development of theoretical and methodological approaches to the educational process in institutions of higher education were determined;
- 3) result-prognostic – the results of the study of pedagogical theory and practice were summarized; perspectives of theoretical and methodological approaches to the process of education in higher education institutions were revealed.

We considered the effective aspects of the identified necessary theoretical and methodological approaches, which are most important for the theory of development and the process of personality education in institutions of higher education.

Our scientific and experimental work was aimed at checking the effectiveness of theoretical and methodological approaches to the organization of the educational process in a higher educational institution. The experiment took place in several stages. Students of 3-4 years participated in it.

The experiment was conducted at several universities: V. O. Sukhomlynskyi National University of Mykolaiv; Oleksandr Dovzhenko Hlukhiv National Pedagogical University; National University of Life and Environmental Sciences of Ukraine. Permission to conduct the

experiment was approved by the academic councils of these universities and considered by the ethics committee of these educational institutions.

To assess the homogeneity of experimental and control data, statistical processing was performed using MS Excel and SPSS (Statistical Package for Social Science).

The purpose of the experimental study was to check the effectiveness of theoretical and methodological approaches of a higher educational institution to the learning process, which contribute to dynamic changes in the field of education on a global scale that occur in life. humanity and in all spheres of professional activity of modern specialists and require changes in the educational paradigms of innovative professional training of specialists.

The research was planned and conducted in accordance with the main approaches to the organization of a pedagogical experiment and covered three stages of scientific research: analytical and methodical; evaluative and generalizing; result-prognostic, which are disclosed above. It should be noted that this division was quite conditional. Specific tasks were developed for each stage, which determined its content.

As part of our research, we have planned: ascertaining (preparatory) and formative (educational) stages of the experiment.

To evaluate the effectiveness of our proposed methodology, a comparative experiment was conducted, which involves the formation of experimental and control groups. Groups of 22-24 students each (about 50 people in total) participated in the experiment.

Having analyzed the variety of approaches to determining the criteria for the effectiveness of educational methods, it was found that:

- the level of assimilation of the process of theoretical and methodological approaches in the higher educational institution to the learning process or the quality of their assimilation;
- level of formation of educational skills.

A comparison of the results in the experimental and control groups makes it possible to assert that the effective theoretical and methodological approaches to the learning process proposed in the study and identified by us, their use in higher education institutions contribute to improving

the quality of educational and professional training of students.

As a result of research and experimental work, the effective aspects of the necessary theoretical and methodological approaches, which are the most important for the theory of development and the process of personality education in higher education institutions, have been determined - ontological, anthropological, value, axiological, regional, acmeological, cultural, competence, humanistic - proven synergistic, environmental, praxeological, systemic, personal approaches. So, in the context of the formation of theoretical and methodological humanitarian approaches to upbringing and education, there is a revival of the value attitude to upbringing, actualization of the human-creating function.

## Results and Discussion

Taking into account the most important trends in the development of educational work in the institution of higher education, we are guided by the main effective and weighty approaches in the development, education, training of the individual (Polishchuk et al., 2022).

Let's consider the effective aspects of the identified necessary theoretical and methodological approaches, which are most important for the theory of development and the process of personality education in institutions of higher education (Bekh, 2018).

The ontological approach from the point of view of the logic of being a pupil and an educator examines the problems of education in the temporal space and is closely related to anthropological and existential research methods (Ponomaryova, 2014).

The anthropological approach substantiates the ontology (methodology) of understanding, which makes it possible to consider approaches for the purpose of studying the processes of upbringing and the educational influence on the personality on the basis of interpretationism. This implies the inclusion of the entire integrity of the subject's mental and spiritual life in the process of understanding the spiritual personal reality (Zhuravel et al., 2022).

The anthropological approach aims at a specific humanistic, philosophical orientation as a methodological and worldview preparation for the research activity of a specialist, the practical activity of an educator, and as a general orientation of the individual. This is the

peculiarity of the anthropological approach. Therefore, the subject, the value of education and its purpose from the point of view of an anthropological approach is Personality and its existence in the world space (Chymak et al., 2021).

An important theoretical-methodological approach to the process of education in a higher education institution is the value approach, which directs researchers to obtain values as the meaning-making basis of the education of higher education seekers, which are understood as examples of a dignified, cultural life of society and man; which makes it possible to understand the examples of a person's personal culture approved by society and passed down from generation to generation, the values of education, its cultural content, reflected in the examples of educational relations, the spiritual manifestation of a person, in educational theories, technologies, systems (Ponomaryova, 2014).

In the educational activity of a modern institution of higher education, the axiological approach allows recognizing the vital and personally significant needs of the individual as the self-development of the subjects of the educational process, as the highest value of human development, as the value of education and upbringing; in the process of education in a higher education institution, the axiological approach warns against the danger of intuitive ideas about human values, orients to the identification of various connections of human self-realization. The axiological approach defines a person as the end in itself of social development and education, the highest goal of society; orients interaction on national, universal, professional values as an extended reproduction of socio-cultural experience (Kolomiets & Lazarenko, 2016).

In a modern institution of higher education, the axiological approach fulfills the role of a connecting link between a practical and cognitive attitude to the world and educational influences (theory and practice), since the content of educational, effective, evaluation and goal aspects of the life of a student of higher education is determined by the orientation of the activity of the student of education to actualization, recognition, understanding and creation of material and spiritual educational values (Molchaniuk, 2018).

In studies of educational problems, the regional approach is associated with the study of the content, methods, forms of patriotic, aesthetic,

moral, and other directions of educational influence on education seekers at the regional level; improvement of education management, development of regional education systems, use of regional ethno-cultural traditions, formation of ethno-pedagogical culture of future specialists, etc (Bialyk, 2017).

The regional theoretical-methodological approach in the system of higher education involves taking into account ethno-cultural, sociological, political, psychological scientific research, taking into account the specifics of the region; involves a transition to the disclosure of the functional potential of various elements of the socio-cultural space from the declarative and descriptive aspects of the study of education problems; in the solution of regional problems of education and the process of upbringing, involves the implementation of social partnership. The regional approach acquires special importance in the space of practice and theory of patriotic education of higher education students (Butenko, 2015).

The next theoretical and methodological approach to the process of education in a higher education institution is the acmeological approach, which consists in reproducing the integrity of the subject, in a comprehensive study.

The essence of the acmeological approach consists in carrying out research that is comprehensive for the formation of the integrity of the subject who is passing the degree of maturity, in the study of his subject-activity and personal characteristics, which are studied in all relationships, in unity, with the aim of contributing to the achievement high levels of personal development, which can be reached by every student in a higher education institution (Ponomaryova, 2014).

The theoretical-methodological cultural approach to the process of education in a higher education institution considers education as a culture-creating process that contributes to the value-meaning development of an individual and takes place in a certain cultural and informational environment.

In the educational field of higher education, the cultural approach is the basis of humanistic pedagogy. It contributes to the formation of personality in the modern historical and cultural conditions of life, which includes education and upbringing (Gumennykova et al., 2022).

From the point of view of the cultural approach, the main subject of research is the personality in the system of value relations to others, to the world, to oneself, which is oriented to humanistic ideals; it has inherent values that are provided by an axiological approach (creativity, morality, intellectual personal potential) and with the help of which a person in a higher education institution is capable of self-correction of his activity, his self-regulation and self-analysis. There is an interaction with this approach to educational activity: between a practical and theoretical attitude to the world and a direction not only towards the understanding and recognition of spiritual values, but also the motivation to create them (Dira, 2020).

The value of the cultural approach in the educational process of a higher education institution is studied as a part of culture, while the following basic functions are performed: integration of people, organization of life activities of the disabled, establishment of communications in the community, enabling of intergenerational ties, development, preservation and changes of the value system, creation of conditions for the self-development of a person and his creative self-realization, designing samples of a person's cultural life, etc. In institutions of higher education, the cultural approach is a system of appropriate methods and forms aimed at the formation of cultural values and the appropriate behavior of each specialist (Cherkashyn, 2019).

The theoretical-methodological competence approach to the education process means the reorientation of the leading educational paradigm in the institution of higher education with the formation of skills and the gradual predominant translation of knowledge, the creation of conditions with the aim of mastering a complex of competencies, which include the ability of the student of higher education to survive and apply sustainable life activities, the renewal of educational potential in the conditions of the modern market-economic, socio-political saturated space (Molchaniuk, 2018).

The humanistic theoretical-methodological approach to the process of education in a higher education institution is an educational scientific-practical modern strategy, where the center is a concrete personality, an individual, his creative self-expression and opportunities (Vekova, 2023). The educational process under such a strategy becomes a tool for solving life's problems, a space for a full-fledged life and personal growth. Relying on a person's ability to

develop, on the positive in the individual, trust and confidentiality in cooperation with the student, respect for his rights – the principles of implementing such an approach in the context of the personal paradigm, in the education of the individual. Taking into account the basic needs of the individual, when carrying out pedagogical activities, the educator must carefully monitor the changes that occur in the personal qualities of a person: promptly adjust the process of education, direct life plans to the orientation of a person to meet personal needs, distinguish value orientations, monitor behavior (Oseredchuk et al., 2022).

The humanistic theoretical and methodological approach is based on recognition, understanding, acceptance of the person, a positive, kind-hearted attitude towards the person, the desire to help (Lialuk, 2020).

One of the important aspects in education is the theoretical and methodological synergistic approach, which is related to the adaptation of a person in the field of his education, the theory of synergy as the acquisition of knowledge about the self-organization of dynamic nonlinear environments, as well as the recognition of education as an open two-way process (Kuchai et al., 2017).

In the field of education, with the involvement of the main provisions of synergy, it is possible to consider the characteristics of the educational phenomenon, such as the interaction of the process, activity, disparate parts of the educational system; instability of the education system, frankness and non-linearity; recognition of a possible priority over the state of reality of the entire educational system; accounting, as a natural state, of external and internal fluctuations of the educational system; the presence of dynamic quantitative and qualitative changes of subjects and the educational process involved in it; emergence of spatio-temporal and functional structures of education; identifying new qualities of the educational system. Thus, in the process of education and upbringing, ideas of synergy are used as a method of managing the educational process and as a method of researching the pedagogical process and as a method of cognition; in the modernization of education – as a means of implementing the ideas of integration and humanitarianization, as a pedagogical means of forming cultural values in the individual and a synergistic style of development of the individual's thinking (Ponomaryova, 2014).

The theoretical-methodological environmental approach creates a part of the general socio-cultural environment in higher education, therefore it contributes to the establishment of links of interaction with the environment, harmonization of place, role, functions in society (Voropayeva et al., 2022).

The interaction of the environment and education is manifested in the following aspects: personal growth (self-development, self-determination, self-realization); raising the level of culture (that is, the degree of quality and value expression of the content) of individual educational systems, processes, communities and institutions of higher education; as changes in the socio-cultural context of education, the field as a whole, growth in the development and level of education culture in the process of education in higher education (Ponomaryova, 2014).

The theoretical-methodological praxeological approach in the activity of a teacher of a higher education institution is possible under the following conditions: openness of pedagogical activity, manifestation of initiative, striving for self-realization, self-improvement, orientation of the pedagogical system on the goals of student development, changes in interpersonal relationships between students and teachers, etc. For this, an environment should be created in the institution of higher education, which will provide opportunities for the individual to realize his creative potential (Kolomiets & Lazarenko, 2016).

The theoretical-methodological systemic approach can reproduce a holistic picture of education and consists in the knowledge and transformation of reality, to its objects as systemic ones (Nevřelová & Ruřičková, 2019). The systematic approach arose as a reaction to the long-term dominance of analytical methods of research, allows to consider various social and natural objects from a certain general point of view, and aims to provide an explanation for those processes and phenomena that have not yet received a rational interpretation within the limits of the experimental approach (Ponomaryova, 2014).

The theoretical-methodological personal approach is "a consistent attitude of the teacher towards the pupil as an individual, as a self-aware responsible subject of his own development and as a subject of educational interaction". I. Bekh (2018), claims that the personal approach "...is a kind of methodological toolkit, the basis of which is a set of initial conceptual ideas, target

attitudes, methods of psychodiagnostic and psychological-technological means that provide a deeper, holistic understanding of the cognition of the personality, its development". The basis of the personal approach is: a deep holistic understanding of a person and the harmonious development of personal knowledge (Cherkashyn, 2019).

Our research and experimental work was aimed at checking the effectiveness of theoretical and methodological approaches to the educational process in a higher education institution. The experiment took place in several stages. Students of 3-4 years participated in it.

The purpose of the experimental research was to identify and verify the effectiveness of theoretical and methodological approaches in the institution of higher education to the process of education, which contribute to dynamic changes in the field of education on a global scale, which occur in the life of mankind and in all spheres of professional activity of modern specialists and require changes in the educational paradigms for innovative professional training of specialists.

The research was planned and conducted in accordance with the main approaches to the organization of a pedagogical experiment and covered three stages of scientific research: analytical and methodological; evaluative and generalizing; result-prognostic, which are disclosed above in research methods. It should be noted that this division was quite conditional. Specific tasks were developed for each stage, which determined its content.

As part of our research, we planned: ascertaining (preparatory) and formative (educational) stages of the experiment.

The 1st stage of the experiment – ascertaining (preparatory) was aimed at the analysis of scientific and methodical literature on this topic, consideration of advanced professional experience in the use of effective theoretical and methodological approaches in the institution of higher education to the process of education in the conditions of the modern educational system, the possibilities of using materials were revealed, obtained during the research. The collection of data was carried out, which made it possible to establish the level of formation of education among specialists. These data, the results of the analysis of psychological-pedagogical and



methodical literature served as the basis for the formation of the intermediate research goal of the first stage of the study.

The purpose of the first stage of the experimental study was:

- to analyze the problems of formation of educational potential in the preparation of future specialists.
- to check the knowledge and skills of students in the application of theoretical and methodological approaches in the institution of higher education to the process of education.

At this stage of the experiment, such research methods as observation, conversation, and questionnaires were used.

In order to find out and analyze the problems of education formation of future specialists, a questionnaire (initial cut) of teachers and students was conducted.

2nd stage – formative (educational).

The main task of the formative experiment was to evaluate the effectiveness of the educational impact on students with the introduction of an experimental factor, i.e. a certain method of conducting practical and laboratory classes, educational extracurricular work in the experimental group and without the introduction of an experimental factor in the control group.

The effectiveness of the process of personality education is a rather complex concept, both from the point of view of definition and from the point of view of measurement, that in any experiment it is necessary to determine the qualitative and quantitative parameters of the learning goals, i.e. future result. There are different approaches in determining the criteria for the effectiveness of research into the process of personality education.

To evaluate the effectiveness of our proposed method of implementation during educational activities and extracurricular time of theoretical and methodological approaches to the educational process in a higher education institution, a comparative experiment was conducted, which involves the formation of experimental and control groups. Groups of 3rd-year students of 22-24 people each (about 50 people in total) took part in the experiment.

In order to distinguish the control and experimental groups, a ascertainment experiment was conducted, during which the initial level of upbringing of the students of the 4th year was revealed. At the same time, assessments of the educational impact during the educational process in institutions of higher education and assessments of student behavior during educational activities and the quality of their educational activities were taken into account. Several preliminary sections were conducted, which included both the identification of theoretical knowledge (test, survey) and practical work skills during educational activities.

According to the results of the initial stage of the formative experiment, control and experimental groups were formed, approximately the same in terms of the level of initial training. The group of each type continued educational work in classroom classes according to the previous scenario of educational work.

In the course of the formative experiment, a current verification of the educational effects of theoretical and methodological approaches in the institution of higher education to the educational process was carried out by testing students on the level of familiarity with the theory and conducting control of the ability to solve typical and atypical educational tasks. In order to diagnose various learning parameters, the following methods were used: testing, surveying, etc.

We have developed levels of assimilation of educational influences of theoretical and methodological approaches in a higher education institution to the process of education or the coefficient of the quality of knowledge. By the level of assimilation, we understand the degree of mastery of educational activities achieved by students as a result of the educational process and in extracurricular activities.

For the preliminary assessment of knowledge during the ascertainment experiment, students were offered tests of the first two levels of learning. There are no significant differences in the assimilation of educational influences of theoretical and methodological approaches in the institution of higher education to the process of education at these levels between the students of the control and experimental groups.

To determine the indicators of assimilation during the formative experiment, we once again turned to the level of assimilation of educational influences of the effective theoretical and methodological approaches identified by us in the institution of higher education to the process of education.

In the course of the experiment, the students had to reach the third and fourth levels of assimilation of educational influences on the personality.

They were offered a task of 4 levels of complexity (test-stairs), which provides relatively objective material about the level of knowledge and allows the application of a rating scale for the quantitative characteristics of the education process. The content of multi-level tests was formed from complex tasks reflecting interdisciplinary connections in the process of personality education.

Test tasks were offered according to the level of assimilation of the given educational content.

The first level tests are recognition tests. These tests contained both a task and an answer (or answer options). Test takers only had to find out and choose the correct answer (or answers) from those offered.

Tests of the second level of assimilation of educational influences tested the student's ability to reproduce learned educational information positions from memory. At this level, the experimental and control groups were asked to answer a number of theoretical questions and solve tasks that required them to reproduce known educational actions.

Tests of the third level are non-typical educational tasks that usually require heuristic activity and the search for additional data to bring the educational task under a typical algorithm. Students performed the tasks of this level more successfully if the arguments for choosing a solution were based on theoretical knowledge about the essence of theoretical and methodological approaches.

The students of the experimental group, where the method of educational influences provided for the development of knowledge and skills regarding the use and creation of educational situations, coped more successfully with the tests of the third level.

Fourth-level tests are creative educational tasks that students had to solve during educational situations proposed by the teacher, but these educational tasks are not applicable to all students. In the educational environment and extracurricular work, these were pseudo-tests of the fourth level. Already solved educational problems, but clearly unknown to students, were used as such tests and standards for them. In order to successfully perform the assigned tasks at the fourth level, students need to have a wider range of knowledge and be able to apply educational influences than the educational program provides. The creation of an electronic "Portfolio" was proposed as the task of clarifying the readiness of students at the fourth level of mastering the essence of the main theoretical and methodological approaches we identified. During these works, students of the experimental and control groups developed separate modules for educational disciplines and extracurricular activities.

The processing of the information obtained during the testing was carried out taking into account the methodology using the methods of mathematical statistics, which turns out to be true only if the measure of assessment of educational influences is objective. The criteria for assigning points based on the results of the tasks corresponded to the level of learning and were determined on a twelve-point scale.

On the basis of the conducted control sections, data were obtained on the successful assimilation of the main theoretical and methodological approaches identified by us by students.

The method of obtaining the final grade was to calculate the average score within each level.

If the average score obtained by the student was lower than the minimum possible value of the given level, we considered that the student did not master the content of the main theoretical and methodological approaches identified by us at the given level.

The final grade was determined by the average score of the highest level successfully completed by the student.

The level of formation of students' professional educational skills of the main theoretical and methodological approaches identified by us as a means of forming

professional skills was determined by a certain toolkit for measuring the levels of development of professional skills of future specialists. For the assessment of skills, criteria were introduced, based on which students' level of upbringing and its influence on professional skills was determined.

In order to assess the level of formation of professional educational skills among students of the main theoretical and methodological approaches identified by us, as a means of forming professional skills in them, the method of group expert evaluations was used in the 4th year, where experts were asked to evaluate the level of education of students for the presence of a block of professional skills.

The first group of skills is associated with functions that are reflected in the mastery of organizational and management skills. The experts were asked the following questions:

- whether students know how to organize educational work;

- whether students know how to organize extracurricular educational activities;
- whether students are able to work with parents and exercise educational influence if necessary;
- do students know how to keep documentation;
- whether students are able to exercise strict control over academic performance and attendance;
- whether students are able to organize creative educational affairs;
- whether students know how to cooperate with institutions in solving educational tasks.

Each expert was offered a questionnaire, where it was necessary for the future specialist to put the coefficient of the level of the corresponding skill formed.

The results of the questionnaire are shown in Table 1.

**Table 1.**

*The distribution of students of the experimental and control groups according to the levels of formation of organizational and management skills as a result of assimilation of the educational influences of the effective theoretical and methodological approaches identified by us in the institution of higher education to the process of education.*

	Control group		Experimental group	
	Number of people	%	Number of people	%
Low	5	20,83%	3	12,5%
Average	12	50%	10	41,66%
High	7	29,17%	11	45,84%

As can be seen from Table 1, the level of formed organizational and management skills as a result of assimilation of the educational influences of the effective theoretical and methodological approaches identified by us in the institution of higher education to the process of education in the experimental group is higher than in the control group, which confirms the positive dynamics: learning and educational influences on students during classroom and extracurricular work; development of students' readiness to use theoretical and methodological approaches to the process of education in professional activity.

A comparison of the results in the experimental and control groups allows us to state that the effective theoretical and methodological approaches proposed in the study and

identified by us in the institution of higher education to the process of education, their use, contributes to the improvement of the quality of educational and professional training of students.

As a result of the research and experimental work, the effective aspects of the identified necessary theoretical and methodological approaches, which are the most important for the theory of development and the process of personality education in institutions of higher education – ontological, anthropological, valuable, axiological, regional, acmeological, cultural, competence, humanistic – have been proven, synergistic, environmental, praxeological, systemic, personal approaches. So, in the context of the formation of theoretical and methodological humanitarian approaches to upbringing and education, there

is a revival of the value attitude to upbringing, actualization of the human-creating function.

The analysis of tasks completed by students, the results of questionnaires obtained as a result of using the method of group expert evaluations, allow us to conclude about the readiness of future specialists to use the effective theoretical and methodological approaches identified by us in the institution of higher education to the process of education in learning and solving various professional tasks. The experiment showed that the developed educational and pedagogical foundations of the interaction of teachers and students, ways of forming professional educational influences based on the effective theoretical and methodological approaches to the education process that we identified, increase the quality of professional training of future specialists, ensure their education in further professional activities and further life.

### Conclusions

Effective aspects of the identified necessary theoretical and methodological approaches, which are most important for the theory of development and the process of personality education in institutions of higher education – ontological, anthropological, valuable, axiological, regional, acmeological, cultural, competence, humanistic, synergistic, environmental, praxeological, systemic, personal approach. In the context of the formation of theoretical and methodological humanitarian approaches to upbringing and education, there is a revival of the value attitude to upbringing, actualization of the human-creating function.

An exploratory and experimental study was conducted, the purpose of which was to identify and verify the effectiveness of theoretical and methodological approaches in the institution of higher education to the process of education, which contribute to dynamic changes in the field of education on a global scale, occurring in the life of mankind and in all spheres of professional activity of modern specialists and require changes in the educational paradigm for innovative professional training of specialists.

The experiment showed that the developed educational and pedagogical foundations of the interaction of teachers and students, ways of forming professional educational influences based on the effective theoretical and

methodological approaches to the education process that we identified, increase the quality of professional training of future specialists, ensure their education in further professional activities and further life.

A detailed consideration of dynamic changes in the educational field on a global scale requires further research.

### Bibliographic references

- Bekh, I.D. (2018). *Personality on the way to spiritual values: monograph*. Kyiv-Chernivtsi: "Bukrek". 320 (In Ukrainian) <https://acortar.link/bMyVX1>
- Bialyk, O. M. (2017). *Modern trends in sexual education of schoolchildren in the countries of the European Union*. The depot of the Uman State Pedagogical University named after Pavlo Tychyna (In Ukrainian) <https://dspace.udpu.edu.ua/handle/6789/7561>
- Boichenko, M., Kozlova, T., Kulichenko, A., Shramko, R., & Polyezhayev, Y. (2022). Creative activity at higher education institutions: Ukrainian pedagogical overview. *Amazonia Investiga*, 11(59), 161-171. <https://doi.org/10.34069/AI/2022.59.11.15>
- Butenko, L. L. (2015). Regional approach in the study of educational problems. *Bulletin of Luhansk Taras Shevchenko National University (pedagogical sciences)*, 7(296), 84-92. (In Ukrainian) <https://acortar.link/YY4HFi>
- Cherkashyn, A. (2019). Methodological approaches to personality education of future specialists-leaders in institutions of higher education of Ukraine. Theoretical and applied aspects of research of the phenomena of leadership, management and development of a social object. *Theory and practice of social systems management*, 2, 60-72. <https://doi.org/10.20998/2078-7782.2019.2.06> (In Ukrainian)
- Chymak, M., Khomych, L., Nakonechna, L., Kopchuk-Kashetska, M., & Zadoya, S. (2021). Individual Educational Trajectory as a Way to Reveal the Potential of a Future Teacher. *Romanian Magazine for Multidimensional Education*, 13(3), 387-400. <https://doi.org/10.18662/rrem/13.3/458>
- Dira, N. (2020). Methodological approaches to the education of a valuable attitude to living nature of secondary school students. *Pedagogical sciences: theory, history, innovative technologies*, 8(102), 362-368.

- <https://doi.org/10.24139/2312-5993/2020.08/362-368> (In Ukrainian)
- Gumennykova, T., Ilchenko, P., Bazyl, O., Ilchenko, A., & Vydrych, O. (2022). Educational trends 2022: essence and innovation potential. *Amazonia Investiga*, 11(55), 226-233. <https://doi.org/10.34069/AI/2022.55.07.24>
- Kolomiets, A. M., & Lazarenko, N. I. (2016). Modern methodological approaches in the organization of higher pedagogical education. *Scientific Bulletin of the South Ukrainian National Pedagogical University named after K. D. Ushynskyi*, 3, 47-52. (In Ukrainian)  
dspace.pdpu.edu.ua/jspui/handle/123456789/3441
- Kuchai, O., Kuchai, T., & Pyrzyk, I. (2017). Studying the peculiarities of education development in Japan (in terms of primary education). *Science and Education*, 25(5), 33-39. <https://doi.org/10.24195/2414-4665-2017-5-7>
- Lialiuk, H. (2020). Theoretical and methodological approaches to the education of orphan children in the context of the personal paradigm. *Innovation in education*, 11(2), 145-154. (In Ukrainian) <https://doi.org/10.35619/iu.v2i11.275>
- Molchaniuk, O. V. (2018). Methodological approaches to the study of the problem of education of value attitude towards the nature of future teachers. *Theory and methods of teaching and education*, 44, 66-79. (In Ukrainian) [doi.org/10.5281/zenodo.1410242](https://doi.org/10.5281/zenodo.1410242)
- Nevřelová, M., & Ruřičková, J. (2019). Educational Potential of Educational Trails in Terms of Their Using in the Pedagogical Process (Outdoor Learning). *European Journal of Contemporary Education*, 8(3), 550-561. [https://ejce.cherkasgu.press/journals\\_n/1569926520.pdf](https://ejce.cherkasgu.press/journals_n/1569926520.pdf)
- Oseredchuk, O., Mykhailichenko, M., Rokosovyyk, N., Komar, O., Bielikova, V., Plakhotnik, O., & Kuchai, O. (2022). Ensuring the Quality of Higher Education in Ukraine. *International Journal of Computer Science and Network Security*, 22(12), 146-152. [http://doi.org/10.22937/IJCSNS.2022.22.12.19](https://doi.org/10.22937/IJCSNS.2022.22.12.19)
- Polishchuk, G., Khlystun, I., Zarudniak, N., Mukoviz, O., Motsyk, R., Havrylenko, O., & Kuchai, O. (2022). Providing the Practical Component of the Future Specialist with Multimedia Technologies in the Educational Process of Higher Education. *International Journal of Computer Science and Network Security*, 22(9), 714-720. DOI: <https://doi.org/10.22937/IJCSNS.2022.22.9.93>
- Ponomaryova, H.F. (2014). *Educación del futuro docente: teoría y práctica: monografía*. Editorial Ranok, 547. (In Ukrainian) <https://acortar.link/Ji2d79>
- Tarasenko, H., Halych, T. (2022). New approaches to the children and youth upbringing in the context of the cultural paradigm of modern educational process. *Scientific bulletin of the Vinnytsia Academy of Continuing Education: Series "Pedagogy. Psychology"*, 2, 30-35. <https://acortar.link/xn2lmN>
- Todosiienko, N. L., & Marinchuk, T. T. (2020). Methodological approaches in the formation of aesthetic perception of younger schoolchildren by means of art. *Vinnytsia State Pedagogical University named after Mykhailo Kotsiubinsky. Series: Pedagogy and psychology*, 64, 33-38. DOI <https://doi.org/10.31652/2415-7872-2020-64-33-38> (In Ukrainian)
- Vekova, L. (2023). Social innovation as a potential and possible approach for social and educational inclusion. *Pedagogy*, 95(4), 25-39. <https://doi.org/10.53656/ped2023-4s.03>
- Voropayeva, T., Kuzmenko, R., Iuksel, G., Stepanenko, O., & Kobal, V. (2022). Educational and scientific potential of the XXI century. Challenges and prospects. *Revista Eduweb*, 16(2), 95-106. <https://doi.org/10.46502/issn.1856-7576/2022.16.02.6>
- Zhuravel, Y., Kuzmenko, Y., Fedoruk, O., & Tymkiv, I. (2022). Increasing the competitiveness of educational institutions in the conditions of internetization. *Revista Eduweb*, 16(3), 23-40. <https://doi.org/10.46502/issn.1856-7576/2022.16.03.2>



DOI: <https://doi.org/10.34069/AI/2023.71.11.15>

How to Cite:

Ismayilova, P. (2023). International standards and domestic legislation on human organ donation and transplantation. *Amazonia Investiga*, 12(71), 175-187. <https://doi.org/10.34069/AI/2023.71.11.15>


## International standards and domestic legislation on human organ donation and transplantation

### Міжнародні стандарти та вітчизняне законодавство про донорство та трансплантацію людських органів

Received: October 14, 2023

Accepted: November 29, 2023

Written by:

Parvina Ismayilova<sup>1</sup> <https://orcid.org/0000-0002-2709-3660>

#### Abstract

The article analyzes international standards for the quality and safety of organs for transplantation. Azerbaijan, like other countries, strictly prohibits organ trade. It criminalized the forcible removal of organs, fraud or coercion, and the buying or selling of organs. The objective of the work is to analyze the Oviedo Convention and the Council of Europe Convention on Combating Trafficking in Human Organs, as well as other legal acts, in comparison with the criminal and administrative laws of Azerbaijan. To achieve the objectives of the research, the author of the article used such methods as analysis and synthesis, the formal-legal method and the comparative-legal method. As a result of the research carried out, it was concluded that Azerbaijan should improve its relevant legislation taking into account the norms of these conventions. In particular, the State's priority should be to emphasize the donation of artificial organs and tissues instead of human donation.

**Keywords:** transplantation, trafficking in human organs, human rights, the principle of dignity, Azerbaijani legislation.

#### Introduction

Human organ transplantation entered a new stage of development that has created a new field of science – transplantology. Despite the transplantation research was conducted for the first time in Europe (Grigoriev et al., 2001), the first successful kidney transplant was performed in the United States in the 50s of the last century.

#### Анотація

У статті проаналізовано міжнародні стандарти якості та безпеки органів для трансплантації. В Азербайджані, як і в інших країнах, суворо заборонена торгівля органами. Він криміналізував примусове вилучення органів, шахрайство чи примус, а також купівлю чи продаж органів. Метою роботи є аналіз Ов'єдської конвенції та Конвенції Ради Європи про боротьбу з торгівлею органами людини, а також інших правових актів у порівнянні з кримінальним та адміністративним законодавством Азербайджану. Для досягнення поставленої мети дослідження автор статті використав такі методи, як аналіз і синтез, формально-юридичний метод та порівняльно-правовий метод. В результаті проведеного дослідження було зроблено висновок, що Азербайджану необхідно вдосконалити відповідне законодавство з урахуванням норм цих конвенцій. Зокрема, пріоритетом держави має стати акцент на донорстві штучних органів і тканин замість донорства людини.

**Ключові слова:** трансплантація, торгівля людськими органами, права людини, принцип гідності, законодавство Азербайджану.

For the first time a heart was transplanted from a dying person to a patient in the 60s of the last century. Transplantology, as one of the promising fields of medical science, was formed with regard to the transplantation of human organs and tissues.

<sup>1</sup> PhD in Law, doctoral candidate and lecturer on "Human rights and Information Law" UNESCO department, Baku State University, Azerbaijan.

Since then, transplantology has turned into a powerful branch of medicine, but criminal activity related to transplantology has also gained serious scale.

The international legal fight against crime in this field should be ensured together with organizational, economic and educational measures, as stated in the National Action Plan for 2020-2024 on the fight against human trafficking in the Republic of Azerbaijan. A more appropriate policy should be the donation of artificial organs and tissues, which should be established in light of the objectives of the Oviedo Convention and its Protocol, rather than human donation.

The research tasks:

Evaluate the Discrepancies Between National Legislation of Azerbaijan and the Protocol on Transplantation:

Conduct a comprehensive analysis of the Protocol concerning Transplantation of Organs and Tissues of Human Origin.

Compare the provisions of the Protocol with the applicable Law of the Republic of Azerbaijan related to organ and tissue transplantation.

Assess the extent to which the internal legislative act aligns with the Protocol and identify any areas where the Protocol provides superior regulation.

Addressing the "Right to Personal Inviolability" and Prevention of Criminal Interests:

Propose amendments to Article 17 of the Protocol to include a provision stating that human organs and tissues transplantation is prohibited in the absence of the deceased person's will.

Examine the implications of such an amendment on preventing criminal interests and protecting the "right to personal inviolability" of the deceased person.

Critical Examination of Protocol Wording for Safeguarding Human Dignity:

Evaluate the wording of Article 21.1 of the Protocol and its implications in safeguarding human dignity.

Recommend changes to Article 21.1, specifically proposing a modification to broaden the scope of

the norm to include various aspects such as social and physiological factors.

Addressing Gaps in National Legislation Against Illegal Organ Trafficking:

Analyze the existing criminal and administrative legislation of the Republic of Azerbaijan related to illegal organ transplantation.

Identify gaps in coverage and propose amendments to strengthen the legal framework, considering the transnational nature of organ trafficking.

Assess the need for and implications of recognizing the Convention against Trafficking in Human Organs by the Republic of Azerbaijan. Promoting International Legal Cooperation in Combating Organ Trafficking:

Evaluate the effectiveness of international legal cooperation in combating illegal transplantation of human organs and tissues.

Analyze the role of criminal and administrative legislation in the Republic of Azerbaijan in supporting international efforts.

Propose strategies for enhancing international legal cooperation against transnational crimes related to organ trafficking.

Exploring Comprehensive Approaches to Prevent Organ Trafficking:

Examine the limitations of relying solely on international legal cooperation in addressing the increasing pace of trade in human organs.

Identify additional measures beyond legal frameworks, such as public awareness campaigns or ethical guidelines, to prevent and combat illegal organ transplantation.

Assess the feasibility and potential effectiveness of these additional measures in complementing legal efforts.

### **Theoretical Framework or Literature Review**

This section delves into the multifaceted challenges surrounding organ donation and trafficking globally. The authors shed light on diverse issues, ranging from the lack of standardization in defining brain death and organ donation criteria to the role of healthcare professionals in perpetuating illegal organ transplantation. The findings underscore the

urgency for international cooperation, legal reforms, and responsible AI frameworks to address these challenges and enhance organ donation practices while curbing illicit organ trafficking.

In the article «Worldwide Barriers to Organ Donation» Ivan Rocha Ferreira Da Silva and Jennifer A. Frontera (2015) claim, that the lack of standardization of brain death and organ donation criteria worldwide contributes to a loss of potential donors. Major barriers to donation include variable clinical and legal definitions of brain death; inconsistent legal upholding of brain death criteria; racial, ethnic, and religious perspectives on organ donation; and physician discomfort and community misunderstanding of the process of donation after cardiac death. Limited international legislation and oversight of organ donation and transplant has contributed to the dilemma of organ trafficking. The authors sum up, that an urgent need exists for a global standard on the definition of brain death and donation after death by cardiac criteria to better regulate organ donation and maximize transplantation rates. Unified standards may have a positive effect on limiting organ trafficking.

In the article «A Responsible AI Framework for Mitigating the Ramifications of the Organ Donation Crisis» Salih Tutun, Antoine Harfouche, Abdullah Albizri, Marina E. Johnson & He Haiyue (2022) proposed a responsible AI framework that integrates network science and artificial intelligence to identify consent outcomes for organ donation. The proposed framework includes three phases: collecting and pre-processing data, creating new features and identifying root causes of family refusal, and training and testing models to predict the probability of families granting consent for organ donation. The designed artifact included collaborative decisions and network measures, increasing explainability through network science. It integrated human reviews and assessment of risks which increases correct and interpretable predictions. The authors believe that results can help encourage organ donations and reduce the illegal organ trade.

In the article «Formula to Stop the Illegal Organ Trade: Presumed Consent Laws Formula to Stop the Illegal Organ Trade: Presumed Consent Laws and Mandatory Reporting Requirements for Doctors and Mandatory Reporting Requirements for Doctors» Sheri R. Glaser (2005) claims that currently the international community has not adequately responded to this problem. To reduce or eliminate organ trafficking, countries should

(1) strengthen their laws against this crime and remove any loopholes that encourage corruption; (2) adopt presumed consent laws to increase organ supply legally, which would reduce the number of organs obtained on the illegal black market; and (3) impose mandatory reporting requirements on doctors who suspect that a patient has obtained an organ from a trafficked person. If these recommendations are not followed, organ trafficking will continue to persist, exploiting the less fortunate and violating the autonomy of its victims.

In his article «Organ Trafficking: Why Do Healthcare Workers Engage in It?» Trevor Stammers (2022) considers organ trafficking in all its various forms is an international crime which could be entirely eliminated if healthcare professionals refused to participate in or be complicit with it. Types of organ trafficking are defined and principal international declarations and resolutions concerning it are discussed. The evidence for the involvement of healthcare professionals is illustrated with examples from South Africa and China. The ways in which healthcare professionals directly or indirectly perpetuate illegal organ transplantation are then considered, including lack of awareness, the paucity of both undergraduate and postgraduate education on organ trafficking, turning a blind eye, advocacy of organ commercialism, and the lure of financial gain.

In her article «Understanding the challenges to investigating and prosecuting organ trafficking: a comparative analysis of two cases» Frederike Ambagtshee (2021) aims to explain the legal, institutional and environmental factors that affected the investigation and prosecution of two organ trafficking cases: the Netcare case, exposed in South Africa and the Medicus case, exposed in Kosovo. Both cases constituted globally operating criminal networks involving brokers and transplant professionals that colluded in organizing illegal transplants. Recommendations to improve enforcement of organ trafficking include improving identification of suspicious transplant activity, strengthening cross-border collaboration and enhancing whistleblower protection laws.

Summary of Main Findings:

"Worldwide Barriers to Organ Donation":

Authors Ivan Rocha Ferreira Da Silva and Jennifer A. Frontera (2015) emphasize the need for standardized criteria for brain death and organ donation globally. Barriers include variable definitions of brain death, legal inconsistencies,

and cultural perspectives. They argue for unified international standards to regulate organ donation, reduce physician discomfort, and address the organ trafficking dilemma.

"A Responsible AI Framework for Mitigating the Ramifications of the Organ Donation Crisis":

Salih Tutun et al., (2022) propose an AI framework integrating network science to predict consent outcomes for organ donation. The three-phase framework enhances explainability and incorporates collaborative decisions and risk assessment. The authors believe this approach can encourage organ donation, mitigate the crisis, and combat illegal organ trade.

"Formula to Stop the Illegal Organ Trade":

Sheri R. Glaser (2005) argues for legal reforms to combat organ trafficking, advocating for strengthened laws, presumed consent, and mandatory reporting by doctors. The author warns that failure to implement these measures may perpetuate organ trafficking, exploiting vulnerable populations and violating individual autonomy.

"Organ Trafficking: Why Do Healthcare Workers Engage in It?":

Trevor Stammers (2022) explores the involvement of healthcare professionals in organ trafficking, discussing types of organ trafficking and the role of professionals in perpetuating illegal transplantation. Factors such as lack of awareness, inadequate education, and financial motives contribute to this issue. Stammers suggests that healthcare professionals refusing to participate could eliminate organ trafficking.

"Understanding the challenges to investigating and prosecuting organ trafficking":

Frederike Ambagtshee (2021) analyzes two organ trafficking cases, the Netcare case in South Africa and the Medicus case in Kosovo, highlighting legal, institutional, and environmental factors affecting investigation and prosecution. Recommendations include improving identification of suspicious activity, enhancing cross-border collaboration, and strengthening whistleblower protection laws to combat organ trafficking globally.

## Methodology

This article undertakes a comprehensive examination of the legal framework governing

organ transplantation in the Republic of Azerbaijan, employing a range of scientific research methods. The primary focus is on evaluating the adequacy of domestic legislation concerning organ transplantation in comparison to the international standards outlined in the Protocol on Transplantation of Human Organs and Tissues. The author utilizes analysis and synthesis, formal legal methods, and the comparative legal method to scrutinize existing laws, identify deficiencies, and propose specific amendments to enhance the legal landscape for organ transplantation.

Analysis and synthesis:

Analysis: The author conducts an analysis of the Protocol on Transplantation of Human Organs and Tissues and the legislation of the Republic of Azerbaijan. The analysis reveals that, despite the initial conclusion about more complete regulation of the domestic legislation, there is a higher level of regulation in the Protocol.

Synthesis: Based on the analysis, a conclusion is made about the need to adapt the national legislation of Azerbaijan to the Protocol, in particular, the article states that the adaptation should continue.

Formal and legal method:

The author uses the formal legal method to argue for making specific changes to the text of the Protocol. For example, the author proposes to include the rule that transplantation of human organs and tissues is prohibited in the absence of the donor's will. This approach is supported from the point of view of the "right to personal integrity" of the deceased person.

Comparative legal method:

The author compares the provisions of the Protocol with the internal legislation of the Republic of Azerbaijan and concludes that the regulation in the Protocol is superior. It also compares the provisions of specific articles with changes that, in the author's opinion, can improve the protection of the rights and dignity of individuals in the context of organ transplantation.

These methods allow the author to identify shortcomings in the current legislation, point out the advantages of the Protocol and propose specific changes to improve the situation in the field of organ transplantation. Analysis and synthesis help to reveal the problem and

highlight the need for changes, the formal-legal method is used to substantiate specific proposals, and the comparative-legal method helps to establish the differences between various norms and determine the optimal way to achieve the goal.

#### Rigor of the Study:

**Source Selection:** The study relies on primary sources, including the Protocol on Transplantation of Human Organs and Tissues, and the domestic legislation of Azerbaijan. The selection of these sources is crucial for a thorough understanding of the legal framework.

**Quality Evaluation:** The quality of sources is assessed based on their relevance to the topic and the authority of the legal documents. The use of internationally recognized standards, such as the Protocol, adds credibility to the study.

**Results Interpretation:** The author interprets the results by critically evaluating the identified shortcomings in domestic legislation, highlighting the Protocol's advantages, and proposing specific changes. The conclusion underscores the urgency of continuous adaptation to international standards in the field of organ transplantation.

In essence, the combination of analysis, synthesis, formal legal methods, and comparative legal methods employed in this study offers a robust foundation for identifying, understanding, and rectifying deficiencies in the current legal framework for organ transplantation in Azerbaijan.

## Results and Discussion

### 1. Transplantology and the legal aspects

Transplantology is a field of biology and medicine that studies the problems of transplantation and develops methods of preservation of organs and tissues, creation and use of artificial organs. As a field of science, it covers surgery, resuscitation (restoration), anesthesiology (sedation, pain relief), immunology (medicine that studies inviolability), pharmacology and other biomedical and medical technologies. It mainly involves the regeneration of diseased organs and tissues as a form of fighting against human diseases.

As human organs and tissues transplantation also covers the problems having legal, as well as

personal, somatic (comes from the Greek) nature, so its legislative solution has also emerged as a special problem. Since many legal and criminal problems arise in the process of transplantation, its complex legislative regulation and issues of international legal cooperation in a transnational context should also be resolved. Since the transplantation and donation of human organs and tissues is a matter of human rights and freedom, dignity and privacy, the norms of the Universal Declaration of Human Rights (United Nations, 1948), the International Covenant on Economic, Social and Cultural Rights (1966b), the International Covenant on Civil and Political Rights (1966a), which contain universally recognized standards must be taken into consideration for the creation and interpretation of special rights. Norms containing universally recognized standards determine the direction of other, specific areas by creating international human rights law (Guseinov, 1998; Toebes, 2001). The right to receive health and medical care, which is expressed in international acts (e.g., Article 25 of the Universal Declaration of Human Rights; Article 12 of the International Covenant on Economic, Social and Cultural Rights, etc.) has led to the adoption of new international acts.

Since it is mainly in the category of economic and social rights, states participate in international cooperation in this field (e.g., the 1981 Declaration of Lisbon on the Rights of Patients on the ethical criteria of doctors regarding the rights of patients; the 2005 UNESCO Universal Declaration on Bioethics and Human Rights, etc.) under the norms that do not create a binding obligation. In the personal rights category, conventional norms on personal rights, personal integrity, respect for human dignity, etc. could not achieve comprehensiveness. For example, the Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine has not been ratified even by the member states of the Council of Europe (UK, FRG, etc.) up to this date. In this field, universal recognition of adopted international obligations is delayed.

Only 28 countries have met the legislative requirement set by the 2010 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity (World Health Organization, 2016).

In terms of adoption of binding legal documents, the main exceptions are acts of the European



Union (e.g., the 2002 European (Brussels) Charter on Patients' Rights). Currently, one of the international legal acts that stands out for its unifying importance is the Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine of April 4, 1997 (the Republic of Azerbaijan is not a signatory to the Convention). It is also known as the Oviedo Convention because it was adopted in Oviedo, Spain. The Convention (Art.1) specifies the necessary legislative measures to be implemented for the safeguard human rights and dignity (Council of Europe, 1999). During the application of biology and medicine, the concerned parties can define more comprehensive rules compared to the Convention regulation (Art.27). The application of biology and medicine not only benefit humanity, but may lead to acts endangering human life, wellbeing or dignity through genetic processes (Sollie, & Duwell, 2009).

Another important aspect of the Convention is the obligation of states to be open to public discussions and consultations during the application of biology and medicine. For fulfilling this obligation, the concerned parties can establish their own procedures. In particular, the domestic legislation (Constitution of the Republic of Azerbaijan, 1995, Art.29) envisages increasing the role of medical personnel, teachers, and society in the application of biology and medicine by establishing ethical commissions for organ donation and transplantation (Art.28). Subordination of professional standards in the healthcare system to human interests, safeguard rights and dignity, the primacy of human dignity with regard to any commercial or scientific interest should find its expression in the domestic legislation. The primacy of human rights and dignity in the Convention (Art.2); ensuring equitable access to health care (Art.3); development of professional standards (Art.4), protection of each individual as a representative of the human race should be ensured in the course of research (Mammadov, & Mustafayeva, 2013). The Convention only regulates preventive, diagnostic, therapeutic and scientific research activities covering human biology and medicine.

The activity of European international judicial bodies (the "Sunday Times" case of the European Court of Human Rights, 1979 (Janis et al., 2008; R.R. v. Poland-HUDOC, 2011) and the "Brustle v. Grenpes" case of the European Court of Justice, 1997 (European Union, 2011) pertaining to the primacy of human health in biotechnology

and medicine over any scientific research and commercial activity is expanding the general practice on the need to safeguard rights and freedoms.

Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine was enacted as an act of the Council of Europe in the context of the 1950 European Convention for the Protection of Human Rights and Freedoms (Council of Europe, 1997). It means that the limit of individual rights expressed in Article 8.2 of the 1950 European Convention for the Protection of Human Rights and Freedoms is also valid for the Oviedo Convention. It is true that in the Oviedo Convention (Art.7) these exceptions have particularity. In this sense, the exceptions stated in Article 8 of the European Convention for the "protection of the country's economic stability, public order or morality and national security" are not covered by the general exceptions of the Oviedo Convention (Art.7.1). It appears that, in the context of the Oviedo Convention, it is not appropriate to make the realization of fundamental rights mainly relating to the protection of human rights in the field of health, dependent on the country's economic well-being, public order or morals, and national security.

The Oviedo Convention establishes the framework principles for the realization of human rights and human dignity of the human being with regard to the application of biology and medicine. For this reason, it has specific annexes according to the subject of regulation, one of which is the 2002 Protocol to the Convention on Transplantation of Human Organs and Tissues (the Protocol entered into force in 2006, the Republic of Azerbaijan is not a signatory to this Convention).

This Protocol applied to the transplantation of human organs and tissues carried out for therapeutic purposes and also haematopoietic stem cells (Art.2). Reproductive organs and tissues, embryonic organs, blood elements are not regulated by the Protocol (Council of Europe, 2002). In this field, the Republic of Azerbaijan is also in the stage of development of its own legislation. For example, the 1997 Law of the Republic of Azerbaijan "On Protection of Population Health" coincided with the adoption of the Oviedo Convention. Subsequently, the 1999 Law "On Transplantation of Human Organs and Tissues" (Law No. 360-IQ, 1997; Law No. 726-IG, 1999), which was replaced by a new legislative act, established a specific legal

regulation in this area. Given the application of biotechnology development in the field of medicine, on October 20, 2020, a new Law of the Republic of Azerbaijan "On Donation and Transplantation of Human Organs and Tissues" was adopted. The new law was enacted as of January 1, 2022. Article 3.3 of the Law prescribes the areas covered by it as per the subject of regulation of the Protocol.

Besides some legal instruments (the Constitution of the Republic of Azerbaijan, the Law of the Republic of Azerbaijan "On Protection of Population Health", this Law, along with other regulatory acts), Article 2 of the Law mentions the international agreements on organ donation and transplantation that the Republic of Azerbaijan is a party. Although the Republic of Azerbaijan is not bound by the Oviedo Convention and its Protocol, it ensures the harmonization of its domestic acts with international norms. In particular, scientific and technical cooperation with foreign countries and international organizations in organ donation and transplantation in accordance with international law; the organs and tissues exchange arrangements are specified in the Law (Art.33).

2. The rights of a living donor, the problem of donation of a deceased person (non-living or deceased donors) and the principle of dignity.

Both domestic legislation and international legal norms have set specific rules and conditions for the removal of donor organs for transplantation from a living donor. One of the issues of special importance of the Protocol and not established in the legislation is the risk assessment mechanism for the donor. Article 12 of the Protocol specifies the right to have access to independent advice by a competent health professional having appropriate experience and who is not involved in the transplantation, on the assessment of possible risks during organ transplantation. Specifically, information on the "right to independent advice" is defined as an international legal obligation for the concerned parties in the Protocol. Although the rights and duties of the living donor are listed in Article 19 of the Law and the right to "receive complete and objective information about transplantation from a health care institution, including possible complications" is established in Article 19.1.1, it cannot be considered the same as the "right to receive independent advice" provided for by the Protocol.

It is true that Article 19.1.1 of the Law specifies to "...get complete and objective information about complications." However, it has substantive legal content. An "independent expert" is needed for its provision. In this sense, the Law should include the rule "to receive complete and objective information about complications from an independent professional having medical ability and knowledge." The relevant rule is one of the procedural conditions before transplantation. The next issue is that the right to "...informed consent" in Article 17 of the Law is given as the right to "consent of the living donor" in Article 13 of the Protocol. "Consent" should mean that it is not only against legality or personal rights, but also not against morality (Koru, 2021). Note that, a detailed definition of "informed consent" is expressed in the Law (in the Article of basic concepts, Art.1.1.10) compared to the Protocol.

Subject to this article, the following are the absolute conditions:

- prohibition of forcing the removal of any personal organs;
- complying with the principle of voluntariness in the transplantation of organs from the living donor;
- certified application of the informed consent of the living donor in writing;
- special form of the informed consent application;
- notarized testimony of close relatives during organ transplantation from the living donor;
- entering information on the informed consent of the living donor into the register of living donors (Art.17.2).

As an established part of the right to informed consent of the living donor, Articles 19 and 20 of the Law also cover the living donor's medical (Art.19.1.4; Art.20), labor (Art.19.1.5), social (Art.19.1.6) and other state guarantees. The right to informed consent of the living donor is one of the basic somatic (medical) rights and is generally guaranteed by the individual's constitutional right to "freedom of information." The right to "informed consent" in the field we have studied ensures the safeguard rights of donors in the donor-doctor relationship by determining the doctor's responsibility (Law No. 360-IQ, 1997). The exception to this right in special cases is compatible with the convention norm (Art.26) (Council of Europe, 1999) and the legislative norm (Art.28).

The legislation of the Republic of Azerbaijan on the organs and tissues transplantation of the

living donor envisages a more comprehensive regulation than the Convention, with very few exceptions (for example, the "right to independent advice" in Article 12 of the Protocol).

### 3. The problem of deceased person (corpse) donation and the principle of dignity

As mentioned, since the human organs and tissues transplantation is related to a number of serious ethical, psychological, and religious issues, its legal and legislative solution also has diversity in the legislation of individual states, and this diversity is changing day by day. For example, in the Swiss Confederation, the previous Law of 2004 established the exact opposite concept with a new amendment. With the new Law "On Transplantation and Donation of Human Organs" adopted as a result of the referendum held on May 15, 2022 (60.2% vote), donation is based on the presumed "silent consent". This trend is also found in other countries. The United Kingdom, which stands out for its conservatism, with the recent 2020 (Carey and Max law) legislative change, automatically considers people aged 18 and over to be organ donors, provided that the person has not expressed objection to organ donation in writing before their death.

According to anti-donation model applicable in the vast majority of states (e.g., Swiss Transplant Act of 1988; US National Organ Transplant Act of 1984; the Federal Law of Germany on Donation, Collection and Transplantation of Organs and Tissues of 1997 as amended on May 25, 2012, if a person has not given voluntary consent for donation before his/her death, his/her organs cannot be taken even after his or her death.

The presumed "silent consent" in donation, which we can express as the Swiss model, is established in the legislation of the states mentioned, including the legislation of the Republic of Azerbaijan (e.g., the 1997 Law of the Republic of Azerbaijan "On Protection of Population Health"; the 1999 Law "On Transplantation of Human Organs and Tissues, etc.) against the presumed "consent" or "requested consent." The presumed "consent" or "requested consent" requires the documented consent of the persons before their death and of their relatives after their death for organ and tissue transplantation. For example, under the US National Organ Transplant Act of 1984 (US Congress, 1984), the consent document is known as a "donor note." According to the "presumed

consent" applied in the United States and Australia, it is considered an objection to donate if it cannot be proven otherwise (e.g., there is no registration in the donor database, registration of consent for donation in the passport) according to the "presumed consent" applied in Australia.

The main argument of the initiators of the 2022 Act of the Swiss Confederation, which should enter into force no earlier than 2024, as well as the recent 2020 Carey and Max Act of Great Britain, is that there are serious problems in securing donations. For preventing abuses, the new Swiss legislation has also significantly enhanced the role of relatives of deceased persons in relation to donation. However, these arguments cannot be considered fair in terms of safeguard personal rights and dignity. Until recently, in some countries (Latvia) clandestine removal of tissues and organs from corpses for commercial purposes in exchange for medical equipment (from Germany) was observed as well (Neethu R. Elberte v. Latvia, 2015). At the beginning of 2005, the European Parliament announced a list of countries where trafficking in human organs is widespread (Moldova, Ukraine, Romania, Estonia, Central Asia). In the current chaos caused by Russia's military aggression against Ukraine, it is possible that this problem will deepen.

As a rule, relatives do not give consent to the donation of a dying person, but wish for his/her recovery. The last thing they may think about is the "obligation" of the relatives to inform the competent authority about the donation consent. Of course, cases of consent to the removal of organs from a person (potential donor) whose death is obvious (for example, in cases of serious accidents) may constitute an exception. In this sense, the provision of data privacy in the secure national online registry, which allows access to donation consent before the death of all persons who have reached the age of 16 in the Swiss legislation we have described, also seems problematic. The inability to express objection in advance for various reasons, the existence of cases of abuse, including criminal cases, does not exclude that this model leads to more serious dangers in societies where democratic values and human rights have not been fully established. Murder for organ removal is also seen in legal states. As proof of this is the "Doctor's case" in the U.S. California Supreme Court in 2008 (Mustafaeva, & Mamedov, 2010). Illegal transplants have also been found in India, Brazil, Ukraine, Croatia, Bulgaria, Venezuela and other countries.

As a rule, there are no unloved relatives at the hospital, and what beloved relative would think about a transplant at this moment? They are praying for healing at this time. That is what is ethical.

The European Court of Human Rights, in a number of its decisions, drew attention to the uncertainty in the legislation of the states in the decision mechanism of relatives. For example, in 2015, the European Court of Human Rights (ECHR) in its decision on the case "Petrova v. Latvia" noted the non-realization of the right of relatives to consent due to the absence of the obligation to ask the consent of the medical personnel in the legislation (Petrova v. Latvia, 2014; Neethu R. Elberte v. Latvia, 2015).

We believe that (as noted by the Non-Party Committee of the Swiss Parliament (Swissinfo, 2022) "silent donation" contradicts the principle of inviolability of human dignity. It is not inconceivable that in this way the commercial removal of organs from people who did not consent to donation Elbert v. Latvia (Neethu R. Elberte v. Latvia, 2015) will not be carried out, and this situation will not lead to the creation and increase of criminal cases.

The inviolability of a person is related to his/her dignity. Dignity is a person's right to respect...quality. It is achieved by the development of a personality that has realized its freedom, equality and protection. Dignity is the right of a person to be valued and respected for their own sake, and to be treated ethically. The donation problem should be solved taking into consideration of the general position of the European Court of Human Rights on "inviolability of personality", as well as international acts (The International Covenant on Civil and Political Rights (Art. 7): ... no one shall be subjected without his free consent to medical or scientific experimentation; the norms on dignity of the Oviedo Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine (Art.1; 2) (the Republic of Azerbaijan is not a signatory to this Convention) and the 2002 Additional Protocol to the Convention on Human Rights and Biomedicine concerning Transplantation of Organs and Tissues of Human Origin.

The new Law of the Republic of Azerbaijan "On Donation and Transplantation of Human Organs and Tissues" adopted on October 20, 2020 is based on the "requested consent" model. The legislation of the Republic of Azerbaijan was

established based on the content of the 1997 Oviedo Convention and its Protocol on the Transplantation of Human Organs and Tissues to solve this problem. The new legislation of the Republic of Azerbaijan has undergone a conceptual change in accordance with the Oviedo Convention and its Protocol. Thus, in the new Law, the institution of donation of human organs and tissues envisages "removal of organs from a deceased person." And organ donation from a living person contains a special case.

The Protocol specifies the cases in which it is not allowed to remove an organ from a deceased person. However, the new legislation of the Republic of Azerbaijan regulates "removal of organs from a corpse" in more detail than the Protocol. Subject to the first part of Article 16 of the Protocol, organs or tissues shall not be removed from the body of a deceased person unless that person has been certified dead in accordance with the law. Subject to the second part of Article 16 of the Protocol, the next restriction condition is provided. According to that article, the doctors certifying the death of a person shall not be the same doctors who participate directly in removal of organs or tissues from the deceased person, or subsequent transplantation procedures (Council of Europe, 2002). Article 25 of the Law "On Donation and Transplantation of Human Organs and Tissues" further expands the scope of restrictions on organ and tissue donation. The Protocol does not specify the mechanism for determining biological death or brain death. The rules for solving this issue are provided in the 1997 Law of the Republic of Azerbaijan "On Protection of the Population Health." (Law No. 360-IQ, 1997) In accordance with the Law "On Protection of Population Health", the decision of the medical council and the consent of the health care institution are taken as the basis for biological death. For excluding abuse or any illegal interest factor, as in the relevant article of the Protocol, the Law prohibits the participation of the transplant doctor and transplant coordinator in confirming the moment of death of the donor.

As per Article 17 (consent and authorization) of the Protocol on transplantation of human organs and tissues, the appropriate wording of the Law attracts attention due to its wider content. Legislation of the Republic of Azerbaijan does not rely on the "silent consent" or "soft model" formula established in European countries, but on the "presumed consent." It is Article 21.1 of the Law that states the principle of consent to the removal of donor organs from a deceased person for transplantation. If a person during his/her



lifetime gives his/her written consent to the transplantation of his/her organs, for educational and scientific purposes, in accordance with Article 22.1 of this Law, after his/her death, his/her donor organs can be used for transplantation, educational and scientific purposes. Article 22 specifies the position of a person regarding his/her consent to the removal of his/her organs and tissues for transplantation after death or his/her objection to remove his/her organs.

Note that subject to the requirement of Article 22.1 (the consent to the removal of organs for transplantation after the death of a fully functional adult during his/her lifetime or the objection to remove organs is executed by an application approved in accordance with Article 22.6 of this Law...) donation institution is based on the "presumed consent." Why "consent"? Such a form of consent to the removal of a person's organs after death for transplantation or the objection to the removal is subordinated to the requested consent form. That is, there is a necessity of formalization for the waiver application. Subject to the previous legislation, it was possible to become a donor by registering a person with the national health care bodies based on an approved official donor document. Donation was not possible if there was no such document.

What does the non-declaration of will on donation mean? Article 21.3 of the Law states that if a person refuses to donate in writing during his/her lifetime, it is not allowed to take organs from his/her corpse for transplantation after his/her death. Contrary to this norm, if a person did not refuse donation in writing during his/her lifetime, if it is possible to remove his/her organs from his/her corpse for transplantation after his/her death? Non-declaration of will on donation replaces the former "strict" or "requested consent" model by the new one (e.g., according to the Swiss model), which "automatically becomes a donor if there is no written objection to donate organs."

This situation is also confirmed by Article 21.4 of the Law (In case of brain death as a result of an accident and natural disaster, it is allowed to take organs for transplantation from the deceased persons who did not object donation in writing during their lifetime and who are not relatives specified in Article 21.2 of this Law). Such a rule is based on the written "presumed consent" specified in Article 21.1 of the Law, as well as the Constitution of the Republic of Azerbaijan (... medical, scientific and other experiments cannot

be carried out on anyone without their voluntary consent) (Constitution of the Republic of Azerbaijan, 1995). It contradicts Article 46.III and can be considered as an unethical, moral aspect of the Law. Thus, there is a tendency of discrimination in relation to the deceased persons who did not consent to donation during their lifetime or did not declare their will about it or did not have the opportunity to do so. Universal international law (e.g., Article 130 of the 1949 Fourth Geneva Convention relative to the Protection of Civilian Persons in Time of War requires detaining authorities to ensure that internees who die while interned are honorably buried, if possible according to the rites of the religion to which they belonged...) (International Humanitarian Law Databases, 1949) expressed to respect the deceased persons after their death in the context of universally recognized human rights. Acceptance of the deceased person's body as a donor despite the absence of a direct expression of will contradicts Article 2 of the Oviedo Convention (the interests and ... of the human being shall prevail over the sole interest of society or science). Article 18 of the Protocol states that during removal the human body must be treated with respect. However, this obligation cannot be considered sufficient in terms of the protection of human dignity. The "presumed consent" in the Protocol should be safeguarded against all abuses. Note that although donation is considered normal for health care institutions, being a donor is related to a psychological process. The original basis of the principle of informed consent can be linked to the inseparability of human rights and freedom established by the French bourgeois revolution. According to the Civil Code of France (Napoleonic Code) (chapter on the inviolability of the person, Art.16.3) (Trans-Lex, 2016), there may be no infringement of the integrity of the human body. The consent of the concerned person must be obtained beforehand.

According to the Protocol (Art.19), parties may take all appropriate measures to promote the donation of organs and tissues. As mentioned, the Protocol is based on the principle of respect for human dignity in the legal regulation of organs and tissues transplantation (Art.1). Although some legal issues of human organs and tissues transplantation (e.g., "human organs and tissues transplantation in the absence of a declaration of will) are within the competence of the domestic legislation of individual states. In this regard, the Oviedo Convention (Art.36) does not interfere with the unilateral regulatory authority of states. However, in terms of ensuring the content richness of the principle of respect for human



dignity in the Protocol, there is also a need for a law-making process. In Article 17 of the Protocol (except for "the removal shall not take place if the deceased person had objected to it"), the rules and conditions of "consent and authorization" are left to the domestic legislation.

For preventing the criminal interests in the human organs and tissues transplantation and ensuring the "right to personal inviolability" of the deceased person, the norm "human organs and tissues transplantation is prohibited in the absence of will" can be included as part 2 of Article 17 of the Protocol. Such a norm would also serve the principle of dignity.

In accordance with the principle of respect for human dignity, as in Chapter VII of the Oviedo Convention, Protocol (21.1) states that "the human body and its parts shall not, as such give rise to financial gain or to obtain a comparable advantage." Here, the formula "... as such give rise to obtain a comparable advantage " should also be considered flawed. It should be noted that "...to obtain any, including social, physiological etc. comparative advantages."

Both the Protocol (Art.22) and the domestic legislation prohibit the commercialization of human organs and tissues transplantation, and state that the human organs and tissues transplantation is free of charge. Article 4 of the Law of the Republic of Azerbaijan "On Donation and Transplantation of Human Organs and Tissues" states that legality, humanism, volunteerism, solidarity, compassion and disinterestedness are the principle directions of organ donation and transplantation. However, as mentioned, organ donation is often accompanied by moral and ethical problems. According to the position of experts, although the human organs and tissues transplantation from one relative and implantation of them into another person is legally free, it is also a transaction. There are different theories on the fair distribution of these scarce resources, and sometimes preference is given to individuals of "higher" social importance (Mustafaeva, & Mamedov, 2010). As stated in the Council of Europe Convention Against Trafficking in Human Organs (Council of Europe, 2015), enacted in 2018, and Article 22 of the Protocol ("prohibition of financial gain"), trade in organs is prohibited in the legislation of the Republic of Azerbaijan. Article 32 of the Law states that the purchase and sale, as well as advertising the need for donor organs is prohibited. Organ trafficking has a number of inexcusable moral ugliness.

The purchase and sale of the human body, with its transformation into an object, leads to the violation of the special social status of the person in the society, depersonalization and demoralization of the person. Trade in organs as a new form of exploitation increase social injustice in society and the rich literally survive at the expense of the poor. Since it is impossible due to various objective and subjective reasons, it should be a matter of special legislation not to eliminate this injustice, but to ensure control over it.

In world practice, there are several legal types of organ removal from a deceased person (corpse). As noted in the literature the cultural, religious, etc. specifics of the region taken separately while establishing the states' domestic legislation on transplantation should be taken into consideration. Mainly, the form of organ collection based on the consent given by the potential donor during his/her lifetime, which is used in some American states, as well as in the Netherlands, Portugal and several other European countries, contains moral and ethical values. It is based on the fundamental rights of the individual, such as self-determination and independence, with informed consent. A person retains the right to dispose of his life and body even after death. In medicine, this is considered a more democratic method. Doctors do not have the right to use the body of a deceased person at own discretion. In medicine, this is considered a more democratic method. In this case, the flexible preparation and transplantation of organs and tissues, the establishment of rapid, stable relationships of mutual trust between the doctor and the patient's relatives and the time required lead to psychological difficulties for doctors. In this case, the doctor collects the organs not by his/her personal will and desire, but according to the law. In terms of prevention of criminal cases, inviolability of personality, and the principle of dignity, as stated above, this form may be deemed as a form of universal regulation based on the rule of international law.

The main points of legislation related to the removal of organs from the corpse for transplantation are:

- the principle of written consent in contradictory (exceptional) form to the removal of donor organs from the corpse for transplantation;
- use of donor organs for transplantation, educational and scientific purposes;

- donation is a declaration of will during the lifetime of a fully functional person who has reached the age of majority;
- formalization of consent to removal of organs or objection of removal of organs with a special application form;
- inclusion of donation information in the register of persons who consented to donation, in the unified state database;
- the possibility to change the expression of will regarding donation at any time after the person's death;
- responsibility of the medical setting and the coordinating institution should be stated for ensuring the confidentiality of information related to the consent to organ transplantation or the objection of removal of organs.

## Conclusions

In case of comparison of the Protocol concerning Transplantation of Organs and Tissues of Human Origin with applicable Law of the Republic of Azerbaijan, despite the initial conclusion that the internal legislative act has a more comprehensive regulation, there is a superior regulation in the Protocol. In this sense, the adaptation of the legislation to the Protocol (Article 12) should be continued.

For preventing criminal interests in the transplantation of human organs and tissues and in terms of ensuring the "right to personal inviolability" of the deceased person, the norm "human organs and tissues transplantation is prohibited in the absence of will" can be included as part 2 of Article 17 of the Protocol. The wording of Article 21.1 of the Protocol ("...cannot be taken to gain comparable advantage") should also be considered flawed. Changing this norm as "...any, including social, physiological, etc. cannot be taken to gain comparable advantage" would be more logical in terms of safeguard human dignity.

Since the trafficking in human organs is a transnational crime that violates human rights and freedoms, human dignity, and threatens public and national security, the fight against it can only be effective with international legal cooperation. Criminal and administrative legislation of the Republic of Azerbaijan is being developed for toughening of punishments. Analysis of criminal legislation shows that all forms of illegal organ transplantation are not fully covered. Therefore, recognition of the Convention against Trafficking in Human Organs by the Republic of Azerbaijan would

make the fight against the criminal donation and transplantation effective and promote international legal cooperation against this transnational crime.

On the background of international legal cooperation against the illegal transplantation of human organs and tissues, establishment of the norms of responsibility in the domestic legislation of the states, including criminal liability, and toughening the punishments are of course important in preventing criminal activity. However, these measures are not the only way out. It seems impossible to prevent the problem using the international legal fight due to the increasing pace of trade in human organs.

## Bibliographic references

- Ambagtsheer, F. (2021). Understanding the challenges to investigating and prosecuting organ trafficking: a comparative analysis of two cases. *Trends Organ Crim*, 2, 37-59. <https://doi.org/10.1007/s12117-021-09421-2>
- Constitution of the Republic of Azerbaijan [Const.]. Art. 46.3. November 12, 1995 (Azerbaijan). Retrieved from <https://e-qanun.az/framework/897>
- Council of Europe. (1999). *Convention for the protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine: Convention on Human Rights and Biomedicine (ETS No. 164)*. Retrieved from <https://acortar.link/18TNjx>
- Council of Europe. (2002). *Additional Protocol to the Convention on Human Rights and Biomedicine concerning Transplantation of Organs and Tissues of Human Origin (ETS No. 186)*. Retrieved from <https://acortar.link/Zj34Rh>
- Council of Europe. (1997). *Explanatory Report to the Convention for the protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine: Convention on Human Rights and Biomedicine*. Retrieved from <https://rm.coe.int/1680a8e4d0>
- Council of Europe. (2015). *The Convention against Trafficking in Human Organs*. Retrieved from <https://rm.coe.int/16806dca3a>
- European Union (2011). *Judgements C-34/10, Oliver Brüstle v. Greenpeace e.v. Court (Grand Chamber) of 18 October 2011*. Retrieved from <https://acortar.link/j7gf6m>
- Ferreira Da Silva, I.V., & Frontera, J.A. (2015). Worldwide Barriers to Organ Donation. *JAMA Neurol*, 72(1), 112-118.

- <https://doi.org/10.1001/jamaneurol.2014.3083>
- Glaser, S. R. (2005). Formula to Stop the Illegal Organ Trade: Presumed Consent Laws and Mandatory Reporting Requirements for Doctors. *Human Rights Brief*, 12(2), 19-22. Retrieved from <https://acortar.link/9ZTo1r>
- Grigoriev, Yu., Grigoriev, I., & Istomina, L. (2001). Legal aspects of conducting some types of biomedical and clinical experiments. *Bulletin of new medical technologies*, 8(3), 79-81. (In Russian)
- Guseinov, L. G. (1998). *International obligations of states in the field of human rights*. Baku: publishing house "Legal Literature". (In Russian)
- International Humanitarian Law Databases. (1949). *Convention (IV) relative to the Protection of Civilian Persons in Time of War*. Retrieved from <https://ihl-databases.icrc.org/en/ihl-treaties/gciv-1949>
- Janis, M., Kay, R., & Bradley, E. (2008). *European Human Rights Law*. Oxford: Oxford University Press. ISBN: 9780199277469
- Koru, O. (2021). Legality of medical intervention: indication requirement. *İnönü University Faculty of Law Journal*, 12(2), 491-500.
- Law No. 360-IQ, On Protection of the Population Health. *Republic of Azerbaijan*, 1997. Retrieved from <https://cis-legislation.com/document.fwx?rgn=5809>
- Law No. 726-IG, On Transplantation of Human Organs and Tissues. *Republic of Azerbaijan*, 1999. Retrieved from <https://cis-legislation.com/document.fwx?rgn=2727>
- Mammadov, V., & Mustafayeva, A. (2013). *Bioethics, law and human rights*. Baku: Law.
- Mustafaeva, A.I., & Mamedov, V.K. (2010). *Transplantology: legal and ethical problems*. Baku: Echo. Retrieved from <https://acortar.link/4f0N3h>
- Neethu R. Elberte v. Latvia. *Application no. 61243/08*. European Court of Human Rights, 2015. Retrieved from [https://hudoc.echr.coe.int/fre#{%22itemid%22:\[%22001-150234%22\]}](https://hudoc.echr.coe.int/fre#{%22itemid%22:[%22001-150234%22]})
- Petrova v. Latvia. *Judgment 24.6.2014*. Case 4605/05. European Court of Human Rights, 2014. Retrieved from [https://hudoc.echr.coe.int/fre#{%22itemid%22:\[%22002-9531%22\]}](https://hudoc.echr.coe.int/fre#{%22itemid%22:[%22002-9531%22]})
- R.R. v. Poland-HUDOC. *Application no. 27617/04*. European Court of Human Rights, 2011. Retrieved from <https://acortar.link/4eEbEV>
- Sollie, P., & Duwell, M. (2009). *Evaluating New Technologies: Methodological Problems for the Ethical Assessment of Technology Developments*. (Vol. 3). Springer Science & Business Media.
- Stammers, T. (2022). Organ Trafficking: Why Do Healthcare Workers Engage in It?. *Cambridge Quarterly of Healthcare Ethics*, 31(3), 73-89. Retrieved from <https://acortar.link/OsEsVw>
- Swissinfo. (2022). *Amendments to the Law "On Human Organ Transplantation"*. Retrieved from <https://acortar.link/N9tKFi>
- Toebe, B. (2001). The right to health. *Economic, Social and Cultural Rights*. London: Law. Retrieved from <https://acortar.link/5Dir80>
- Trans-Lex. (2016). *French Civil Code*. Retrieved from [https://www.trans-lex.org/601101/\\_/french-civil-code-2016/](https://www.trans-lex.org/601101/_/french-civil-code-2016/)
- Tutun, S., Harfouche, A., Albizri, A., Johnson, M.E., & Haiyue H. (2022). A Responsible AI Framework for Mitigating the Ramifications of the Organ Donation Crisis. *Inf Syst Front*, 25, 2301-2316. Retrieved from <https://doi.org/10.1007/s10796-022-10340-y>
- United Nations. (1948). *Universal Declaration of Human Rights*. Retrieved from <https://www.refworld.org/docid/3ae6b3712c.html>
- United Nations (General Assembly). (1966a). *International Covenant on Civil and Political Rights*. Treaty Series, 999, 171. Retrieved from <https://www.refworld.org/docid/3ae6b3aa0.html>
- United Nations (General Assembly). (1966b). *International Covenant on Economic, Social, and Cultural Rights*. Treaty Series, 999, 171. Retrieved from <https://www.refworld.org/docid/3ae6b36c0.html>
- US Congress. (1984). National Organ Transplant Act of 1984. Retrieved from <https://acortar.link/vDEhTC>
- World Health Organization. (2016). Implementation of the Nagoya Protocol and pathogen sharing. Implications for healthcare. Retrieved from <https://acortar.link/d30I2H>

DOI: <https://doi.org/10.34069/AI/2023.71.11.16>

How to Cite:

Karamanov, O., Prokip, A., Tsiupryk, A., Ivashchenko, K., Koliada, T., & Dobryden, A. (2023). Youth religious education: from the ideas of reformist pedagogy to modern times. *Amazonia Investiga*, 12(71), 188-198. <https://doi.org/10.34069/AI/2023.71.11.16>

## Youth religious education: from the ideas of reformist pedagogy to modern times


### Релігійна освіта молоді: від ідей реформаторської педагогіки до сучасності

Received: September 28, 2023

Accepted: November 25, 2023

Written by:

**Oleksiy Karamanov<sup>1</sup>**

 <https://orcid.org/0000-0002-0067-0747>


**Andrii Prokip<sup>2</sup>**

 <https://orcid.org/0009-0002-3477-3872>

**Andrii Tsiupryk<sup>3</sup>**

 <https://orcid.org/0000-0002-2921-7778>

**Kateryna Ivashchenko<sup>4</sup>**

 <https://orcid.org/0000-0003-1133-9635>

**Tetiana Koliada<sup>5</sup>**

 <https://orcid.org/0000-0002-9202-1196>

**Alla Dobryden<sup>6</sup>**

 <https://orcid.org/0000-0003-0786-0161>


#### Abstract


The purpose of the study is to investigate the state of youth religious education, taking into account the mutual influence of educational and religious ideas in Galicia in the context of Reformed pedagogy of the turn of the 20th century. To achieve the goal, three scientific tasks were solved, in particular: to study the main factors of dissemination and interpretation of the ideas of Reformed pedagogy in Galicia; to identify fundamental aspects of the interaction of educational and religious ideas; to consider the nature of postulates of religious or Christian pedagogy; to study the opinion of student youth regarding their religious beliefs and influence on worldview (225 students of various higher education institutions of Ukraine aged from 19 to 22 participated in the survey).

#### Анотація


Метою дослідження є вивчення стану релігійного виховання молоді з урахуванням взаємовпливу освітніх і релігійних ідей у теорії та освітній практиці Галичини в контексті реформаторської педагогіки на рубежі ХХ ст. Для досягнення мети було вирішено наукові завдання, зокрема: дослідити основні чинники поширення та інтерпретації ідей реформаторської педагогіки в Галичині; виявити фундаментальні аспекти взаємодії просвітницьких і релігійних ідей; розглянути природу постулатів релігійної або християнської педагогіки; вивчити думку студентської молоді щодо їхніх релігійних переконань і впливу на світогляд (в опитування взяли участь 225 студентів різних закладів вищої освіти України віком від 19 до 22 років). На основі аналізу впливу ідей реформаторської

<sup>1</sup> Doctor of Sciences (Pedagogy), Professor at the Department of General Pedagogy and Pedagogy of Higher School, Head of the Laboratory of Museum Pedagogy. Ivan Franko National University of Lviv, Ukraine.  WoS Researcher ID: IAN-5627-2023

<sup>2</sup> Ph.D. (History), Associate Professor, Leading researcher at the Lviv Historical Museum, Ukraine.  WoS Researcher ID: JVO-5588-2024

<sup>3</sup> Doctor of Sciences (Pedagogy), Associate Professor at the Department of Applied Psychology and Pedagogy. Lviv State University of Life Safety, Ukraine.  WoS Researcher ID:GNZ-9934-2022

<sup>4</sup> Ph.D. (Pedagogy), Associate Professor at the Department of Social Pedagogy and Social Work. Pavlo Tychyna Uman State Pedagogical University, Ukraine.

<sup>5</sup> Ph.D. (Pedagogy), Associate Professor at the Department of Social Pedagogy and Social Work. Pavlo Tychyna Uman State Pedagogical University, Ukraine.  WoS Researcher ID: ITU-8453-2023

<sup>6</sup> Ph.D. (Pedagogy), Associate Professor at the Department of Educational Technologies and Pedagogical Creativity, Pavlo Tychyna Uman State Pedagogical University, Ukraine.



Based on the analysis of the impact of the ideas of reformatory pedagogy illustrated by Galicia of the early 20th century, the system of religious education from the points of view of Ukrainian and Polish pedagogues as well as religious figures is discussed. Religious education is emphasized to be a powerful means of developing moral values of the individual, and a significant factor of their social behavior. Facts of interaction of educational and religious ideas in the context of reformatory pedagogy in the theory and educational practice of Galicia are stated.

**Keywords:** reformatory pedagogy, religious pedagogy, moral values of an individual, Galicia, the early 20th century.

### Introduction

Religious factor always holds an important place in the development of any society leading to revealing and analysis of various concepts of faith, educational and spiritual values as well as religious freedom (freedom of conscience). While tracing various religious phenomena in the history of pedagogical thinking and educational practice, it is important to analyze the experience of certain European regions, in which the elements of religious education have undergone through some transformation during the reformation of the educational sphere without referring to the basic canons of faith. Galicia of the early 20<sup>th</sup> century (now the western regions of Ukraine – Lviv, Ternopil, Ivano-Frankivsk) can serve as an example of such a region where one can observe tolerant coexistence of different ethnic groups as well as interesting educational and religious interactions due to the active dissemination of ideas and concepts of reformatory pedagogy.

The religious education of young people in Galicia, who were members of various state associations during the period of the spread of reformist pedagogy (late nineteenth and early twentieth centuries), was characterized by its diversity, as they mainly represented Poles, Ukrainians, and Jews. Obviously, the worldview of these three peoples differed significantly, but we can find many common points (mainly related to the Catholic faith) related to the influence of the ideas of reformist pedagogy. The main approaches to understanding the basis of religious education can be illustrated by the educational and philosophical direction of cultural pedagogy, which considered education as a process of mastering the cultural heritage of mankind and, at the same time, as a process of

педагогіки, проілюстрованих Галичиною на початку ХХ ст., досліджується система релігійної освіти з точки зору українських і польських педагогів, а також релігійних діячів. Наголошується, що релігійне виховання є потужним засобом формування моральних цінностей особистості, вагомим фактором її соціальної поведінки. Викладено факти взаємодії освітніх і релігійних ідей у контексті реформаторської педагогіки в теорії та освітній практиці Галичини.

**Ключові слова:** реформаторська педагогіка, релігійна педагогіка, моральні цінності особистості, Галичина, початок ХХ століття.

personal self-improvement, emphasizing the unity of the social and subjective orientation of learning. Compared to the concept of naturalism, cultural pedagogy recognized the dependence of a person on the socio-cultural heritage and the regularity of the process of mastering universal values. Representatives of this trend (W. Dilthey, E. Spranger) pointed to the right of the individual to choose in the learning process those cultural achievements that meet his or her cultural needs and are significant for personal development. At the same time, they emphasized the active role of a person, which was manifested in his/her experiences and creative activity. At the same time, there was a religious trend (E. Ferster, J. Maritain) that demanded that schools be completely subordinated to moral and religious education, combining Christian pedagogy with both reformist and traditional ones. Education was seen here as “self-affirmation for man” on the way to God, to Christian brotherhood and love (Chmaj, 1938, pp. 353).

In our study, we used the following methods: problematic-historical, chronological, personalistic-biographical, theoretical generalization and comparison of historical facts, events, pedagogical phenomena, systematization and classification of historical and pedagogical literature, as well as the method of questionnaire in the format of an online survey.

### Literature Review

Modern scholars specify that from the middle of the 19<sup>th</sup> century till the beginning of the 20<sup>th</sup> century educational institutions in this area, reflecting the nature of development of the state and society, aimed at building pupils' values



which together can be defined as traditional spiritual values (Vorozhbit, 2013, pp. 95-100).

The issues stated above have been studied in various aspects by Ukrainian and Polish scholars such as W. Jamrózek (1994), A. Zakrzewska (2012), M. Pluskota (2012), Yu. Scherbyak (2012), V. Vorozhbit (2013), I. Strazhnikova (2014), B. Savchuk, & Yu. Chopyk (2015), K. Jurzysta (2017), particularly relating to social religious influences on the history of education, new educational context of religious doctrine, and education as a unifying factor of religion and culture, etc.

Modern works on the subject can be divided by nationality. As a rule, the works of Polish scholars touched upon general issues of religious education in interwar Poland (which at that time included Galicia), focusing on its humanistic nature, the relationship with "pedagogy of culture" and pedagogical personalism, etc.

At the same time, Ukrainian scholars emphasized the evolution of the theory and practice of religious education in Galicia and its role in spiritual, educational, and didactic activities.

When analyzing the views of Ukrainian and Polish educators in late nineteenth- and early twentieth-century Galicia on religious education, we should pay attention to several important figures.

Analysing the role of religious upbringing in human development, a famous Ukrainian pedagogue father Yulian Dzerovych<sup>7</sup> expressed his thoughts on the duration of upbringing. He believed that upbringing should last for such a period *"till a pupil realizes what their tasks toward God, society, the people and themselves are and what powers and means they have to fully perform these responsibilities"* (Dzerovych, 1905, pp. 43–45).

Revealing the educational role of the family, church and state, he emphasized the upbringing in the spirit of Christ's faith and religion since *"it is the Christian upbringing that is most appropriate for the temperament and character of our people"* (Dzerovych, 1938, pp. 195–196).

During the period under review, it was obvious to refer to the aim of religious upbringing, which was seen in pupil's personal spiritual and moral perfection and maturity as well as their independence. This can be reached only through long but gradual development of internal innate forces in mental, moral and aesthetic directions, and giving the relevant matter to these forces (Dzerovych, 1937, p. 25).

In Zygmunt Bielawski's<sup>8</sup> opinion, the aim of religious upbringing was the development of appropriate values, personal and social maturity in pupils. According to the pedagogue, while reaching it, pupils had to get a certain complete specialization that would reveal and open them to *"the goodness and further development of the society they live in"* (Bielawski, 1934, p. 51).

According to the beliefs of a famous Polish Galician catechist Jan Rozkwitalski<sup>9</sup>, new pedagogical trends perfectly harmonized and coordinated with religious doctrine and features of the youth of that time. Main constituents of this worldview were world knowledge, values and the ideal of life (Roskwitalski, 1935, pp. 418-419).

In her researches, B. Źulińska came to a conclusion that upbringing work should always start from work on oneself: this requires creating relevant features that make work with children easier and lead to Christian love. Such features are the ability to listen, punctuality, hospitality, respect for the elderly, and respect for others' work (Źulińska, 1928, pp. 129-130). So, the only tool in people's social relations is love, and its highest ideal is God.

Jan Ciemńiewski considered religion to be the most important feature of a character; the right development of a character can't happen without religion because *"without the revival of Christian sprouts, without their inoculation a true culture will not be produced; and humanity can return to the original state of barbarism; only true and sincere faith is a basis for rooted Christian life, only it can keep us in moral balance and save the world from total destruction"* (Ciemńiewski, 1907, p. 4).

In literature of the interwar period the term "school of religious life" was quite often used to

<sup>7</sup> Yulian Dzerovych (1871–1943) – a priest of the Ukrainian Greek Catholic Church, Galician pedagogue, church and educational and cultural figure, patron, professor.

<sup>8</sup> Zygmunt Bielawski (1877–1939) – a Polish pedagogue, theorist of religious and moral upbringing, academic teacher.

<sup>9</sup> Jan Rozkwitalski (1885–1939) – a Catholic priest, Polish pedagogue, catechist, theorist of religious and moral upbringing.

religious pedagogy. Such a school was meant to become the final evolution in catechism and contain two basic principles: of independence and concentration. That is why teacher's educational activity in this school had to be based on great love and respect for pupils, on the one hand, and on thorough knowledge of didactics and psychology, on the other hand (Roskewitski, 1928, p. 132).

### The aim of the research

The aim of the study is to investigate the state of youth religious education, taking into account the mutual influence of educational and religious ideas in the theory and educational practice of Galicia in the context of reformist pedagogy at the turn of the 20th century.

### Methodology

Among the numerous tendencies of reformatory pedagogy of the late 19th – early 20<sup>th</sup> century, a religious and pedagogic tendency should be singled out, the representatives of which tried to reconcile traditional postulates of the religious doctrine with the ideas of reformatory changes both in education and upbringing. From the scholars' point of view, this tendency focused rather on church and religious cultural tradition rather than political goals. It showed spiritual and moral upbringing of children as a way of understanding the meaning of human existence; treated it in an integrative unity with aesthetic and labor elements, based on faith and religious feelings (Vorozhbit, 2013, pp. 95-100).

Considering the issues chosen to examine, for main points worth attention are outlined below:

- firstly, the way the spread and interpretation of the ideas of reformatory pedagogy in Galicia took place;
- secondly, which most important aspects of interactions of educational and religious ideas can be highlighted;
- thirdly, the nature of postulates of religious or Christian pedagogy
- to study the opinion of student youth regarding their religious beliefs and influence on worldview.

Wide interpretation of religious themes within various pedagogical concepts enables the reference to relevant concepts, i.e. "moral upbringing", "religious upbringing", "spiritual upbringing", etc. One should notice that these concepts are of complementary nature since they

may be identified with pedagogical ethics, moral and spiritual values, cultural values and ideals.

Accordingly, local pedagogues developed the postulates of religious or Christian pedagogy, so that there was an embodiment of the true Christian spirit among people. Religion was a powerful means of forming the individual's worldview and moral values; it also served as a significant factor of the individual's social behavior.

The ideas of religious upbringing were embodied in the views of Ukrainian and Polish pedagogues and religious figures who emphasized the necessity of citizens' awareness of traditional concepts of faith and belief in the possibility to be both passionate Christians and thinking, independent persons at the same time.

Among the cross-cutting issues raised by pedagogues and religious figures one can distinguish:

- the search for the aim of religious upbringing and its role in person's life;
- the analysis of historical development of religious and moral pedagogy;
- the latest forms and methods of teaching religion in schools;
- the role of creativity in religious upbringing;
- the worldview and character formation with the help of religion.

During February–May 2023, in order to determine the level of awareness of pedagogical students of Ukrainian higher education institution regarding the issues of youth religious education in the context of the ideas of reformist pedagogy, an anonymous online survey was conducted, which contained 8 questions with suggested answer options and the opportunity to express own attitude to the problem.

225 students of various higher education institutions of Ukraine, aged from 19 to 22, took part in the survey.

### Results and Discussion

We take into account key moments of scholar's thought on perfection, independence and development of child's innate forces, which proves their knowledge of reformatory shifts in education of that time.

For example, the fact of a textbook by Zygmunt Bielawski "Religious and Moral Pedagogy (Catechetics)" revealing some psychological aspects of religious upbringing

alongside outlining the historical development of religious and moral pedagogy, as well as the proposal of forms and methods of teaching religion may serve as a proof.

When studying the peculiarities of the development of reformatory pedagogy of early 20<sup>th</sup> century, contemporaries remarked that new pedagogical trends must decisively influence the formation of the worldview and character of the youth. As a result, this will assist to bridge the gap between formal school and young people's private lives when *"school education will become the basis that will impact the psyche of a young person, penetrate into their essence and thus will form this person as an individual"* (Roskwitalski, 1935, pp. 418-419).

In particular, world knowledge was determined by the use of the principle of independence in religious cognition. The mentioned factor, which was derived from the church tradition, facilitated a certain revival of religious methods and opportunity for the youth to master religious doctrine independently (Karamanov, 2004, p. 9).

The next constituent was values that the pupil experienced in the process of religious cognition. This means that a young person experiences a certain value, and in the process of cognition receives what becomes a part of their new own "me". As a result, cognitive value becomes a new source of life. This constituent with its principles is close to the tendency of pedagogy of culture, which relates to religious pedagogy, since in pedagogy of culture, as well as in humanistic pedagogy, culture makes a basis as a world of spirit and values in forming humanistic development of the world and human (Jurzysta, 2017, p. 15).

The third constituent is the ideal of life that means creating a true life ideal based on deep faith in the Bible. The personality of catechist had to play an important role here (Roskwitalski, 1935, pp. 420-433).

The views mentioned above can be compared with the ideas of philosophic and pedagogical stance of personalism, which puts a human being in the centre of research interests as a personality and interprets religion as a personal connection of a human with God (Pluskota, 2012, p. 65).

In this regard, it can be noted that religious instinct is an important element in the structure of human consciousness, which is manifested in the search for happiness, the pursuit of perfection and better life, etc.

During the period under study, issues of the role of creativity in religious upbringing, which was crucial for the formation of a harmonious personality, became of great importance. According to the views of a Polish teacher Barbara Żulińska<sup>10</sup>, creativity is *"a divine spark, the flowering of thought that should develop Catholic doctrine"* (Żulińska, 1930, pp. 466-467).

In particular, she defined such terms of development of creativity in pedagogue's activity:

- an inner state that does not allow to implement things incompatible with the principles of faith and Christian ethics into the teaching process;
- the ability to justify one's opinions;
- the respect towards pupils striving to show their creative abilities;
- the increase of one's own independence;
- the creation of methods of upbringing, which are most derived from pupils' needs;
- the desire for continuous self-improvement – *"a creative person is a person of an idea, and therefore a person who can love"*;
- the formation of the ability to focus and concentrate (Żulińska, 1930, pp. 467-468).

According to the apt statement of the author, the things psychology and pedagogics teach are long known from the Gospel but teachers do not fully use Christ's teaching for pedagogical goals (Żulińska, 1930, p. 469).

In this respect, Jan Ciemniewski's<sup>11</sup> views deserve attention; his scientific interests focused on the issue of cognition and character training from a religious point of view. Outlining the concept of "a character", the author determined two different meanings:

- a character is an inner side of a person, their individual constitution, which distinguishes the individuality of each of us; in such a sense each human must have a character since everyone has a certain inner individuality;

<sup>10</sup> Barbara Żulińska (1881–1962) – a Catholic pedagogue, academic teacher, founder of children's medical camps in Galicia.

<sup>11</sup> Jan Ciemniewski (1866–1947) – a Catholic priest, Doctor of Philosophy and Theology, pedagogue; during the interwar period he educated the youth of Lviv grammar school.

- having a character means “*establishing a certain order and ethical rules in one’s life, a harmony with the right to follow the voice of conscience and reason because people with a character make conscience of the people*” (Ciemniewski, 1903, pp. 8-9).

The researcher believed that degeneration of human characters was the result of disregard for the laws of nature, the reason for which was the withdrawal from religion and transformation of the religious doctrine into pure formalism. He saw the way out of this state in the adaptation of the word of God to the needs of the new man, and following the example of pedagogy and psychology, in the search for “*new ways of introducing the eternal truths of faith to people*” (Ciemniewski, 1907, p. 5). Therefore, J. Ciemniewski in his views advocated the opportunity for all to be independent, creative, active individuals, and at the same time ardent followers of Christianity.

Scholars’ thoughts on the importance of practical application of the method of labour school in religion that should fully cultivate feelings and mental independence of man may serve as an important proof of educational and religious interactions in a pedagogical thought of that period.

The aim of this method was to evoke an intensive religious life and raise religious and ethical character. According to this, religious knowledge should not remain just knowledge but have to be implemented in real life on the grounds of Christian and Catholic ethics (Roskwitalski, 1928, pp. 70-71).

One can state that in Roskwitalski’s views an attempt to adjust new reformatory pedagogics to religion was traced at the same time opening a way to new religious pedagogics. The key element of this pedagogics was spiritual aspect of the existence of a human. The inner activity of man and man’s ability to productively use their own opportunities were recognized as the main characteristics of the existence.

It should be noted that in educational institutions of Galicia, religious subjects were of paramount importance, being one of the main. Being focused on cultivating principles of faith, they contributed to the formation of a holistic religious worldview aimed at keeping a human being from moral decline (Ministry of Religious

Denominations and Public Enlightenment, 1926, pp. 106-107).

During the interwar period the role of religious pedagogy constantly grew in Galicia, which particularly was caused by encyclicals by Pope Pius XI “That Divine Teacher” dated 31/12/1929 and “Chaste Wedlock” dated 31/12/1930 as well as by the operation of the organization Generalny Instytut Akcji Katolickiej formed in 1930 (Jamrózek, 1994, p. 102). The encyclicals facilitated the increase of the influence of Christian religion on building the worldview and character of young people.

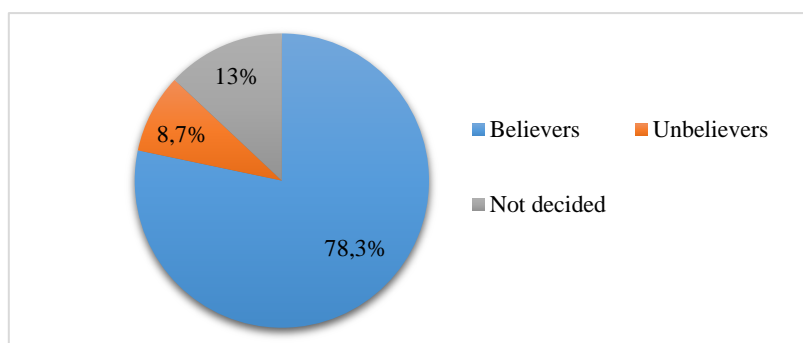
In general, the spread of the reformatory ideas of education and upbringing in Galicia stimulated the discussion among local pedagogues of various national groups concerning the role and meaning of religion in the life of both a society and each citizen in particular. In its turn, this provoked the formation of the postulates of religious or Christian pedagogy that aimed at embodiment of the true Christian spirit, building the worldview and moral values of a person and appropriate social behaviour.

Ukrainian and Polish pedagogues of Galicia saw religious education and upbringing as a source of full human development, pointing out that the educational goals formulated here contribute to the full formation of man. Such a system is definitely a bearer of the humanization of the social life since it “looks” at everything from the point of view of love to God and neighbour, and therefore is free from hatred, which is often shared by people, social groups, nations or states (Zakrzewska, 2012, p. 49).

Based on the survey conducted to determine the level of awareness of students of pedagogical specialties of higher education institutions of Ukraine with the problems of religious education of young people in the context of the ideas of reformist pedagogy, we obtained the following results.

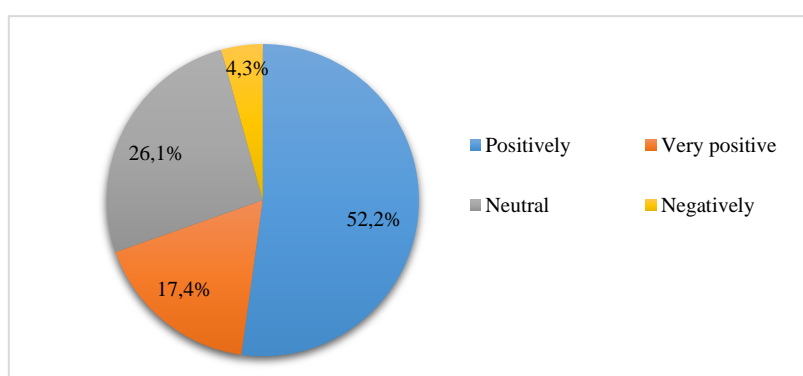
78.3% identified themselves as religious people, 8.7% identified themselves as non-religious people, and 13% could not clearly define this question for themselves (Fig. 1).

52.2% of respondents positively assess the influence of religious education on young people in society, 17.4% are very positive, 26.1% are neutral, and 4.3% are negative (Fig. 2).



**Fig. 1.** Results of a survey of students about their religiosity.

Source: Authors' calculations based on the survey results.



**Fig. 2.** Assessment of the impact of religious education on youth in society.

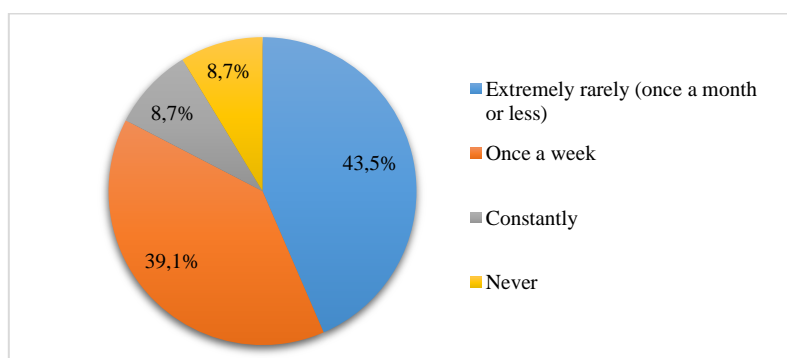
Source: Authors' calculations based on the survey results.

Most of the surveyed students show a certain passivity to the question "How often do you take part in various religious events or practices (worship, prayers, religious gatherings, singing, etc.?)" – 43.5% do it extremely rarely (once a month or less), at the same time 39.1% take part in such events once a week, 8.7% – constantly and 8.7% – never (Fig. 3).

Such a passivity can be explained by the rhythmic and saturated pace of life, active involvement in educational activities, and

participation in various attractions in non-formal education institutions.

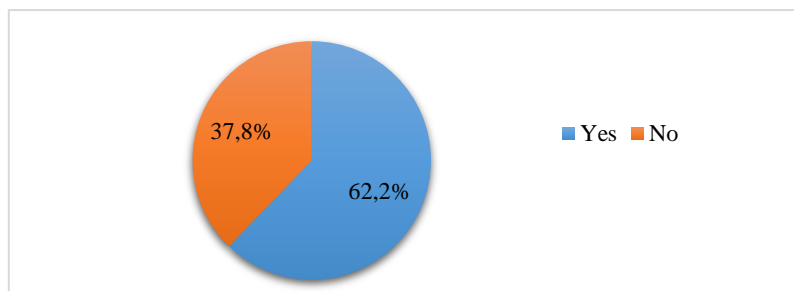
The answer to the question "Are you familiar with the currents of reformist pedagogy, in particular, the idea of free personal education, pragmatism, labor school, experimental pedagogy and psychology, the project method, etc.?" is interesting, because students demonstrate a fairly high level of awareness (62.2% said "yes" against 37.8% – "no"), due to actual knowledge of the educational material (Fig. 4).



**Fig. 3.** How often do you participate in various religious activities or practices (worship, prayers, religious gatherings, singing, etc.?)

Source: Authors' calculations based on the survey results.



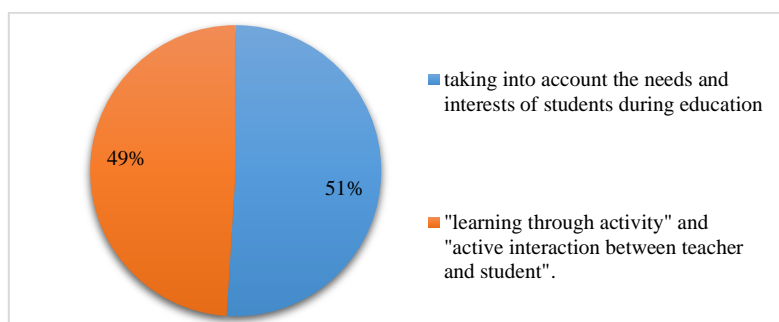


**Fig. 4.** Are you familiar with the currents of reformist pedagogy, in particular, the idea of free personality education, pragmatism, labor school, experimental pedagogy and psychology, project method, etc.?

Source: Authors' calculations based on the survey results.

This is confirmed by the answers to the question "Which of the ideas of reformist pedagogy, in your opinion, can be useful for the religious education of young people?". More than 50% of students chose "taking into account the needs and

interests of students during education", "civic education" and the idea of free personality education. Definitions for "learning through activity" and "active teacher-student interaction" were somewhat less useful (Fig. 5).

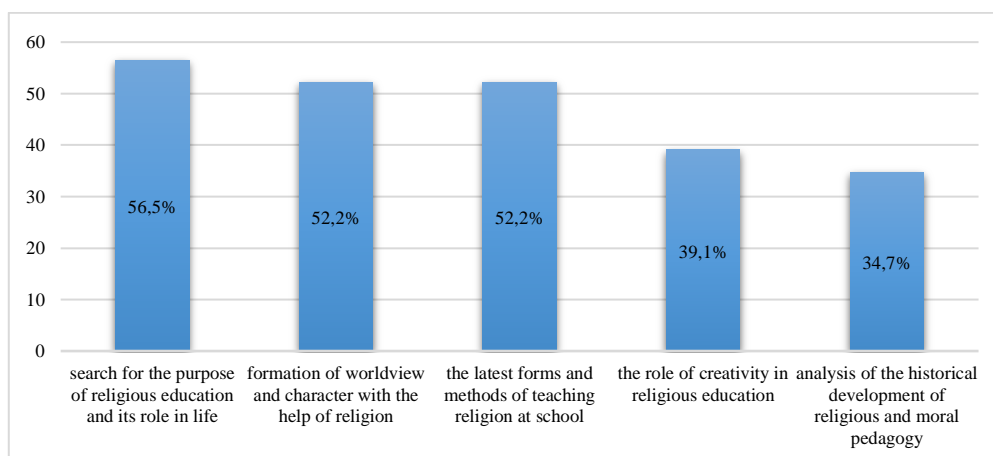


**Fig. 5.** Which of the ideas of reformist pedagogy, in your opinion, can be useful for the religious education of young people?

Source: Authors' calculations based on the survey results.

To the question "Which of the ideas of religious education in the context of reformist pedagogy can be applied in the process of youth religious education?" the majority of respondents noted "the search for the purpose of religious education and its role in life" (56.5%), "the formation of worldview and character with the help of

religion" (52.2%), "the newest forms and methods of teaching religion at school" (52.2%). Slightly fewer respondents chose "the role of creativity in religious education" (39.1%), and "analysis of the historical development of religious and moral pedagogy" (34.7%) (Fig. 6).

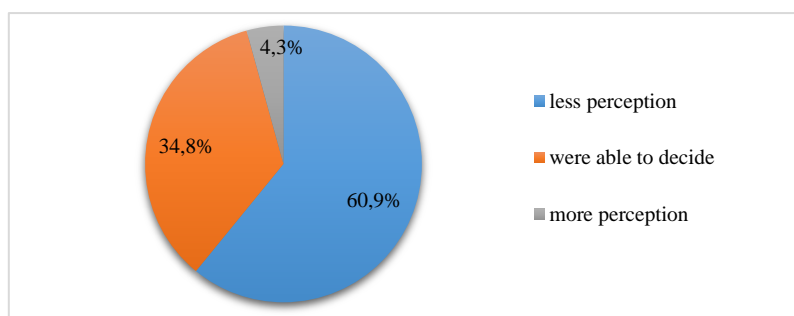


**Fig. 6.** Which of the ideas of religious education in the context of reformist pedagogy can be applied in the process of religious education of youth?

Source: Authors' calculations based on the survey results.

A certain resonance among students was caused by the question “Do you agree with the opinion that today’s youth are more or less receptive to religious education compared to previous generations?”, to which the majority answered

that they have less acceptance (60.9%), the rest could not decide with an answer (34.8%), and only 4.3% answered that they have more acceptance (Fig. 7).

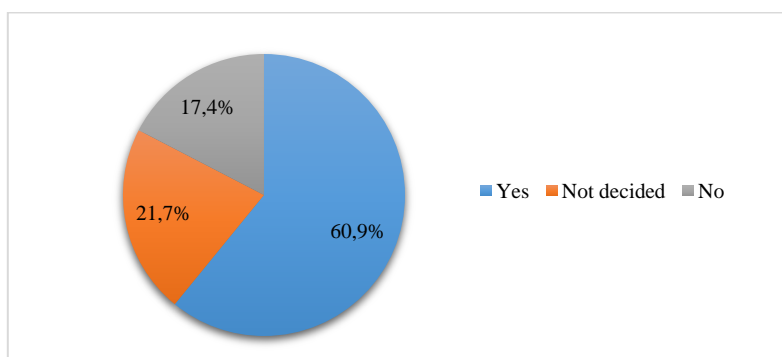


**Fig. 7.** Can we agree with the opinion that today’s youth are more or less receptive to religious education compared to previous generations?

*Source: Authors’ calculations based on the survey results.*

At the same time, young people are aware of the prospects. The absolute majority (60.9%) gave an affirmative answer to the question “Do you

think that religious education should be a mandatory part of education in society?”, 21.7% could not decide, and 17.4% denied it (Fig. 8).



**Fig. 8.** Do you think that religious education should be a mandatory part of education in society?

*Source: Authors’ calculations based on the survey results.*

So, the results of the survey testify to the students’ awareness of the phenomenon of reformist pedagogy of the late 19th and early 20th centuries and its main ideas related to the young people’s religious education, in particular, in the context of taking into account the needs and interests of youth during education, the formation of a worldview and the free education.

Against the background of less acceptance of religious education in modern conditions, the majority of students consider themselves religious people and advocate the inclusion of religion as a mandatory component of public education.

## Conclusions

On the basis of the conducted scientific research, it is possible to determine the following aspects

of the interaction of educational and religious ideas in the context of reformative pedagogy:

- the formation of moral behaviour, worldview and character of the youth, after all, these things are always universal for both educational and religious influences;
- the focus on spiritual aspects of the existence of a person;
- the desire for creativity and constant self-improvement.

These ideas are actively accepted by the modern students, who are mostly familiar with the historical currents of reformist pedagogy, which advocated global changes in the field of educational policy, free access to education, and individual freedom. In the context of religious education, these ideas were harmoniously combined with the postulates of faith and free

personal education, the need to adhere to appropriate norms of behavior and the formation of a broad worldview, deep respect for established traditions and customs with activity and responsibility for one's own behavior.

On the example of the comparative analysis of religious traditions of Galicia of the early 20<sup>th</sup> century with its cultural phenomena and educational transformations, openness to new reformatory changes (which clearly showed the progressive changes in the field of schooling), one can notice, on the one hand, deep respect for religious customs, formation of spiritual and moral values, and on the other hand, the focus on the activeness and independence of a human together with discipline and faith in God, which generally corresponded to the postulates of reformatory pedagogics that emphasized the importance of realization and discovery of human forces and opportunities, humanistic treatment to a child, formation of child's individual and innate abilities.

The results of the research are of direct interest for modern educational practice, as they not only reflect an actual historical and pedagogical problem on the example of one region, but also indicate that religious education of young people can be an important part of general education, which can help young people to fully develop their potential, to realize themselves in modern society and to see the prospects for their own development.

### Bibliographic references

- Bielawski, Z. (1934). *Religious and moral pedagogy (catechetics)*. Lviv: Religious Library, 735 p. <https://acortar.link/VvgkWH> (in Polish).
- Ciemniewski, J. (1903). *Recognition and character development*. Saint's Bookstore Wojciech, Part 1, 246 p. <http://pbc.up.krakow.pl/dlibra/doccontent?id=5576> (in Polish).
- Ciemniewski, J. (1907). *On the actions of faith from the standpoint of modern psychology*. Poznań: Print. and Books. Saint Wojciech, 64 p. <https://acortar.link/Gm2xij> (in Polish).
- Chmaj, L. (1938). *Trends and currents in contemporary pedagogy*. Warsaw: Nasza Księgarnia, 752 p. (in Polish).
- Dzerovych, Yu. (1905). *How to live in the world? Or the rules of good education*. Ternopil: "Drukarnia Podilska" EU. Stepka 180 p. (in Ukrainian).
- Dzerovych, Yu. (1937). *Pedagogy*. Lviv: Edition of the Greek Catholic Theological Academy, 240 p. (in Ukrainian).
- Dzerovych, Yu. (1938). *Christian religious and moral education of youth*. The First Ukrainian Pedagogical Congress, Lviv, pp. 195-197. <https://acortar.link/5QgWHJ> (in Ukrainian).
- Jamrózek, W. (1994). Education and pedagogical thought in Poland of the interwar period. In: Hellwig, J. (ed.). *History of upbringing. Script for full-time and extramural students*. Poznań: Scholar, pp. 91-105. <https://acortar.link/jnfYix> (in Polish).
- Jurzyska, K. (2017). The pedagogy of culture in the system of contemporary education. *Journal of Modern Science*, 4(35), 11-32. <https://doi.org/10.13166/jms/84814> (in Polish).
- Knysh, I., Dubinka, M., Kochubei, O., Poliakov, I., & Tiahur, V. (2022). Practices for readiness of future specialists for professional self-determination in the information society. *Amazonia Investiga*, 11(59), 108-118. <https://doi.org/10.34069/AI/2022.59.11.10>
- Karamanov, O. V. (2004). *The development of reformist ideas of education and training in Eastern Galicia in the first third of the 20<sup>th</sup> century*. (Extended abstract of candidate's thesis). Ivan Franko National University of Lviv, Lviv. (in Ukrainian).
- Ministry of Religious Denominations and Public Enlightenment (1926). *Curriculum for state teaching seminaries*. Warsaw, 264 p. <https://polona.pl/preview/8e1430dd-c17c-4d71-8807-9f57f0f92bae> (in Polish).
- Pluskota, M. (2012). Pedagogical personalism: in search of autonomous personhood. *Pedagogical and Medical Notebooks: Innovation and Creativity in Pedagogy*, 19(3), 65-75. <http://surl.li/emgmrm> (in Polish).
- Roskwitalski, J. (1928). School of work and religious education. *Monthly Catechetical and Educational Magazine*. Warsaw, (1), 10-390. <https://acortar.link/I1Bwvp> (in Polish).
- Roskwitalski, J. (1935). New pedagogical currents in the face of Catholic principles. *Monthly Catechetical and Educational Magazine*. Warsaw, (X), 418-432. <https://bcu.lib.uni.lodz.pl/publication/87185> (in Polish).
- Savchuk, B., & Chopyk, Yu. (2015). The impact of reformed pedagogy in development of theory and practice of teaching and education in Ukraine in the first third of the twentieth

- century: Historiography of the problem. *Human Studies. Series of Pedagogy*, (31), 260-270.  
<http://pedagogy.dspu.in.ua/index.php/pedagogy/article/view/33> (in Ukrainian).
- Scherbyak, Yu. (2012). Rol The role of catholic periodicals in an educational activity of the Ukrainian Greek and Catholic Church of the first part of the 20<sup>th</sup>. *Pedagogical sciences*, (54), 87-94.  
[http://nbuv.gov.ua/UJRN/pena\\_2012\\_54\\_18](http://nbuv.gov.ua/UJRN/pena_2012_54_18) (in Ukrainian).
- Strazhnikova, I. (2014). Evolution of the theory and practice of religious and moral education in the western region of Ukraine. *Scientific Bulletin of Uzhhorod University. Series: "Pedagogy. Social Work"*, (32), 189-192 (in Ukrainian).
- Vorozhbit, V. (2013). Spiritual and moral upbringing of a child in the heritage of representatives of the religious and pedagogical direction of pedagogy of the second half of the 19<sup>th</sup> and early 20<sup>th</sup> centuries. *New collegium*, (2), 98-101 (in Ukrainian).
- Zakrzewska, A. (2012). Religious education of school children and youth of the interwar period as a source of humanization of social life. *Christian education*, 2(30), 47-53.  
<http://surl.li/emgmy> (in Polish).
- Żulińska, B. (1928). *The mother-citizen. Talks on child-rearing*. Lviv: Religious Library, 157 p. (in Polish).
- Żulińska, B. (1930). More creativity. *Monthly Catechetical and Educational Magazine*. Warsaw, (X), 465-470.  
<https://bcu.lib.uni.lodz.pl/dlibra/publication/86985/edition/78089> (in Polish).

DOI: <https://doi.org/10.34069/AI/2023.71.11.17>

How to Cite:

Babalich, V., Sobko, N., Maleniuk, T., Sobko, S., Kovalova, Y. (2023). Modern trends of physical education and sports in the education system of Ukraine. *Amazonia Investiga*, 12(71), 199-213. <https://doi.org/10.34069/AI/2023.71.11.17>

## Modern trends of physical education and sports in the education system of Ukraine

### Сучасні тенденції фізичного виховання і спорту в системі освіти України

Received: August 17, 2023

Accepted: October 21, 2023

Written by:


**Viktoria Babalich<sup>1</sup>** <https://orcid.org/0000-0001-5698-836X>**Nataliya Sobko<sup>2</sup>** <https://orcid.org/0000-0002-5354-9262>**Tetiana Maleniuk<sup>3</sup>** <https://orcid.org/0000-0003-2966-1382>**Serhiy Sobko<sup>4</sup>** <https://orcid.org/0000-0001-7375-2869>**Yuliia Kovalova<sup>5</sup>** <https://orcid.org/0000-0002-4649-294X>


#### Abstract


The article examines issues of modern trends in physical education and sports in the education system of Ukraine. The role of video materials in the innovative provision of the educational and training process is shown, which became possible for use with the appearance of special programs for processing digital video information, and digital video cameras that allow the output of video information on various media. In the educational process of training future specialists in physical culture and sports, the following options for innovation policy are defined: the policy of "innovative push", "market orientation", "social orientation", and "direction for change". The multifaceted nature of innovative educational innovations is shown. For high-quality professional training of future specialists in physical culture and sports, a methodological basis is described to use innovative types of motor activity. The conducted experimental research makes it


#### Анотація


У статті розглядаються питання про сучасні тенденції у фізичному вихованні і спорті в системі освіти України. Показано роль відеоматеріалів в інноваційному забезпеченні навчально-тренувального процесу, що стали можливі для використання з появою спеціальних програм обробки цифрової відеоінформації, цифрових відеокамер що дозволяють виведення відеоінформації на різні носії. В освітньому процесі підготовки майбутніх фахівців фізичної культури і спорту визначено такі варіанти інноваційної політики – це: політика «інноваційного поштовху», «ринкової орієнтації», «соціальної орієнтації», «спрямування на зміну». Показано багатоаспектність специфіки інноваційних освітніх інновацій. Для якісної професійної підготовки майбутніх фахівців фізичної культури і спорту описано методологічний базис з метою використання інноваційних видів рухової активності. Проведене

<sup>1</sup> Ph.D. (Pedagogy), Associate Professor of the Department of Theory and Methodology of Olympic and Professional Sport, Volodymyr Vynnychenko Central Ukrainian State University, Ukraine.  WoS Researcher ID: HPE-4390-2023

<sup>2</sup> Candidate of Science of Physical Culture and Sport, Associate Professor, Associate Professor of the Department of Theory and Methodology of Olympic and Professional Sports, Volodymyr Vynnychenko Central Ukrainian State University, Ukraine.  WoS Researcher ID: IAP-2989-2023

<sup>3</sup> Ph.D. in Physical and Sport, Associate Professor of the Department of Theory and Methodology of Olympic and Professional Sport, Volodymyr Vynnychenko Central Ukrainian State University, Ukraine.  WoS Researcher ID: HTQ-0787-2023

<sup>4</sup> Candidate of Pedagogical Sciences, Associate Professor, Associate Professor of the Department of Physical Education and Health-Recreational Work, Volodymyr Vynnychenko Central Ukrainian State University, Ukraine.  WoS Researcher ID: HTQ-0538-2023

<sup>5</sup> Ph.D. (Pedagogy), Senior Instructor (Lecturer) of the Department of Physical Education and Health-Recreational work, Volodymyr Vynnychenko Central Ukrainian State University, Ukraine.  WoS Researcher ID: IAM-5845-2023



possible to conclude positive qualitative changes in the formation of the readiness of future physical culture and sports specialists to use innovative educational technologies in educational and professional activities, which indicates the effectiveness of the proposed method of applying innovative educational technologies in institutions of higher education to form future specialists of multimedia competence.

**Keywords:** professional training, physical culture and sports specialists, innovative educational technologies, informatization of education, institutions of higher education.

## Introduction

The integration of domestic professional training into the pan-European and global context begins with the awareness of the basics and principles of modern continuous professional training, and the search for ways of its practical implementation. Therefore, it is relevant to determine the current trends in physical education and sports in the education system of Ukraine.

Physical education and sports a priori play an important role in a person's life and cover all age groups of the population. Considering the multifunctional character of physical culture and sports, it determines the development of physical, aesthetic, and moral qualities of the individual, enriches the leisure time of the population, performs a preventive function concerning diseases, promotes physical and psycho-emotional rehabilitation and communication, helps in the education of the younger generation.

Modern students of higher education quickly respond to changes in the digital world, easily perceive technological innovations, and readily find out issues of leisure organization and household issues with the help of advanced software and technical tools. The experience of training future specialists shows that they lack the skills to use technological innovations in non-standard situations and their limited perception of the possibilities of using innovative technologies in providing a system of physical education and sports. Despite the rapid development of technology and science as part of the integral development of today's society, the applied orientation of education in the field of innovative information technologies is not fully implemented, which hinders the further professional development of future specialists in

експериментальне дослідження дає можливість зробити висновок про позитивні якісні зміни у формуванні готовності майбутніх фахівців фізичної культури і спорту до застосування інноваційних освітніх технологій у навчальній та фаховій діяльності, що свідчить про ефективність запропонованої методики застосування інноваційних освітніх технологій у закладах вищої освіти з метою формування у майбутніх фахівців мультимедійної компетентції.

**Ключові слова:** професійна підготовка, фахівці фізичної культури і спорту, інноваційні освітні технології, інформатизація освіти, заклади вищої освіти.

physical culture and sports (Byshevets et al., 2020).

Nowadays, physical culture and sports are considered the main components of society's culture, the mastery of which affects the totality of society's achievements in the rational use and creation of special methods, means, and conditions for the purposeful spiritual and physical improvement of the personality of its physical and motor qualities, on the improvement of people's skills. Competitive, high-quality professional training of physical culture and sports specialists within the framework of the multifaceted specificity of educational innovations is gaining great importance today (Petrenko, 2018).

All these positions require new approaches to the introduction of educational innovations into the educational process of the higher school and the development of forms, content, and methods of professional training of specialists of the new formation. Let's consider the study of the multifaceted specificity of educational innovations in the professional training of future specialists in physical education and sports.

## Literature Review

Modern pedagogical technologies focus the system of higher physical education on the preparation of graduates who possess professional competence and the ability to navigate the labor market, present themselves favorably, and withstand competition with other applicants for jobs. Therefore, one of the tasks of a higher school is to create conditions for training a graduate who can compete in the labor market. It is important for effective professional training

of the future of specialists in physical education and sports to have the quality of higher physical education, which determines the degree of their readiness for various activities, as well as personal, worldview, and civic development. A scientist L. Denysova (2017) analyzed the ways of using information and communication technologies and characterized the modern view and trends of introducing the latest technologies in the professional training of future masters of physical culture and sports. The scientist concluded the need to implement modern information technologies based on cloud computing to solve the issues of providing information resources for higher education and the development of IT infrastructure in educational institutions.

Innovative approaches to high-quality training of future specialists in physical culture and sports were analyzed by O. Sohokon, Ye. Shostak, & O. Donets (2021). They characterized the content of modernization of education, which primarily forms a specialist of high competence and quality, capable in the conditions of continuous integration into the European educational space to innovatively search for ways of self-realization. The importance of a competitive specialist in physical culture and sports is shown, which depends on providing a differentiated approach to children of different ages, strengthening the health potential of young people, and motivating and predicting their needs for self-improvement and physical development. In the modern training of a future specialist in physical culture and sports, the ways of implementing socio-economic, professional, humanitarian, and practical training are revealed.

Many works are devoted to various aspects of physical education and sports in the education system of Ukraine. Thus, the theoretical and methodological principles of the formation of the system of sports for all in Ukraine were reflected in the scientific work of V. Pylnenkyi (2021). He considered innovations that can be used in institutions of higher education and modern technologies in physical culture and sports, which are used in the training of future athletes. It has been proven that innovative education is one of the ways to improve the educational process and an important factor in the entry of the education system of each country into the common European educational space. The necessity of using innovative technologies in the training of future athletes and contributing to the formation of sustainable motivation to maintain physical development, health, and physical training has been proven; the importance of

scientific developments, new technologies in education, and the improvement of sports equipment is shown, penetrating all aspects of education and life, allowing to achieve positive educational and practical results, offering equipment and high-tech equipment.

The basis of the study of the problem of professional training of the future scientific works of specialists in physical education and sports. O. Savonova (2019) singled out the features of the use of mixed learning technologies and named the advantages of implementing the professional training of future specialists in physical education and sports. S. Shynkariov & S. Kostenko (2016) considered the types of innovative technologies; the importance of innovative technologies for quality training of physical culture and sports teachers is revealed; ways of effective use of innovative technologies in the educational process are determined; the integration foundations of the higher education system have been established, which provide for the introduction of innovative technologies in the process of professional training of a teacher of physical culture and sports under the condition of the development and preservation of the traditions and achievements of the higher school.

The researches of modern scientists highlight the problems of improving the professional orientation of the process of physical training of future specialists of various profiles in institutions of higher education. S. Lazorenko (2020) focused attention on the quality training of future specialists in physical culture and sports for the implementation of digital technologies in their professional activities. The scientist emphasized the need for a sufficient modern level of information competence, technological readiness, and digital literacy of physical culture and sports specialists who can find ways to solve professional problems, orient themselves in problematic situations, and be competitive in the labor market.

The methodical and theoretical aspects of the professional training of future specialists in physical culture and sports in institutions of higher education, which is based on holistic, systemic, person-oriented, competence-based, activity-based, reflective, and other approaches, were studied; ideas of synergy; on the provisions of the humanistic paradigm of education; takes into account the development trends of the field of physical culture and sports, the structure of the professional and pedagogical competence of specialist N. Stepanchenko (2017). The author

created and proved the effectiveness of the developed concept of professional training of specialists, and substantiated the conditions for improving the professional training of future specialists in physical education and sports.

In general, the problem of physical education and sports in the education system of Ukraine remains understudied.

At the same time, the peculiarities of training future specialists in institutions of higher education in the field of physical culture and sports are even less studied. Despite the pedagogical orientation of these institutions, the current system of professional training is aimed more at the development of sports skills and the general scientific component of the education of future physical education specialists, which does not provide graduates with the level of pedagogical competence by social demand.

Therefore, despite the importance of scientific research, the problem of professional training of future physical education specialists in higher educational institutions has not been sufficiently studied in the theoretical and methodological aspects, and the traditional education system is not able to ensure the organic entry of a new generation of specialists into the complex and rapidly changing field of diverse needs of educational activity in modern higher education. The defined range of scientific and practical tasks for the development of higher education in Ukraine, together with the current problems of modern science, determined the choice of the topic of our article.

**The purpose of the research:** to find out the main effective modern trends of physical education and sports in the education system of Ukraine and propose ways of their use in the process of professional training of future specialists in physical culture and sports and experimentally verify their effectiveness.

### Methodology

Theoretical research methods were used in order to identify factors influencing the professional training of future physical culture and sports specialists; aimed at obtaining conclusions and objective data for the specifics of the research subject: generalization of results and systematization of research in the field of education to characterize the state of development of the problem of training future specialists in physical culture and sports for the use of innovative types of motor activity in their

professional activities; extrapolation and analysis of research results obtained during the study of pedagogic, sociological, psychological, scientific literature, for substantiation and determination of practical and theoretical principles of training future specialists in physical culture and sports to use the methodological basis of research, innovative types of motor activity in professional activity; to carry out a comparative analysis, with the aim of comparing the theoretical approaches available in the literature to the definition and justification of the qualitative professional training of future physical culture and sports specialists with the use of information technologies in institutions of higher education, and a pedagogical experiment (declarative, formative) – to determine qualitative changes in the formation of readiness future specialists in physical culture and sports to the use of innovative educational technologies in educational and professional activities.

The study of finding out the main effective innovative educational technologies and proposing ways of their use in the process of professional training of future physical culture and sports specialists was carried out based on activity, system, personal, and competence approaches.

A methodological basis was developed for the high-quality professional training of future physical culture and sports specialists to use innovative types of motor activity: at the philosophical level of the methodology; at the general scientific level of the methodology; at the concrete-scientific level of the methodology; at the technological level of methodology.

The implementation of the pedagogical experiment was carried out in three stages: preparatory, main, and final.

At the preparatory stage, the purpose and tasks of the research were determined, the experimental plan was developed, methods of measurement and processing of results were selected, control and experimental groups were selected, and their homogeneity was checked.

At the main stage, an experiment was conducted.

At the final stage, the results of the experiment were analyzed, their reliability was confirmed, and conclusions were drawn about the pedagogical effect of the experiment.

The experiment was conducted at several universities: Volodymyr Vynnychenko Central

Ukrainian State University. Permission to conduct the experiment was approved by the academic councils of these universities and considered by the ethics.

The choice of the methodology for diagnosing the formation of individual indicators of physical education and sports in the education system of Ukraine was determined by their compliance with such principles as validity, reliability, accessibility, informativeness in use, relative ease of processing empirical data, and the possibility of frontal application. By validity, we mean the indicator of suitability of certain research methods, and quality assessment, used under certain conditions in a specific situation. In this way, it is possible to assess how applicable and effective the chosen methods are and how their effectiveness has been verified.

We assume that conducting an experiment with the help of selected methods in the conditions of the traditional system of professional training will allow us to determine the main approaches to the implementation of the conditions for the formation of physical education and sports in the education system of Ukraine.

In the experimental methodology during the experiment, we show the role of video materials in the innovative provision of the educational and training process. In the educational process of training future specialists in physical culture and sports, the following options of innovation policy are used: the policy of "innovation push", "market orientation", "social orientation", and "direction for changes". For high-quality professional training of future specialists in physical culture and sports, methodical bases for the use of innovative types of motor activity have been developed.

The purpose of the experiment was to check the effectiveness of the implementation of the proposed method of applying innovative educational technologies in classes in higher educational institutions for the formation of multimedia competence of future specialists.

The inspection of the quality of assimilation by future specialists of physical culture and sports of educational topics from professional disciplines confirmed the improvement of the results of assimilation of the presented material with the help of innovative educational technologies.

The analysis of the results showed minor changes in the control group, but we can see a significant

increase in the quantitative indicators of the criteria in the experimental group.

In particular, the personal and motivational attitude of future physical culture and sports specialists in educational activities increased by 28.1% in the experimental groups, by 5.6% in the control groups; in the experimental groups, the formation of general information literacy increased by 30%, in the control groups - by 3.1%; the formation of the application of innovative educational technologies and multimedia-creative literacy in the experimental groups increased by 30.6%, in the control groups - by 2.6%.

So, as a result of the experiment, directions for improving the training of future physical culture and sports specialists using innovative educational technologies were determined: purposeful reflection of existing innovative technologies in the training programs of professional disciplines; close connection with the school (experience of innovative teachers, leading specialists in the field of physical culture and sports), use of creative tasks and various pedagogical situations, etc.

To assess the homogeneity of experimental and control data, statistical processing was performed using MS Excel and SPSS (Statistical Package for Social Science).

## Results and Discussion

In the field of physical culture and sports, the following are characteristic features in the field of public services: popularization of innovative non-traditional forms of physical activity (slide aerobics, aqua aerobics, step aerobics, body combat, spin bike aerobics, body pump, fitball gymnastics, zumba, stretching, jumping, bossa, fly -fitness, kango jump, etc.); the emergence of modern forms of motor activity (windsurfing, freestyle, etc.); spread of healing systems (qigong, hatha yoga, taijiquan, etc.) of the ancient East; development of innovative forms of sports, physical culture and rehabilitation, sports, and mass work; revision for the field of physical culture and sports of the content of "traditional" professions (physical education teacher, trainer) and the appearance of new ones (sports manager, instructor-coach, sports, and mass work instructor, commercial type of activity instructor, etc.). The above indicates a demand for specialists in the field of physical culture and sports who teach different, innovative types of motor activity; popularize, master, spread, and demand a solution to the problem of high-quality

professional training based on the use of innovative technologies and a methodological base. Innovative technologies, which are used for the training of future specialists in physical culture and sports in the educational process, strengthen the realization of intellectual opportunities in the information society and increase the quality of the educational process. A large volume of theoretical material is included in the training of specialists in physical culture and sports, but the minimum number of training hours is allocated to it, so the use of modern innovative technologies is necessary for an effective solution to this problem (Petrenko, 2018).

Every day there are more and more discoveries that allow a person to create new innovative techniques, set new records, and master new approaches to training. For example, in athletics, the use of poles made of synthetic materials qualitatively improved their properties and allowed athletes to raise the jump bar from 5 to 6 meters and change the jumping technique altogether. Improvements in the arena of surfaces allowed to change the technique and speed of running, the rhythm of runners, and allowed them to develop great speed. The materials from which bicycles are made have significantly improved, their design and management in cycling have changed, and they have become much faster and lighter than their predecessors. Such innovative technologies affected all types of sports (Bida et al., 2018).

Diagnostic equipment is also constantly being improved, which makes it possible to manage the future athlete's condition during training. The use of systems and devices is simply necessary to analyze information about the athlete during exercise. Today, with the innovative use of video recording devices for multiple reproductions of the image of the athlete's movements, for further adjustment of training, their analysis and technique practice are mandatory. Tensometric devices, which are widely used in the educational and professional space, received an innovative approach and registered the support reaction when performing various exercises. Recently, to conduct research in real-time during training and competition, scientists have developed portable devices; automated systems are actively used to control athlete actions in team sports (Shevchenko et al., 2022).

With the help of diagnostic equipment, data are collected that allow optimization of the activities of physical culture and sports specialists, allowing the use of the best methods and means

of restoring and increasing sports performance, systematic assessment of the level of physical condition of students who attend sections of swimming, athletics, basketball, football, volleyball, handball, triathlon, etc. Innovative development makes the structure of physical education and sports in universities innovative (Zakharova & Petrenko, 2017).

Video materials play an important role in the innovative provision of the educational and training process, which allows for providing innovative information related to dynamic processes (when conducting cultural and mass sports events, teaching students motor actions, analysis of tactical actions, biomechanical characteristics, etc. Such materials can be components of innovative programs and pedagogical tools and can be used independently in the form of a separate thematic video film (Drózd et al., 2022).

With the appearance of special programs for processing digital video information (Adobe Premiere, Windows Movie Maker, etc.), digital video cameras that allow the output of video information to various media, editing, the work of creating innovative materials with the inclusion of video information has become much easier (Ladyka et al., 2019). For example, innovations in sports tourism are the creation of new tourist routes and their meaningful development, the selection of service technologies with the use of new innovative tourist resources, basic products, types of tourism, information technologies, modern achievements of science and technology, the implementation of which allows improving the tourist image of the country, economic development of tourist enterprises. When preparing sports tourist trips, and routes, organizing orienteering competitions, and training future physical culture and sports specialists, it is advisable to use innovative modern technologies, which during the preparatory work allow you to save time, increase the efficiency of planning tours, increase the safety and comfort of sports tourist trips, and make innovative training of future physical culture and sports specialists (Pylnenkyi, 2021).

To analyze the state of implementation of innovative educational technologies and video materials in the innovative provision of the educational and training process, which became possible for use with the appearance of special programs for processing digital video information, digital video cameras that allow the output of video information to various media, the



definition of different options for innovative policy (policy of "innovative impetus", "market orientation", "social orientation", "direction for change") and clarification of the multifaceted specificity of innovative educational innovations, an ascertaining experiment was conducted.

At this stage of the experimental work, the following methods were used: research of students' creative works, questionnaires, interviews, pedagogical observation, student self-assessment, teachers' expert assessment, generalization, and analysis.

In our opinion, the use of innovative educational technologies and video materials in the innovative provision of the educational and training process, which are possible for use with the appearance of special programs for processing digital video information, digital video cameras that allow the output of video information on various media, the definition of various options for innovative policies, the multifaceted specificity of innovative educational innovations contribute to the formation of multimedia competence of students of higher education institutions. We invited the respondents to express their opinions on certain judgments to find out the availability of skills to work in the telecommunications environment of education and the attitude of students to the use of innovative educational technologies in the educational process.

To do this, we developed a questionnaire consisting of questions divided into two blocks. The first block included questions aimed at identifying the state of application of innovative educational technologies in the educational process.

The questionnaire was prepared for both students and teachers. As a result of the analysis of the answers, we concluded that (72%) of the majority of respondents consider it mandatory to use innovative educational technologies in education during the study of projects. This increases the scope of the educational process and provides a practical direction.

In the educational process, increasing the motivation of students in higher education creates conditions for their successful self-realization in the future. At the same time, half of the respondents (57%) are fluent in innovative computer technologies.

To the question: "Do you use innovative information technologies in the educational process?" – 38% of respondents answered "yes".

The next question was: "Do you use multimedia technologies in the educational process?". Here, 59% of respondents gave a positive answer.

The questions of the second block were aimed at studying the state of training of future physical culture and sports specialists to work in an innovative educational environment and their participation in international programs and projects.

29% of respondents can work in an innovative telecommunications educational environment of a higher education institution. Only 9% know international programs.

Regarding the development of methodological materials for participation in projects of innovative educational technologies and their use during the training of future physical culture and sports specialists, 17% gave a positive answer.

Having analyzed all the answers of first-year students, it can be stated that the majority of future specialists in physical education and sports are not ready to use innovative multimedia support.

We have determined the criteria for diagnosing the formed and existing readiness of future physical culture and sports specialists to use innovative means of education in educational activities (personal-motivational, multimedia-creative literacy, general information literacy) and their indicators.

Levels of readiness of future specialists in physical culture and sports to use innovative multimedia educational tools in educational activities have been established based on the analysis of defined criteria: low, medium, and high.

A low level is characteristic of future specialists in physical culture and sports at the level of computer user knowledge, students lack creative imagination, show weak initiative in learning, are unable to analyze and select material in electronic form, work independently with a multimedia product, do not show interest to classes with the use of innovative technologies, do not know how to perceive educational information in electronic form.

The average level is characteristic of future specialists in physical culture and sports, who are aware of the need to use information technologies in professional activities, know how to select and analyze innovative products; they have the basics of working with a computer, they show episodic interest in multimedia learning, they do not show creative approaches when using innovative learning tools.

A high level is typical for future physical culture and sports specialists who have the skills and ability to operate information in electronic form; have a persistent and purposeful attitude to the educational process with the aim of perfect preparation for their professional specialty; show creative approaches to the development of lessons with multimedia elements; have a persistent need for further self-improvement, self-discovery, a rich professional imagination; show a sustained long-term interest in learning with the use of innovative means of education; actively perceive information in electronic form; they are characterized by the use with the appearance of special programs for processing digital video information, digital video cameras that allow the output of video information on various media, the definition of various options for innovation policy (the policy of "innovation push", "market orientation", "social orientation", "direction for change") and elucidation of the multifaceted nature of innovative educational innovations.

We have determined the criteria for determining the formation of multimedia competence of future physical culture and sports specialists to analyze the state of implementation of innovative educational technologies and video materials in the innovative provision of the educational and training process: personal and motivational, multimedia and creative literacy, general information literacy.

The personal and motivational criterion is characterized by the fact that future specialists in physical culture and sports show interest in the use of innovative educational technologies in classes, and have a persistent need for the development of computer literacy, and self-knowledge.

The criterion of multimedia and creative literacy is characterized by the fact that future physical culture and sports specialists show creative approaches to the development of classes with elements of innovative educational technologies; can create their own multimedia presentations when studying educational material and master

the basic knowledge of working with the Microsoft PowerPoint program for future physical culture and sports specialists to create their own educational multimedia products, i.e. acquisition of future physical culture and sports specialists competence in the field of application of innovative educational technologies.

The criterion of general information literacy is characterized by the fact that future specialists in physical culture and sports have the skills and ability to operate information in electronic form and show a long-term stable interest in education with the use of innovative educational technologies.

The confirmatory experiment made it possible to identify the following levels in future physical culture and sports specialists:

- high level of readiness of future physical culture and sports specialists to use innovative educational technologies in educational activities is inherent in a small number of respondents (a high level was found in 10.2% of future physical culture and sports specialists);
- average level of readiness of future physical culture and sports specialists is 34.4%;
- low level of readiness of future physical culture and sports specialists – 55.4%.

The majority of future specialists in physical culture and sports do not have the skills and abilities to operate information in electronic form, do not know how to rationally organize their study time when working with innovative educational technologies, and do not see the need to apply innovative educational technologies in their activities.

Therefore, the study of the levels of knowledge formation of future physical culture and sports specialists showed that today's students are not sufficiently prepared to work with innovative educational technologies, during their training, the main attention is paid to the formation of basic knowledge, they have not developed multimedia competence.

Therefore, we in the experimental groups worked on improving the implementation of innovative educational technologies and video materials in the provision of the educational and training process, which became possible for use with the appearance of special programs for processing digital video information, digital video cameras that allow the output of video information on various media, the definition of various options

innovation policy (the policy of "innovative push", "market orientation", "social orientation", "direction for change") and showing the advantages of the multifaceted specificity of innovative educational innovations and the formation of multimedia competence of students.

In the educational process of training future specialists in physical culture and sports, the following options for innovation policy are defined: the policy of "innovative push", "market orientation", "social orientation", and "direction for change".

The unity of the three components of the innovation process is emphasized in the methodology of innovation: creation, development, and implementation of innovations and is the object of study in pedagogical innovation.

The subject of pedagogical innovation includes a system of relationships that are created in educational innovation activity, which is aimed at the formation of the personality of subjects in the process of training future specialists in physical culture and sports.

Innovations are characterized by quality improvement of the training process of future physical culture and sports specialists, novelty, and results and are reflected in innovative, improved, or new components (content, purpose, methods, forms, means, structure, results), educational technologies (didactic, managerial, educational), scientific developments, innovative technical means, etc.

We will show the multifaceted nature of innovative educational innovations:

- have a mandatory influence on subjects in the process of training future specialists in physical culture and sports;
- are carried out through the interaction of subjects of pedagogical interaction;
- their main driving force is not the motive of introducing profit.
- Innovation must comply with the principles according to the characteristics of innovation processes:
- creation of a new innovative system of training future specialists in physical education and sports; perception of all innovative things by the social and pedagogical community;
- the application of pedagogical innovations (a system of recommendations for practical and theoretical application, knowledge of

innovative educational processes of training future specialists in physical culture and sports and their management) (Voloshyna, 2015).

Analyzing traditional and innovative learning technologies in the conditions of informatization of education in institutions of higher education, we will emphasize the importance and necessity of the existence of forms of distance learning in the world, in particular: Adaptive learning; Blended learning; E-learning (Lishchynska, 2017).

The use of multimedia presentations significantly increases the quality of training of future specialists in physical culture and sports, and makes the educational process more innovative, richer, more dynamic, and more vivid, since the coverage of various directions of theoretical issues can be visually directly demonstrated. Practical assimilation of educational material by future physical culture and sports specialists using a computer workshop provides an opportunity to gain new knowledge using innovative methods, promote health preservation, improve movement programs, and contribute to the creation of safety conditions when performing sports and coaching work, in the process of physical education culture at school, during physical rehabilitation of patients and athletes (Skydan et al., 2017).

When training future specialists in physical culture and sports, information technologies provide opportunities to more efficiently train specialists with the help of information support for application during consideration of theoretical issues, since students can prepare their reports using official websites within the limits of advance tasks (Petrenko, 2018).

The use of blended learning in modern conditions of education modernization in the professional training of future physical culture and sports specialists is a promising and urgent issue within the framework of the organization of the innovative educational process of higher education institutions (Savonova, 2019).

In the process of training future specialists in physical culture and sports in institutions of higher education, cloud technologies, which were initially used in the application of free hosting of postal services, as virtual postal services, became necessary. In connection with the fact that in the scientific literature, there were no theoretical and practical data on the use of cloud technologies, other cloud services were

practically not used for educational purposes, and there were no skills of education seekers regarding the practical use of cloud technologies. And in recent years, students and teachers have begun to value innovative IT applications (Vakaliuk, 2016). The main problems of introducing cloud technologies into the educational process of professional training of future specialists in physical culture and sports include problems with the transfer of specialized software to the "cloud", data security, the need for a high-quality permanent connection to the Internet, the imperfection of the legal framework that defines the duties and the rights of all parties to educational activity (Denysova, 2017).

A methodological basis was developed for the high-quality professional training of future physical culture and sports specialists to use innovative types of motor activity:

- 1) at the philosophical level of the methodology – the dialectical law of unity and the struggle of opposites, existential and dialectical approaches, which determines the need for awareness, identification, and overcoming of internal and external contradictions that are revealed in the course of the educational process (between personal resources and the requirements placed on a person); in the implementation of the professional activity of physical culture and sports specialists (between the market and pedagogical aspects of the activity of physical culture and sports specialists);
- 2) at the general scientific level of the methodology, we will highlight the importance of a systemic approach, which allows us to consider the professional training of future physical culture and sports specialists in a higher education institution as a pedagogical innovative open system, which includes the following interrelated components: principles, systemic factors, purpose, the content of education, subjects, and conditions of the innovative educational process, forms, and methods of the innovative process, means of education, criteria for the effectiveness of the innovative educational process;
- 3) at the concrete-scientific level of the methodology, we distinguish the main innovative, reductionist, professional-personal, activity-based, health-improving, bio-socio-cultural, and gender approaches;
- 4) at the technological level of methodology – teaching methods (Atamaniuk, 2022).

To find out the main effective innovative educational technologies in the process of professional training of future physical culture and sports specialists, we tested their effectiveness experimentally. The meaning of innovation was revealed and innovative technologies were presented as necessary for today's education (Semenikhina et al., 2022).

In the experimental methodology, during the formative experiment, we show the role of video materials in the innovative provision of the educational and training process. In the educational process of training future specialists in physical culture and sports, the following options of innovation policy are applied: the policy of "innovative push", "market orientation", "social orientation", and "direction for change". The multifaceted nature of innovative educational innovations is shown, and the importance and necessity of the existence of forms of innovative education, the use of multimedia presentations, mixed and distance learning, and cloud technologies are proven. For high-quality professional training of future specialists in physical culture and sports, a methodological basis was written to use innovative types of motor activity.

The purpose of the formative experiment was to check the effectiveness of implementing such a proposed method of applying innovative educational technologies in classes in higher education institutions to form multimedia competence in future specialists.

The inspection of the quality of mastering educational topics from professional disciplines by future specialists in physical culture and sports confirmed the improvement of the results of mastering the material taught with the help of innovative educational technologies.

When checking the quality of learning the material and mastering technologies, we used the Student's t-test. At all stages of calculations, it turned out that  $t_{calc.} > t_{table.}$ , assuming the possibility of the risk of making false conclusions in five cases out of a hundred ( $\alpha \leq 0,05$ ). Therefore, the null hypothesis ( $H_0$ ) that the use of innovative educational technologies in the study of professional topics does not improve the assimilation of educational material, that is, the difference between the old and new methods of the educational process of future physical culture and sports specialists is equal to zero, is rejected, and the alternative hypothesis is accepted ( $H_1$ ), in particular, that the study of educational topics offered to future specialists in physical culture

and sports with the help of innovative educational technologies contributes to the improvement of the results of assimilation of the material, which speaks of the significant advantages of such experimental training.

After the completion of the formative experiment, future specialists in physical culture and sports in educational activities were diagnosed with the level of readiness for the use of innovative educational technologies with the help of defined criteria.

The analysis of the results showed minor changes in the control group, but we can see a significant increase in the quantitative indicators of the criteria in the experimental group.

In particular, the personal and motivational attitude of future physical culture and sports specialists to the use of innovative educational technologies in educational activities increased by 28.1% in the experimental groups, and by 5.6% in the control groups; in the experimental groups, the formation of general information literacy increased by 30%, in the control groups – by 3.1%; the formation of the application of innovative educational technologies and multimedia-creative literacy in the experimental groups increased by 30.6%, in the control groups – by 2.6%. The readiness of future physical culture and sports specialists of the experimental and control groups to use innovative educational technologies in educational activities before and after the formative experiment is presented in the table. 1.

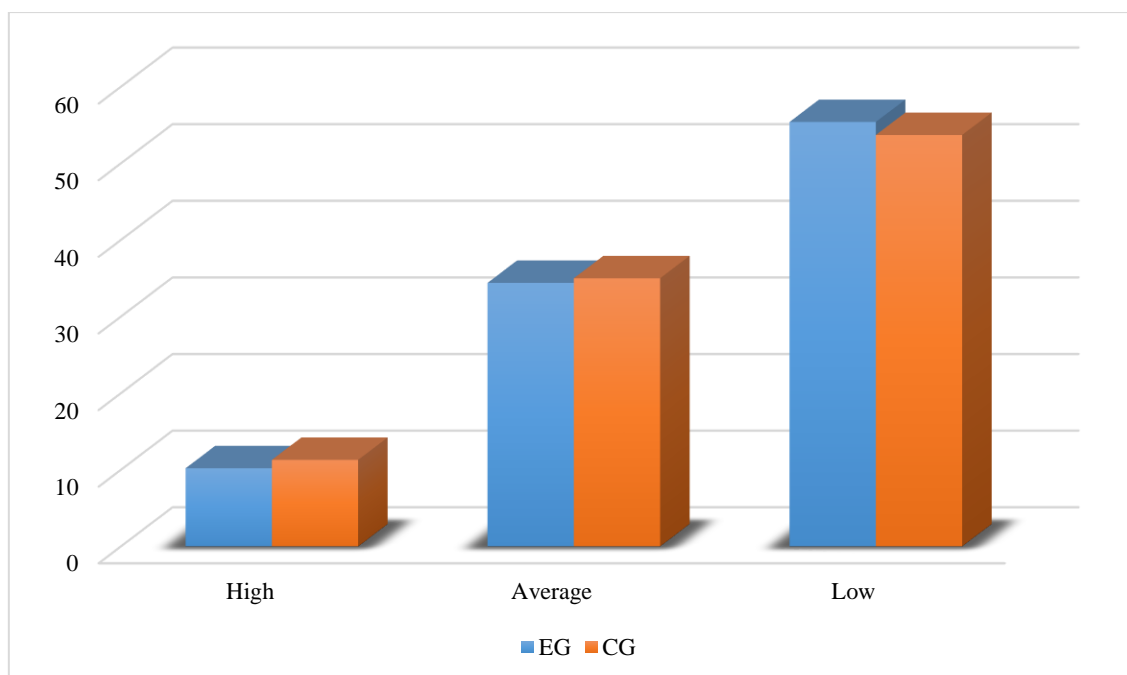
**Table 1.**

*The dynamics of readiness of future physical culture and sports specialists of the experimental and control groups to use innovative educational technologies before and after the experiment.*

Levels	Experimental group		Control group	
	before (%)	after (%)	before (%)	after (%)
High	10,2	24,8	11,3	12,5
Average	34,4	51,6	35	37,5
Low	55,4	23,6	53,7	50

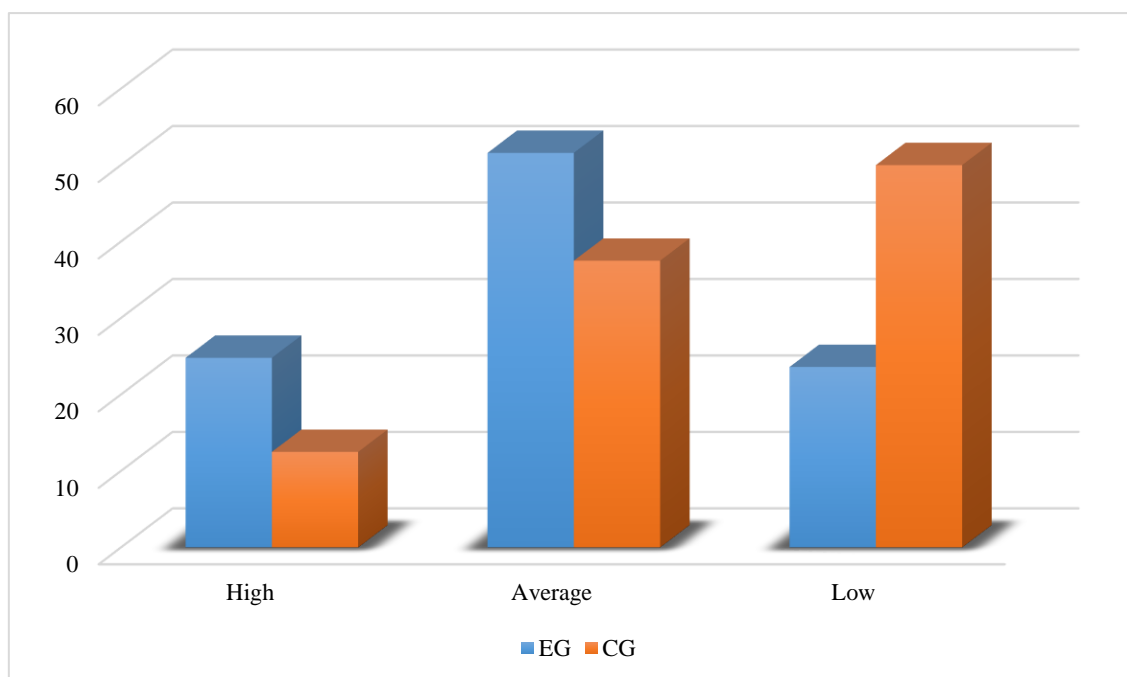
Therefore, the use of innovative educational technologies in experimental groups during the teaching of professional disciplines contributed to the creation of a positive mood in class, the diversification of forms of educational activity,

and the formation of new skills and abilities, as a result of which the respondents of the experimental groups showed better results in terms of their readiness to use innovative educational technologies (Fig. 1, Fig. 2).



**Figure. 1.** Levels of readiness of EG and CG to use innovative educational technologies in the educational activities of future physical culture and sports specialists before the start of the experiment.





**Figure. 2.** Levels of readiness of EG and CG to use innovative educational technologies in the educational activities of future physical culture and sports specialists after conducting the experiment.

It should be noted that the analysis of the results of the formative experiment allows us to talk about a significant improvement in the results of assimilation by future physical culture and sports specialists of the professional material studied with the help of innovative educational technologies, and this contributed to increasing the level of readiness of future physical culture and sports specialists to use innovative educational technologies in educational activities (the number of future physical culture and sports specialists with a high level of readiness increased by 14.6% and the number of future physical culture and sports specialists with an average level of readiness increased by 17.2%). Future specialists in physical culture and sports receive and improve the ability to create their own multimedia projects, independent work with innovative educational technologies, acquire skills and abilities to operate with information in electronic form, organize their study time while working with an innovative product, the ability to use innovative educational technologies in independent activities, learned to develop classes with elements of innovative educational technologies. This contributed to the formation of the personality of a creative future specialist in physical culture and sports, who has a constant need for further self-improvement, self-discovery, and a rich creative imagination.

The comparison of the obtained results makes it possible to conclude positive qualitative changes in the formation of the readiness of future

physical culture and sports specialists to use innovative educational technologies in educational and professional activities, which indicates the effectiveness of the proposed method of applying innovative educational technologies in classes in institutions of higher education to form multimedia competence in future specialists.

So, as a result, we will determine directions in improving the training of future specialists in physical culture and sports using innovative educational technologies: purposeful reflection of existing innovative technologies in training programs of professional disciplines; close relationship with the school (experience of innovative teachers, leading experts in the field of physical culture and sports), use of creative tasks and various pedagogical situations, etc.

A modern specialist in physical culture and sports should know:

- 1) content of innovative Ossetian technologies;
- 2) forms, principles, and methods of organizing innovative training in the field of physical culture and sports;
- 3) psychological-pedagogical, medical-biological, and sociocultural foundations of innovative educational technologies in the field of physical education and sports.

Thus, it was established that the modern system of higher education provides for the introduction

of innovative educational technologies in the professional training of future specialists in physical education and sports under the condition of the development and preservation of traditions and achievements of higher education. Holistic and essential constant updating of educational theory and practice in the field of physical culture and sports teacher training will be provided by physical culture and health and psychological and pedagogical innovative educational technologies (Shynkariov & Kostenko, 2016).

Therefore, the use of innovative educational technologies in the professional training of future physical culture and sports specialists is constantly being improved in connection with the acceleration of scientific and technical progress, new innovative educational technologies that penetrate all aspects of human life, while opening new horizons for achieving positive educational and professional results, offering high-tech equipment and equipment for educational and professional activities.

The use of innovative educational technologies, which are implemented during the professional training of future physical culture and sports specialists, contributes to the formation of sustainable motivation for physical development, health preservation, physical training, forms practical skills for independent physical exercises, expands movement experience, helps the development of a creative personality, contributes to the improvement and increase of personal results, conducting active recreation, ensures the effective formation of positive motivation for a healthy lifestyle in young people (Pylnenkyi, 2021).

As a result of the analysis of literary sources, we found out the insufficiency of scientific research on the problem of modern trends in physical education and sports in the education system of Ukraine, the insufficiently studied traditional education system, which is unable to ensure the organic entry of a new generation of specialists into the complex and rapidly changing sphere of various educational needs activities of modern higher education. Therefore, we conducted an experimental verification of the effectiveness of the implementation of the method of applying innovative educational technologies in classes at higher educational institutions for the formation of multimedia competence of future specialists.

## Conclusions

In the process of professional training of future specialists in physical culture and sports, the main effective innovative educational technologies were clarified and ways of their use were proposed.

The content of innovation (the process by which a new potential for actions is developed or new assets are created, i.e. it is the process of creating new things with the help of creative thinking and technologically necessary channels) is revealed and innovative technologies are presented as necessary for education today.

The role of video materials in innovative provision of the educational and training process is shown, which became possible for use with the appearance of special programs for processing digital video information (Adobe Premiere, Windows Movie Maker, etc.), digital video cameras that allow the output of video information on various media.

In the educational process of training future specialists in physical culture and sports, the main options for innovative policy are defined.

The multifaceted nature of innovative educational innovations is shown.

Analyzing traditional and innovative learning technologies in conditions of informatization of education in institutions of higher education, they emphasized the importance and necessity of the existence in the world of forms of distance learning, the use of multimedia presentations, mixed learning, and cloud technologies.

For high-quality professional training of future specialists in physical culture and sports, a methodological basis is described to use innovative types of motor activity.

An experimental study was conducted, the results of which allow concluding positive changes in the formation of the readiness of future physical culture and sports specialists to use innovative educational technologies in educational and professional activities, which indicates the effectiveness of the proposed method of applying innovative educational technologies in classes in institutions of higher education to form multimedia competence in future specialists.

Directions in improving the training of future specialists in physical culture and sports using innovative educational technologies have been determined.

We consider further research to be the implementation of the issues of introducing into the educational process of professional training of future physical culture and sports specialists the technologies of contextual learning, the organization of distance learning, etc.

### Bibliographic references

- Atamaniuk, S. (2022). Preparation of future physical culture and sports specialists for the use of innovative types of motor activity: methodological basis. *Education. Innovation. Practice*, 10(3), 6-15. <https://oip-journal.org/index.php/oip/article/view/38/36>
- Bida, O.A., Shevchenko, O., & Kuchai, O.V. (2018). Innovative technologies in physical education and sports. *Scientific Bulletin of Mykolaiv National University named after V.O. Sukhomlynskyi. Pedagogical sciences*, 3(62), 19-23. <http://mdu.edu.ua/wp-content/uploads/ped-visnik-62-2018-2-5.pdf>
- Byshevets, N., Honcharova, N., & Rodionenko, M. (2020). Innovative approaches to improving the educational process of future specialists in physical education and sports. *Theory and methodology of physical education and sports*, 4, 78-85. <http://tmfvs-journal.unisport.edu.ua/article/view/232138/230976>
- Denysova, L. V. (2017). Modern trends in the use of information and communication technologies in the professional training of future masters of physical culture and sports. *Scientific journal of the M. P. Drahomanov NPU*, 3(84), 152-156. <https://acortar.link/3Lv608>
- Drózd, R., Pasek, M., Zajac, M., & Szark-Eckardt, M. (2022). Physical Culture and Sports as an Educational Basis of Students' Healthy Physical Activities during and Post-Lockdown COVID-19 Restrictions. *International Journal of Environmental Research and Public Health*, 19(18), 11663. <https://doi.org/10.3390/ijerph191811663>
- Ladyka P., Kuz, Yu., & Saprun, S. (2019). Possibilities of using modern information technologies in the educational and training process of swimming. In *Innovative and information technologies in physical culture, sports, physical therapy and occupational therapy* (pp. 235-237). Kyiv: NUFVSU. <https://acortar.link/UllxDu>
- Lazorenko, S. (2020). Results of experimental training of future specialists in physical culture and sports for implementation of digital technologies in professional activities. *Current issues of humanitarian sciences*, 34(3), 266-272. [http://www.aphn-journal.in.ua/archive/34\\_2020/part\\_3/43.pdf](http://www.aphn-journal.in.ua/archive/34_2020/part_3/43.pdf)
- Lishchynska, L. B. (2017). *The use of innovative and traditional learning technologies in higher education institutions in the conditions of informatization of education*. In *Distance learning as a modern educational technology: materials of the inter-university webinar* (pp. 56-59). Vinnytsia: VTEI KNTU.
- Petrenko, Yu. I. (2018). Theoretical foundations of the formation of kinesiological competence of future physical culture and sports specialists using information technologies. *Physical and mathematical education*, 1(15), 22-25. [https://r.donnu.edu.ua/bitstream/123456789/1407/1/13\\_PDF\\_Фізико-математична%20освіта\\_науковий%20журнал.pdf](https://r.donnu.edu.ua/bitstream/123456789/1407/1/13_PDF_Фізико-математична%20освіта_науковий%20журнал.pdf)
- Plokhikh, V., Popovych, I., Zavatska, N., Losiyevska, O., Zinchenko, S., Nosov, P., & Aleksieieva, M. (2021). Time Synthesis in Organization of Sensorimotor Action. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience*, 12(4), 164-188. <https://doi.org/10.18662/brain/12.4/243>
- Pylnenkyi, V. (2021). Innovative technologies in the training of future athletes in the conditions of the educational process of higher education institutions. *Young scientist*, 5(93), 190-192. <https://doi.org/10.32839/2304-5809/2021-5-93-36>
- Savonova, O. V. (2019). Natural and scientific training of future specialists in physical education and sports using mixed learning technologies. *Herald of the Carpathian University. Series: Physical culture*, 33, 78-84. <http://lib.pnu.edu.ua:8080/handle/123456789/8862>
- Semenikhina, O. V., Yurchenko, A. O., Rybalko, P. F., Shukatka, O. V., Kozlov, D. O., & Drushlyak, M. G. (2022). Preparation of future specialists in physical culture and sports for the use of digital health means in professional activity. *Information Technologies and Learning Tools*, 89(3), 33-47. <https://doi.org/10.33407/itlt.v89i3.4543>
- Shevchenko, O., Bahinska, O., Markova, O., Broiakovskyi, O., Bielkova, T.,



- Honcharenko, I., & Bida, O. (2022). Use of Multimedia Technologies in the Training of Physical Culture and Sports Specialists. *IJCSNS International Journal of Computer Science and Network Security*, 22(7), 245-251.  
<https://doi.org/10.22937/IJCSNS.2022.22.7.30>
- Shynkariov, S. I. & Kostenko, S. Yu. (2016). Innovative technologies in the process of training a physical culture teacher. *Bulletin of Luhansk National University named after Taras Shevchenko*, 1(298), 49-53.  
<https://acortar.link/OCpvR2>
- Skydan, L. L. Ashanin, V. S., & Petrenko, Yu. I. (2017). *The use of information technologies in studying the discipline of biomechanics within the framework of training specialists in physical culture and sports*. In Actual problems of physics and their information support (pp. 128-132). Kharkiv: NTU "KhPI". <https://acortar.link/E6fFb1>
- Sohokon, O. A., Shostak, Ye. Yu., & Donets, O. V. (2021). Implementation of innovative approaches of natural-scientific and practical-professional training of future teachers of physical education. *Pedagogical sciences: science. journal Poltava national ped. V. G. Korolenko University*, 78, 72-82.
- Stepanchenko, N. I. (2017). *System of professional training of future teachers of physical education in higher educational institutions* (diss. ... Dr. Ped. Sciences: specialist) theory and methodology of professional education. Vinnytsia State Pedagogical University named after Mykhailo Kotsyubynskyi, 629.
- Vakaliuk, T. A. (2016). *Cloud technologies in education: an educational and methodological guide for students of the Faculty of Physics and Mathematics*. Zhytomyr: ZhDU Publishing House, 72.
- Voloshyna, O. V. (2015). *Pedagogy of innovations in higher education: educational and methodological manual*. Vinnytsia, 161.  
[https://library.vspu.edu.ua/polki/akredit/kaf\\_4/voloshina2.pdf](https://library.vspu.edu.ua/polki/akredit/kaf_4/voloshina2.pdf)
- Zakharova, A. O., & Petrenko, N. V. (2017). *Innovative technologies of physical education in higher educational institutions. In Innovative technologies in the system of improving the qualifications of physical education and sports specialists* (pp. 24-26). Sumy: Sumy State University.  
<https://core.ac.uk/download/pdf/324255015.pdf>

DOI: <https://doi.org/10.34069/AI/2023.71.11.18>

How to Cite:

Pidbereznykh, I. (2023). US-Brunei cooperation in the 2000s: an analysis. *Amazonia Investiga*, 12(71), 214-222.  
<https://doi.org/10.34069/AI/2023.71.11.18>

## US-Brunei cooperation in the 2000s: an analysis

### La cooperación entre Estados Unidos y Brunei en la década de 2000: un análisis

Received: September 30, 2023

Accepted: November 28, 2023

Written by:

Inna Pidbereznykh<sup>1</sup> <https://orcid.org/0000-0001-9906-4327>

#### Abstract

The article analyzes the main aspects of relations between the Sultanate of Brunei Darussalam, which is located in Southeast Asia, and the United States. The relevance of the study is related to the strengthening of diplomatic ties between different states and the need for a comprehensive analysis of their various aspects. The reason for the study was to explore a relatively new area of diplomatic relations between the United States and Brunei. The scientific value and novelty lie in the complex analysis of relations between the mentioned states during the given historical period. General scientific methods of research were used, and due to the fact that the studied issue is at the junction of several sciences, methods of historical, political science and the study of diplomatic relations were used. The study found that the diplomatic relations of the United States and Brunei are influenced by the geopolitical competition between the United States and China in Southeast Asia, revealing Washington's desire to subordinate the countries of the region to its influence and establish hegemony in opposition to China. For this purpose, the US is trying to find geopolitical allies among the countries of the region, with Brunei being one of them.

**Keywords:** Southeast Asia, International Relations, Diplomacy, Sultanate, Geopolitics.

#### Introduction


Consideration of the relationship between the Sultanate of Brunei Darussalam and the USA is caused by the fact that historically the policy and diplomacy of the USA in Southeast Asia was determined by the geopolitical interests of

#### Resumen

El artículo analiza los principales aspectos de las relaciones entre el Sultanato de Brunei Darussalam, ubicado en el sudeste asiático, y Estados Unidos. La relevancia del estudio está relacionada con el fortalecimiento de las relaciones diplomáticas entre diferentes Estados y la necesidad de una análisis integral de su varios aspectos. El motivo del estudio. Era explorar un área relativamente nueva de relaciones diplomáticas entre Estados Unidos y Brunei. Valor científico y novedad. residir en análisis complejo de las relaciones entre los Estados mencionados durante el período histórico en cuestión. Se utilizaron métodos de investigación científica general y, debido a al hecho de que el problema estudiado se encuentra en el unión de varios Se utilizaron ciencias, métodos de la ciencia histórica, la ciencia política y el estudio de las relaciones diplomáticas. El estudio concluyó que las relaciones diplomáticas de Estados Unidos y Brunei están influenciados por la competencia geopolítica entre Estados Unidos y China en el Sudeste Asiático, lo que revela el deseo de Washington de subordinar a los países de la región a sus influir y establecer uno hegemonía frente a China. Con este fin, Estados Unidos está tratando de encontrar aliados geopolíticos entre los países de la región, siendo Brunei uno de ellos.

**Palabras clave:** Sudeste Asiático, Relaciones Internacional, Diplomacia, Sultanato, Geopolítica.

Washington in this region first, attention was paid to supporting free transport routes across the South China Sea, which gave access to the markets of the region. Secondly, the USA made every effort to contain the spread of communist

<sup>1</sup> PhD in History, Associate Professor of History Department of History, Petro Mohyla Black Sea National University Mykolaiv, Ukraine.  WoS Researcher ID: ABF-1779-2021



ideas in the region, which were ideological opponents of America's political system. To this end, in the second half of the twentieth century. The United States actively intervened in the politico-military conflicts that erupted in the region. Washington supported France in the Indochina War and was directly involved in the Vietnam Campaign. In the twenty-first century. The USA has declared Southeast Asia as one of the fronts in the fight against terrorism. During this historical period, there has been an increase in tensions with China, which claims regional and, along with Russia, global leadership (Parameswaran, 2019a; Parameswaran, 2019b; Parameswaran, 2018). Brunei is among the states that are the backbone of the USA in the region. This study aims to analyze and systematize the major aspects of the relationship between the USA and the Sultanate of Brunei Darussalam at the beginning of the 21st century (Omar, 2018). As for the study of the problem, it is reasonable to divide the works devoted to this problem into three main groups: works of Ukrainian researchers (Ukrainian-language segment of historiography); works of Russian scientists (Russian-language segment of historiography); studies of American, European and Asian scientists (English-language segment of historiography).

In the forthcoming sections of this article, we delve into a comprehensive exploration of the diplomatic relations between the United States and Brunei Darussalam. The second section, "Theoretical Framework and Literature Review," critically analyzes existing literature on this subject. Despite the absence of specific scientific works addressing this relationship, we draw insights from broader studies, especially those by Ukrainian and Asian scholars. Noteworthy contributors include Sofilkanych (2022), Omar (2020), Gorodnia (2018), Pidbereznykh (2018), King & Druce (2022), and Nguyen (2016), offering diverse perspectives on the historical, economic, and political dimensions of the region and the specific case of Brunei. This section lays the foundation for understanding the context in which the U.S.-Brunei relationship evolves.

The subsequent section, "Research Design and Methods," unveils the methodology applied in this study. Here, we present hypotheses exploring the nature of U.S. involvement in international relations, emphasizing geopolitical interests, attempts at regional hegemony, and strategies for cooperation with Brunei. The research employs a range of general scientific methods, including deduction, induction, analysis, synthesis, modeling, and formalization.

By integrating historical and political science approaches, we adopt a systematic, ideological pluralism, and dialectical understanding of the historical process. This methodological fusion allows us to assess international relations' nuances, emphasizing the importance of observation, participant observation, content analysis, and event analysis. The study also draws from jurisprudential methods, such as the analysis of theoretical and normative-legal sources, comparison, generalization, and modeling, to unravel the intricacies of diplomatic relations between Brunei and the United States. These methodological choices, rooted in a multidisciplinary approach, enable us to provide a nuanced and comprehensive analysis of the diplomatic interactions at different levels between these two nations.

### Theoretical framework and literature review

It should be noted that no scientific works, which would reveal any aspect of this topic during this study, were found. Therefore, there were used the works, which dealt with this issue only in general and indirectly (Sofilkanych, 2022; Omar, 2020). Among Ukrainian scientists, made a significant scientific contribution to the study of this issue (Gorodnia, 2018; Pidbereznykh, 2018). Her articles are devoted to an in-depth analysis of USA policy strategy in the region, respectively, the place of their relations with Brunei.

The issue was analyzed in the context of the overall US policy towards Southeast Asia. The peculiarities, the purpose of the policy and its transformation under different administrations and changing paradigms of geopolitical realities were disclosed. Thus, the relationship with Brunei was an integral part of the regional relations analyzed in this study. Various aspects of the historical, economic, and political development of the region have attracted attention (Pidbereznykh, 2018). At the same time, no separate works devoted to the relationship between the United States of America and Brunei Darussalam were written by Ukrainian researchers. They have analyzed in detail and revealed some aspects of the history and socio-political processes in Brunei, which determined the basis of US policy in the region. At the same time, the issue of diplomatic relations between the United States and Brunei Darussalam was not a sphere of their professional interests. Therefore, they touched on this issue only indirectly, mentioning it only briefly in their research. Therefore, there are no comprehensive studies devoted to the diplomatic relations between Brunei and the United States in this

historical period in Russia either. Representatives of the third segment are studies by Asian scholars (King & Druce, 2022; Omar, 2018). Graham (2015) highlighted the historiographical controversy over important events, personalities, and developments in Brunei. Hang Nguyen explored the Obama administration's renewed engagement with Southeast Asia and revealed the reasons for the United States' desire to expand its presence in Southeast Asia after a period of relative calm and indifference (Nguyen, 2016). American scholar of international relations in Southeast Asia Weatherbee (2008) has analyzed the efforts of Southeast Asian states to collectively adapt in the process of building an ASEAN community to the challenges of traditional internal regional security issues. ASEAN is the Association of Southeast Asian Nations, which was formed on August 8, 1967 in Bangkok, while the finalization did not occur until 1976 on the island of Bali. The ASEAN member states acted with common sense pragmatism, seeking to partially isolate the region from external influence (from the point of view of the neoliberal economic approach such regionalism is considered "discriminatory"). The writings of Omar (2020) are also of particular interest in this study (Mohidin, 2014; Darussalam, 2016; Putra, 2021). The sources of the study were statements and directives from U.S. and Brunei leaders, presidential speeches, articles in periodicals, and materials from government websites.

## Research design and methods

### Hypotheses

During the study a number of hypotheses were put forward, the first of which is that the U.S., building international relations, primarily guided by the protection of its own geopolitical interests, so building mutually beneficial relations with other states is the exception rather than the rule.

The hypotheses were formulated based on a careful consideration of the study's objectives and research questions. For instance, the first hypothesis posits that U.S. international relations are primarily guided by geopolitical interests, with the exception of mutually beneficial relations when aligned with the partner state's political and economic course.

### Data Analysis

The data underwent a comprehensive analysis using a variety of techniques, including content analysis, event analysis, and comparative

analysis. This methodological approach facilitated a nuanced exploration of the data, incorporating both qualitative and quantitative dimensions, contributing to the robustness of the study's findings.

The study is anchored in the principle of historicism, emphasizing a systematic approach, ideological pluralism, and a dialectical understanding of historical processes. Given the interdisciplinary nature of the study, methods from history and political science were employed, complemented by approaches specific to international relations.

Observational methods, including instrumental observation with technical means and participant observation, were incorporated, drawing on insights from diplomatic and political experiences. The study incorporates content analysis and event analysis, aligning with the methodologies used by notable researchers such as E. Azar in the analysis of international conflicts. Methodological approaches from social and humanitarian sciences have been adopted, considering the study's legal context. The focus on jurisprudential methods, including the analysis of theoretical and normative-legal sources, comparison, generalization, analysis of documents, and modeling, provides a robust framework for investigating diplomatic contacts between Brunei and the United States at various levels.

Mutually beneficial relations are possible only if the partner state supports the political and economic course of the states. The next hypothesis is to consider U.S. attempts to establish its geopolitical hegemony in the region by narrowing or not allowing geopolitical competitors into the region as much as possible. Hypothesis four states that the main method of establishing dominance in the region is to support governments loyal to the U.S. and eliminate those who oppose Washington's hegemony in the region by various methods. The fifth hypothesis is that the US seeks to establish mutually beneficial cooperation with Brunei, without preventing geopolitical rivals from establishing contacts and connections in the region. The sixth hypothesis indicates that the U.S. is increasingly active in the struggle for raw materials and markets.

In the process of the implementation of this scientific study primarily used general scientific methods: deduction, induction, analysis, synthesis, modeling, formalization. The article was based on the principle of historicism, which

is one of the basic principles of the study of history (Shakun, 2022; Maraieva, 2022). The basic methods of historical study were the following: systematic approach, ideological pluralism, dialectical understanding of the historical process, as well as the problem-chronological method. Due to the fact that the investigated problematics is at the junction of history and political science the basic methods of study were used, which are most often used in this science. In addition, methods that help to consider and assess the features of international relations were applied. This is due to the fact that political processes taking place at the global and regional level have a certain specificity and differ from the socio-political relations, which are limited to the framework of individual states. In this case, the method of observation plays a great role. The researcher first observes a process and the tendency of its development and only then makes an assessment. Specialists are increasingly resorting to instrumental observation, which is carried out with the help of technical means, and this method of observation has also found its application in this study. An interesting method of analyzing international relations is participant observation, i.e., observation by direct participants in events. More fundamental and informative analytical studies are those that are made on the basis of one's own diplomatic and political experience (Shakun, 2022). To this end, the study of memoirs of various political figures is carried out. Also, the method of content analysis and event analysis was applied, which consists in tracing the dynamics of events in the international arena to determine the main trends in the political situation in individual countries, regions and the world as a whole. American researcher E. Azar applied event analysis, when studying the trend of international conflicts. In the middle of the XX century, the adherents of the modernist direction in the study of international relations began to widely apply methodological approaches borrowed from other social and humanitarian sciences. Because this study is performed in a legal context, the main attention was paid to the methods of research that are used in jurisprudence. Among them the analysis of theoretical and normative-legal sources; comparison; generalization; analysis of documents; modeling. We should also note that cooperation between the countries is based on diplomatic contacts. Between Brunei and the United States, they took place at different levels. This study examines contacts at the highest level (visits and meetings between heads of state); at the level of heads of foreign ministries and other

government agencies; assesses visits of lower-level government officials.

## Results

Before analyzing the relations between Brunei and the United States, it is necessary to emphasize that international relations between civilized countries are based on the principles of international law, a special legal system that regulates international relations through various legal norms. The peculiarity of international law is the possibility to apply coercive measures to enforce the legal norms on the basis of the existing norms and within the framework of relevant international treaties. Norms of international law are usually divided into imperative and dispositive. A peremptory norm of international law is a norm accepted and recognized by the international community, from which no deviation is permitted. Imperative norms, for example, are the principles of international law. Dispositive norms are rules of conduct from which States may derogate by mutual agreement, if the derogation does not harm the rights and legitimate interests of other States. Dispositive norm implies the right of subjects to regulate their relations otherwise than provided by the general norm. International law, in turn, influences national laws, and this influence is constantly increasing, for example, ensuring fundamental human rights. The rules of international law guide Brunei Darussalam, a Southeast Asian state on the northwestern island of Kalimantan, in its foreign policy. Notably, the island is divided between Brunei, Malaysia and Indonesia, while Brunei itself is divided into two parts by the territory of Malaysia. The word "Darussalam" means the abode of peace, the polity of the sultanate. Relations between the United States and Brunei date back to the mid-XIX century, specifically from April 6, 1845, when the American warship USS Constitution dropped anchor in Brunei Bay. The historic visit contributed to the Treaty of Peace, Friendship, Commerce and Navigation, which has been in force since 1850. For 96 years (1888-1984) Brunei was under the protectorate of Great Britain, a U.S. ally in two world wars. On the day of the Sultanate's declaration of independence (January 1, 1984), the United States opened an embassy in the center of Brunei's capital, Bandar-Seri Begawan. On March 10, 1984, the Brunei Embassy was opened in the District of Columbia and diplomatic relations were established between the two states through an exchange of the appropriate notes. It is this historic moment that is considered the beginning of official bilateral relations between the countries.

Therefore, it should be noted that by the beginning of the 2000s, diplomatic relations had been less than 20 years old and were in their infancy. This is evidenced by the fact that on November 15-16, 2000, President B. Clinton of the United States visited Brunei's capital with his first presidential visit and participated in the Asia-Pacific Economic Cooperation (APEC) forum, which unlike ASEAN has more member countries, including Canada and the US (Weatherbee, 2008, pp. 64-65; Pidbereznykh, 2018, p. 198) that are not South-East Asian countries. It is believed that APEC and ASEAN, which is formed on the basis of civilization, are directly opposite international associations. Some researchers point out that one of the objectives of APEC is to unify the region by Western standards and turn it into a single market of goods and services in the interests of the United States, while the goal of ASEAN is to preserve national and regional identity and economic independence. At the same time, it should be emphasized that both organizations are focused on cooperation with the United States and Washington plays an active role in their activities. July 30-01, 2002, Bandar Seri Begawan hosted the ASEAN Regional Forum (ARF), which was attended by U.S. Secretary of State Colin Powell. The first official visit of the Sultan of Brunei and the King of Malaysia to the United States took place in 2002. The delegation was received by President Bush in Washington. This visit was a milestone in the development of bilateral relations and focused primarily on trade and economic aspects and the United States committed to promoting trade and investment in ASEAN countries, including Brunei (Gorodnia, 2018, p. 109). In 2002, former Secretary of State Colin Powell made an official visit to the Sultanate to attend a meeting with ASEAN members at the RFA. Somewhat later, there is a strengthening of military cooperation, which was marked by a visit in 2008. Sultan to the U.S. Pacific Fleet base located in Hawaii. They were accompanied by Ambassador William Todd. It is known that during this period, Brunei sent cadets to U.S. military academies, cooperated in maritime security and coordination of humanitarian aid and disaster relief. Meanwhile, military cooperation between the US and Brunei dates back to November 29, 1994, when a Memorandum of Understanding on Military and Defense Cooperation was signed. The countries began a dialogue with the formation of joint training programs, and then other forms of military cooperation began to develop. The Sultanate allowed U.S. naval forces to enter its docks for repairs and the transit of military aircraft. Also, Brunei's armed forces often

participate in joint military exercises with the U.S. military (Gorodnia, 2014, p. 101). In July 2011, Brunei's energy minister and minister of foreign affairs and trade visited the United States to expand energy cooperation between the two countries, where officials met with a number of U.S. companies representing the oil and gas sector. On September 20 of the same year, Minister Jok Seng and U.S. Assistant Secretary of State Kurt Campbell had their first dialogue. In the field of bilateral economic relations, American firms worked in the energy sector, in financial services and consulting for government projects, and American franchises and brands were gradually opened in Brunei. This further strengthened the bilateral relationship and marked a new milestone in the strategic partnership between the two countries. A wide range of bilateral, regional and global issues of common interest were addressed. They included security, combating terrorism, economic development, particularly the strengthening of commercial and investment ties and the possibility of coordinating development projects within the framework of the multilateral initiative to protect the wildlife "The Heart of Borneo". Progress in defense cooperation was also noted. In 2011, the United States participated in the celebration of the 50th Anniversary of the Royal Brunei Armed Forces and the BRIDEX international defense exhibition. At the same time, the next visit of the Brunei delegation headed by the Sultan to the United States took place only on March 12, 2013, actually 11 years after the first visit. (U.S. DEPARTMENT OF STATE, 2011). This interruption can be viewed both negatively and positively: if viewed from a negative perspective, one can assume that the U.S. is not strongly interested in contacts with Brunei. On the positive side, Brunei is a country with a small territory and therefore probably not of primary interest. However, Brunei occupies an important economic and strategic location on the coast, at the crossroads of trade routes. At the same time, there are intensive diplomatic contacts at a lower level. Therefore, a separate assessment should be made of the circumstances that led to the long interruption of interstate visits at the highest level. One can assume that the U.S. high-level visit was possible because Brunei presided over ASEAN in 2013 (Pidbereznykh, 2018). Overall, this year can be characterized by an intense increase in diplomatic activity. Secretary of State John Kerry visited the country for several ministerial and leadership meetings. At the meeting with President Obama B., mutual interest in deepening bilateral cooperation, which has spanned more than 160 years but has only



received its most vigorous development in recent decades, was reaffirmed. Particular emphasis was placed on the development of mutually beneficial projects. At the same time, Obama praised His Majesty's leadership on maritime issues in the APEC and the promotion of English language learning among young people, which helped expand trade and strengthen ties between the United States and the region (de Vienne & Jammes, 2020). At the same time, this fact may indicate the desire of the United States, through the exposure of the general population to the English language, to enhance the Westernization process in Brunei and the spread of Western values that are not typical of the traditional culture of the country. On the one hand, as noted above, it can strengthen trade relations, and on the other hand, it can strengthen the processes of globalization, which can destroy the identity of the country and its traditional values. Therefore, the U.S. position can be assessed as a desire to spread its cultural influence, unifying it throughout the world under its standards, establishing its hegemony and standards of living for all mankind. Slightly deviating from the topic, let us note that one of the reasons of confrontation between the US and Russia and China, may be the desire of Washington to establish a unipolar, Westernized in all spheres of human life, world. It is noteworthy that the issue of expanding the scope of the English language in the region has been discussed before, during Clinton's visit to Brunei in September 2012. Even a special project was developed to strengthen the role of this language in the region. It should be noted that similar trends of spreading the influence of Western values are also typical for Ukraine and may pose a threat to the cultural identity of the country and the development of the Ukrainian language. It is stated that the main purpose of the visit is to promote cooperation between the United States and ASEAN (Pidbereznykh, 2018, p. 199). One of the nuances of the U.S.-Brunei relationships has been the difficult diplomatic situation emerging in the region due to the growing confrontation between global geopolitical players: the United States and China. Increasing tensions between these countries are occurring in all spheres of activity. Researchers believe that China is expanding into the region, using a variety of means, from outright pressure to "soft power," which serves to attract more and more states in the region to its side. Therefore, the relationship between the U.S. and Brunei, which Washington seeks to subordinate to its influence, should be viewed in the context of geopolitical competition and struggle for spheres of influence between the U.S. and China in the region. As a result, Brunei,

small in area but wealthy and economically influential, is of great interest to both the U.S. and China. Therefore, the state is forced to maneuver on the diplomatic front, ensuring the protection of its national interests: on the one hand, it appeals to the United States for support, and on the other hand, it tries to establish close economic relations with China. It should be noted that economic cooperation and participation in APEC and ASEAN are now in the foreground. Brunei saw APEC as a community of open and interconnected economies, as a means of strengthening the ability to grow globally, in strengthening markets, developing human resources and promoting the development of small and medium-sized enterprises to support the economy. The movement toward global integration was seen as an opportunity to improve the standard of living and social well-being of the population. An ambitious Agenda for Economic Modernization was introduced to help the economy leverage advances in information technology to increase productivity and stimulate growth and expansion of services, strengthen markets, e-commerce, infrastructure, knowledge and skills development, affordable and more efficient access to communications and the Internet. Brunei also supported APEC programs to improve the quality of teachers and build sound education management through a collaborative educational process in the region. New information and communication technologies enabled the development of networks to extend health services to a wider population, and to address major health issues. Therefore, Brunei, under the diplomatic influence of the U.S., deliberately became involved in the processes of globalization.

### Discussion

The question of how mutually beneficial the U.S.-Brunei relationships is remains debatable. Researchers believe that the purpose of U.S. bilateral cooperation with other countries is to protect and promote national interests, which are to support sovereignty and territorial integrity; preserve political, cultural and religious identity; promote regional and global peace, security, prosperity, stability, welfare, economic and social well-being of citizens (Gorodnia, 2011). At the same time the tendencies of the USA directed to unification, globalization, and establishment of a new world order, which is in line with neoliberal values and does not provide for regional and cultural pluralism, are noted (Mahtani, 2019). This conclusion can be drawn in view of the fact that the U.S. is making every effort to promote the English language,



American culture and values as the standard of democracy and freedom. This process of globalization provides the erasure of national and regional differences in the modern world and the establishment of a single standard (Maraieva, 2022). It is noted that globalization has become so total that it is accepted as an objective reality and one of the natural stages of human development by an increasing number of politicians, researchers. There are several varieties of globalization and one of them is the American model of globalization, which was developed in the United States. At the same time in the U.S. there is a reverse process of active influence of Chinese and Asian culture in general. Therefore, this process is far from ambiguous and multidimensional. Therefore, we should express some disagreement with the opinion of researchers who believe that the U.S. seeks to maintain the cultural diversity of the modern world and express disagreement with the view that there is only the American scenario of globalization (U.S. Indo-Pacific Command, 2019). Therefore, it should be noted that the historical process is largely due to the geopolitical competition between the superpowers and the desire to maximize its sphere of geopolitical influence, including the maximum number of states that do not belong to the category of superpowers.

### **Specific Mechanisms of Cooperation between the United States and Brunei**

The economic ties between the United States and Brunei are underscored by robust trade agreements, strategic investment partnerships, and joint ventures. Trade between the two nations has flourished, with mutual benefits evident in the exchange of goods and services. Investment partnerships have paved the way for shared economic interests, fostering growth and development in both countries. These collaborations contribute significantly to job creation, technology transfer, and the overall economic well-being of the nations involved.

In the realm of security and defense, the U.S. and Brunei engage in joint efforts aimed at ensuring regional and global stability. Military alliances, intelligence sharing, and counterterrorism initiatives are central to their collaborative approach. Notable security agreements and joint military exercises serve as tangible evidence of the depth of cooperation, demonstrating a commitment to shared security goals and the protection of both nations' interests.

Cultural and educational exchanges form a vital component of U.S.-Brunei relations. Various programs promote cultural understanding, facilitate language exchange initiatives, and establish educational partnerships. These exchanges play a crucial role in fostering mutual understanding between the people of the United States and Brunei, contributing to the development of enduring people-to-people connections that transcend geographical boundaries.

### **Implications of U.S.-Brunei Cooperation**

The economic implications of U.S.-Brunei cooperation are profound, influencing the growth of industries, employment rates, and overall economic stability in both countries. Collaborative efforts have spurred innovation, technological advancements, and increased market access, leading to enhanced economic prosperity. However, challenges may arise, and it is crucial to address potential areas requiring further attention to sustain and maximize economic benefits.

The partnership between the U.S. and Brunei carries significant political implications, impacting the sovereignty and territorial integrity of both nations. An evaluation of this cooperation within the broader geopolitical landscape reveals how it aligns with each country's strategic interests. This alignment is critical in navigating complex international relations and fostering diplomatic ties that strengthen the geopolitical position of both parties.

Exploring the cultural implications of U.S.-Brunei cooperation unveils the influence of American values and cultural exchange on Bruneian society. The dynamics of globalization come into play, impacting cultural diversity. While cultural exchanges enrich societies, challenges may arise from the potential homogenization of cultures. A nuanced assessment is essential to understand and address the implications for both nations.

U.S.-Brunei cooperation plays a role in the larger geopolitical context, particularly within the competition between global superpowers. Both countries navigate this landscape, seeking to maximize their geopolitical influence. Understanding the impact of this cooperation on their respective spheres of influence is crucial in comprehending the geopolitical dynamics in the region and beyond.

Acknowledging varying perspectives on U.S. globalization, it is essential to consider arguments both for and against the idea that the U.S. seeks to maintain cultural diversity. A nuanced perspective is crucial in understanding the influence of American and other cultural forces in the global arena. This reconciliation of views provides a comprehensive understanding of the multifaceted nature of U.S. globalization and its implications for cultural diversity worldwide.

## Conclusion

To sum up, during the study period, the United States and Brunei have cooperated closely in many areas, most notably joint integration alliances, defense programs, trade and economic activities, and humanitarian missions. It is necessary to state that diplomatic relations between the Sultanate of Brunei Darussalam and the United States have deep historical roots and during the period under study were conducted at a high level of intensity. At the same time, it should be noted that the highest level of the Brunei Darussalam delegation visited the United States only twice. At the same time, there is an active level of cooperation between the U.S. and Brunei at the diplomatic level, with regular meetings of heads of foreign ministries and other government officials of the highest rank. Cooperation between the states in the first two decades of the XXI century has been multidirectional. The role of English as a factor in spreading U.S. influence is emphasized. Let us note that other countries resort to similar tactics, which by introducing the language of their country spread its influence in many aspects and first seek to introduce their culture. Therefore, language in our time has become one of the tools to spread the geopolitical influence of a particular state. As for the objectives of the study, the different aspects of cooperation between the United States and Brunei during this historical period were systematized, and the priority areas of cooperation were analyzed, and it was found that the economy, defense, the fight against terrorism and the cultural field in which the United States encourages the strengthening of the role of English in Brunei. The main vectors of cooperation, which are due to global and regional geopolitical competition and the desire of the U.S. to acquire an ally in the region, were revealed. Diplomatic contacts at various levels have been covered in detail and the scope and main priorities of cooperation have been established. The geopolitical component was analyzed separately, and some predictions were given for the US-Brunei relationship. As for the

hypotheses of the study, the hypothesis that in building international relations, the U.S. primarily seeks to protect its interests, in principle, this is natural for any state and is especially characteristic of those countries that are superpowers, was largely confirmed. Therefore, mutually beneficial relations are the exception rather than the rule and are only possible when the partner state supports the political and economic course of the states. It is also quite natural that the United States is trying to establish a geopolitical hegemony in the region under study by narrowing, or complete displacement of geopolitical competitors. The main method of U.S. domination is to support loyal governments, and if they do not support the U.S. policy, attempts are made to change the regime in one way or another. Now there is a struggle between Washington and its competitors for raw materials and markets. As for cooperation with Brunei, it is more likely to be mutually beneficial, since the government supports the political and economic course of the United States.

## Bibliographic references

- Darussalam, A. M. (2016). *Brunei Darussalam Financial Sector Blueprint, 2016-2025*. Bandar Seri Begawan, Brunei Darussalam: Brunei Darussalam Monetary Authority. Available from: <https://acortar.link/bODlig>
- de Vienne, M.-S., & Jammes, J. (2020). China's maritime nexus in southeast Asia. *Asian Survey*, 60(5), 905-927. <https://doi.org/10.1525/as.2020.60.5.905>
- Gorodnia, N. (2011). East Asia in the global transformation of modernity under the influence of the 2008-2009 financial and economic crisis. *World Policy Studies*, 1, 197-222, Available from: <https://elibrary.ivinas.gov.ua/id/eprint/657>
- Gorodnia, N. (2014). Security Cooperation between the U.S. and East Asian Nations in post Cold War era. *Scientific Bulletin of the Diplomatic Academy of Ukraine*, 21(1), 99-107, Available from: <https://acortar.link/HVubzW>
- Gorodnia, N. (2018). U.S. multilateral trade strategies in Asia-Pacific: from G. H. W. Bush to D. Trump. *American History & Politics: Scientific edition*, 4, 104-117, Available from: <https://doi.org/10.17721/2521-1706.2018.04.104-117>
- Graham, S. (2015). *A history of Brunei* (2nd ed.). Routledge. Available from: <https://www.routledge.com/A->

- History-of-  
Brunei/Saunders/p/book/9781138863453
- King, V. T., & Druce, S. C. (2022). *Origins, history and social structure in Brunei Darussalam*. Routledge.  
<https://acortar.link/BC1BKy>
- Mahtani, S. (2019, April 11). *Brunei once held off on strict Islamic law to stay in a U.S.-backed trade pact*. Then Trump pulled out. Washington Post (Washington, D.C.: 1974). Available from: <https://acortar.link/Ng5dm2>
- Maraieva, U. (2022). On the formation of a new information worldview of the future (literature review). *Futurity Philosophy*, 1(1), 18-29.  
<https://doi.org/10.57125/FP.2022.03.30.02>
- Mohidin, M. (2014). *Brunei Darussalam, 2005-2009*. Bandar Seri Begawan: Department of Information, 392 p. ISBN 9789991749518.
- Nguyen, H. (2016). The Obama administration and Southeast Asia: Dynamics of a new engagement. *Indian Journal of Asian Affairs*, 29(1/2), 39-56.  
<http://www.jstor.org/stable/44123128>
- Omar, A. M. (2018, November 30). Brunei between big powers: Managing US-China rivalry in Asia. *The Diplomat*.  
<https://acortar.link/zR9UgF>
- Omar, A. M. (2020). Digital era governance and social media: The case of information department Brunei. In *Advances in Electronic Government, Digital Divide, and Regional Development* (pp. 19-35). IGI Global. Available from: <https://acortar.link/FiUNKJ>
- Parameswaran, P. (2018, November 14). US-Brunei defense ties in focus with military exercise in South China sea. *The Diplomat*.  
<https://acortar.link/lcRLou>
- Parameswaran, P. (2019a, April 12). What's in the Brunei navy vessel's new China voyage? *The Diplomat*.  
<https://thediplomat.com/2019/04/whats-in-the-brunei-navy-vessels-new-china-voyage/>
- Parameswaran, P. (2019b, September 16). INDOPACOM commander introductory visit highlights US-Brunei defense relations. *The Diplomat*. <https://acortar.link/ZdvEgo>
- Pidbereznykh, I. (2018). *United States of America in Southeast Asia: partnership in contemporary challenges (1990-early 2000s)*. Nikolaev: Ilion.  
<http://dspace.tnpu.edu.ua/handle/123456789/10249>
- Putra, B. A. (2021). Comprehending Brunei Darussalam's vanishing claims in the South China Sea: China's exertion of economic power and the influence of elite perception. *Cogent Social Sciences*, 7(1).  
<https://doi.org/10.1080/23311886.2020.1858563>
- Shakun, N. (2022). Anthropological dilemmas of information society development modern stage in the context of globalisation challenges. *Futurity Philosophy*, 1(3), 52-63.  
<https://doi.org/10.57125/FP.2022.09.30.04>
- Sofilkanych, M. (2022). The formation of a new information culture of the future: the socio-philosophical content. *Futurity Philosophy*, 1(1), 56-67.  
<https://doi.org/10.57125/FP.2022.03.30.05>
- U.S. DEPARTMENT OF STATE. (September 20, 2011). *Inaugural Brunei Darussalam - United States Senior Officials Dialogue 2011 Joint Statement*. Washington, DC. Retrieved 15 June 2021, from <https://2009-2017.state.gov/r/pa/prs/ps/2011/09/172853.htm>
- U.S. Indo-Pacific Command (2019, October 31). *U.S. Royal Brunei Navy ships transit in formation during CARAT Brunei*.  
<https://acortar.link/dE3gZw>
- Weatherbee, D. E. (2008). *Historical dictionary of United States-southeast Asia relations*. Scarecrow Press. <https://acortar.link/lAs9dN>

DOI: <https://doi.org/10.34069/AI/2023.71.11.19>

How to Cite:

Plekhanova, T., Strashko, I., Hryshchenko, O., Komarova, Z., & Savitskaya, M. (2023). Language policy and its media representation in post-war Ukraine: Implications for identity and inclusivity. *Amazonia Investiga*, 12(71), 223-232. <https://doi.org/10.34069/AI/2023.71.11.19>


## Language policy and its media representation in post-war Ukraine: Implications for identity and inclusivity

### La política lingüística y su representación mediática en la Ucrania de posguerra: implicaciones para la identidad y la inclusión

Received: November 6, 2023

Accepted: November 30, 2023

Written by:


**Tatyana Plekhanova<sup>1</sup>** <https://orcid.org/0000-0003-2639-0396>**Iryna Strashko<sup>2</sup>** <https://orcid.org/0000-0001-5137-991X>**Oleksandr Hryshchenko<sup>3</sup>** <https://orcid.org/0000-0002-4361-5705>**Zoia Komarova<sup>4</sup>** <https://orcid.org/0000-0001-5129-7543>**Maryia Savitskaya<sup>5</sup>** <https://orcid.org/0009-0000-3585-3300>


#### Abstract


**Purpose:** This article aims to study language policy and its media representation in post-war Ukraine, as well as to identify the peculiarities of inclusiveness in the future language policy. **Methodology:** a content analysis of modern literature and academic research on language policy and its representation in the Ukrainian media was conducted; a content analysis based on the selection of key media resources and survey sites was conducted. The scientific novelty of the work lies in determining the current state of linguistic policy in Ukraine against the background of the unfolding military processes and the future development of the state. The analysis takes into account the recommendations of the European Commission and shows Ukraine's compliance with European standards in the field of language rights. **Results:** It is determined that the expansion of the Ukrainian-speaking audience is a noticeable


#### Resumen


**Objetivo:** Este artículo pretende estudiar la política lingüística y su representación en los medios de comunicación en la Ucrania de posguerra, así como identificar las peculiaridades de la inclusividad en la futura política lingüística. **Metodología:** Se ha realizado un análisis de contenido de la literatura moderna y la investigación académica sobre la política lingüística y su representación en los medios de comunicación ucranianos. La novedad científica del trabajo radica en determinar el estado actual de la política lingüística en Ucrania en el contexto del desarrollo de los procesos militares y el futuro desarrollo del Estado. El análisis tiene en cuenta las recomendaciones de la Comisión Europea y muestra el cumplimiento por parte de Ucrania de las normas europeas en materia de derechos lingüísticos. **Resultados:** Se determina que la expansión del público de habla ucraniana es una tendencia notable, confirmada por diversos

<sup>1</sup> PhD in Philosophy, Associate Professor, Head of the Department of Publishing and Editing, Faculty of Journalism, Zaporizhzhya National University, Zaporizhzhia, Ukraine, Zaporizhzhia, Ukraine.  WoS Researcher ID: JDW-9437-2023

<sup>2</sup> PhD in Philosophy, Head in the Department of Germanic Languages, Department of Germanic Languages, Faculty of Foreign Philology, Mykhailo Drahomanov State University of Ukraine, Kyiv, Ukraine.  WoS Researcher ID: JRW-5981-2023

<sup>3</sup> PhD in Philosophy, Associate Professor, Department of Journalism and Philology, Faculty of Socioeconomic, Pylyp Orlyk International Classical University, Mykolaiv, Ukraine.  WoS Researcher ID: GRS-9206-2022

<sup>4</sup> PhD in Philosophy, Associate Professor, Associate Professor of the Department of Ukrainian Language and Teaching Methods, Faculty of Philology and Journalism, Pavlo Tychyna Uman State Pedagogical University, Uman, Ukraine.  WoS Researcher ID: AIC-3412-2022

<sup>5</sup> Medical Doctor, Ludwik Rydygier Hospital in Krakow, Krakow, Poland.  WoS Researcher ID: JJE-2363-2023

trend, confirmed by various sociological studies. At the same time, current legislative changes allow for the publication of advertising and events in the languages of national minorities. The conclusions emphasise that future legislative changes should reflect the inclusive development of society. In conclusion, it is noteworthy that the observed expansion of the Ukrainian-speaking audience, as highlighted in the study, presents a positive trend with the potential to contribute to national unity in the aftermath of conflict.

**Keywords:** language policy, Ukraine, Russian-Ukrainian war, future, importance of media, laws.

## Introduction

Ukraine, as a country with a long history and an outstanding cultural heritage, has undergone significant transformations. Language policy and its interaction with media representation is one of the key areas that has been subject to not only political but also socio-cultural changes. In light of the diversity of ethnic, linguistic, and cultural groups that inhabit the country, the study of the impact of language policy on identity formation and the creation of an inclusive society is becoming an extremely relevant task. The Russian-Soviet influence on Ukraine and its politics has long persisted even after the actual collapse of the Soviet Union in 1991. It existed due to the support of a part of the population for Russian propaganda about the cultural superiority of the Russian language, which was actively imposed through digital and traditional media, by certain political experts and even politicians (Kuzio, 2022; Tkachova et al., 2021). At the same time, the current Russian-Ukrainian war has raised a very relevant question: if the Kremlin regime puts the language issue in Ukraine as one of the main factors of its invasion (the concept of “protecting the Russian-speaking population”), to what extent may the use of Russian become necessary in the media space and at the official level in the future? For this reason, it is crucial to thoroughly analyse the implications of language policy and media representation in post-war Ukraine, and to consider their important aspects for the formation of national identity and inclusiveness in contemporary society.

### *Research problem*

In post-war Ukraine, a historically tense period of transformation, language policy and media representation are key factors influencing social

estudios sociológicos. Al mismo tiempo, los actuales cambios legislativos permiten la publicación de publicidad y actos en las lenguas de las minorías nacionales. Las conclusiones subrayan que los futuros cambios legislativos deben reflejar el desarrollo integrador de la sociedad. En conclusión, cabe señalar que la expansión observada de la audiencia de habla ucraniana, como se destaca en el estudio, presenta una tendencia positiva con el potencial de contribuir a la unidad nacional después del conflicto.

**Palabras clave:** política lingüística, Ucrania, guerra ruso-ucraniana, futuro, importancia de los medios de comunicación, leyes.

and identity dynamics. The study is based on a theoretical framework that combines the concepts of language policy, media representation theory, and sociological approaches to identity construction. The use of this theoretical context allows us to uncover the complexities and interrelationships that exist between official language strategies and the ways in which these strategies are represented in the media, taking into account the impact on different groups in society.

### *Research focus*

The main focus of the study is a detailed examination of the consequences that arise from the interaction of language policy and its media representation in post-war Ukraine. The core objective is to identify the key mechanisms of influence, study their relationship with the identity construction of various population groups and evaluate their contribution to the creation of an inclusive society. This study is seen as an important step in the development of strategies aimed at supporting cultural diversity and promoting the social integration of different groups of citizens in the context of contemporary Ukraine.

### *Research aim and research questions*

The purpose of the article is to study language policy and its media representation in post-war Ukraine and to identify the peculiarities of the development of inclusiveness in the future. The realisation of this goal involves the following tasks:

1. Characteristics of the linguistic demography of wartime Ukraine.



2. Identification of the main language sentiments of Ukrainian residents based on the analysis of media resources. Based on this, the study of certain aspects of the implementation of further language policy.

### Theoretical Framework or Literature Review

The researchers' attention is devoted to various aspects of the role of national minorities in the socio-political life of Central and Eastern Europe. Bakishev & Plumlee's (2022) study focuses on the linguistic aspects of the current regional war in Kazakhstan, Ukraine and Russia. Specifically, the authors examine the impact of the conflict on the linguistic situation and provide practical recommendations for translators. This study may prove useful for understanding the relationship between language and conflict in a regional context. Bocale (2022) examined the situation of national minorities in the post-Soviet space thirty years after the collapse of the USSR. This publication is important for understanding the dynamics of their environment in the countries that used to be part of the USSR and their impact on contemporary socio-cultural processes. Cheskin (2016) studied the situation of Russian-speaking citizens in post-Soviet Latvia. The book provides an important contribution to the understanding of the problems and challenges faced by Russian-speaking communities in the post-Soviet space, contributing to the debate on multilingualism and cultural integration. Katerynych (2023) thematically analysed Belarusian media narratives in the context of the Russian-Ukrainian war. Yatsenko's article (2022) considers the philosophical content of the definition of national mentality. At the same time, the study by Filipova et al., (2021) described in detail the impact of the transhumanist concept on identity development. However, not all of the authors' statements can be accepted with, since, as the Russian-Ukrainian war has demonstrated, the development of nationality and patriotism are crucial. Ismailova (2022) described the key aspects of the socio-political development of contemporary society. Ivashchenko (2022) focuses on the study of the mainstream media in the context of Ukraine's European integration. This study details the impact of media on the perception and understanding of the European integration process in Ukrainian society. These works summarise and expand our comprehension of key aspects of language policy, cultural identity, and media interaction in the context of contemporary socio-cultural challenges.

Events related to Russian aggression in Ukraine have also become a subject of study. Brusylovska & Maksymenko (2022) analyzed the influence of Russian media, namely how the media shape views and opinions on events in the region. Duszczuk et al. (2023) examined the socio-economic consequences and challenges faced by military refugees from Ukraine in Poland after the Russian aggression. Kaunert & de Deus Pereira (2023) described the relationship between the EU and Ukraine in the context of the Russian-Ukrainian conflict and study the impact of these processes on ontological security. This work demonstrated Ukraine's continuing Eurocentricity. Instead, Kuzio (2022) emphasized on the foundations of aggressive Russian nationalism, which has turned into a state ideology. At the same time, Holper & Kyselova (2021) highlighted the dilemmas of including the language issue in peacebuilding and dialogue processes in Ukraine, the challenges that arise in the process of peacebuilding and dialogue in conflict-affected settings. Meylahn (2022) viewed the war in Ukraine as a conflict of languages and bodies and offered a philosophical justification and understanding of the relationship between language and corporeality. Rimpiläinen (2020) examined the representations of the displacement of the Donbas population by Ukrainian and Russian government media, analysed how government media create images and concepts of internal displacement. Vicente et al., (2023) provided an overview of the Russian-Ukrainian war, looking at different aspects of the conflict, the factors and consequences of this conflict, focused on various aspects of the military conflict in Ukraine and its impact on various spheres of society. The authors examined how socio-cultural, linguistic, and media aspects interact in the context of military events. All of these studies provide a deep and varied insight into the impact of the military conflict on various aspects of society and serve as important sources for further research and comprehension of events in Ukraine.

### Methodology

The study aimed at analysing language policies and its media representation in the post-war period in Ukraine in order to determine their impact on identity formation and the level of inclusiveness in society was carried out in several stages:

1. Literature review

- Analyse the recent literature and scholarly articles that focus on language policy to find out how this subject is portrayed in the Ukrainian media through a content analysis.
- Identify the main trends, debates, and concepts that shape the debate on this issue.

## 2. Content analysis of the media

- Select the key media resources, including news sites and social networks.
- Scrutinize news articles and programmes for language representation and determine the direction of language policies (Suspilne kultura, 2023; Svyrydyuk, 2023; Kulyk, 2023).

## 3. Surveys

- Study the results of surveys conducted by well-known sociological groups such as Rating, Kyiv International Institute of Sociology, and Info Sapiens research agency (Rating, 2022; Kulyk, 2023; InfoSapiens, 2023).
- Determine citizens' views on language policy and media representation.

The primary objectives of the survey encompassed the elucidation of Ukrainian citizens' perspectives regarding the prevailing language policy and the delineation of prospective trajectories for its evolution. Furthermore, an additional focal point involved ascertaining Ukrainians' inclinations towards the incorporation of the Russian language and their stance on the singular state language, notably Ukrainian. These aspects are the main trends of modern language surveys. This inquiry sought to achieve a heightened scholarly depth by delving into nuanced aspects of linguistic attitudes and policy orientations among the surveyed population.

Criteria for selecting sources:

1. Representativeness: the scope of views and opinions in chosen resources.

2. Relevance: commitment to current topics and events related to language policy and representation in wartime.
3. Credibility: level of trust in sources among the scientific and public communities.

Detailed Data Analysis in Media Content:

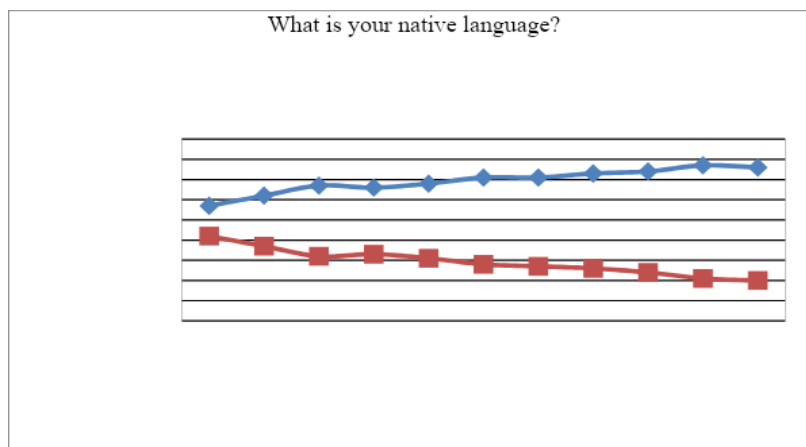
1. Examined the frequency and prominence of different languages in media content.
2. Investigated the contextual nuances and sentiments associated with language representations.
3. Analyzed the framing of language policies, identifying recurring themes and discourses.
4. Explored any shifts or changes in media language representation over time.
5. Categorized media content based on themes related to language policies and representation.

Therefore, based on the analysis of literature, media, and surveys, the study aims to identify the key features of the development of Ukraine's future language policy.

## Results and Discussion

### Ukrainian-speaking audience: the current state of the problem

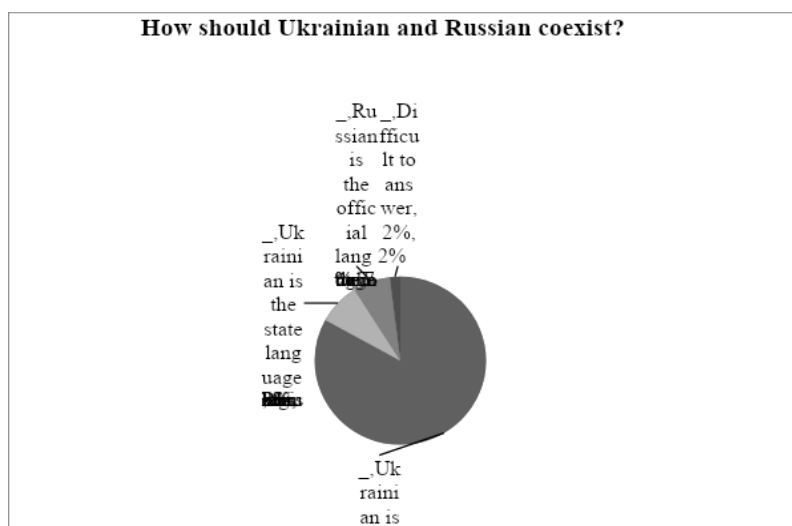
Today, the expansion of the Ukrainian-speaking audience is a noticeable trend that will continue to be dominant in the future. This is confirmed by various sociological studies. A key national survey conducted by the Rating Group in March 2022 sheds light on the language dynamics in Ukraine. Over the decade (from 2012 to 2022), the share of people who consider Ukrainian their native language has increased from 57% to 76% (Rating, 2022). At the same time, the use of Russian has decreased by 22%, falling from 42% to 20%. This information is partially confirmed by Eras (2023). It is noteworthy that the Russian-speaking demographic has declined, dropping from 40% in 2012 to 18% at the start of the war in 2021 (see Figure 1).



**Figure 1.** Diagram of people who consider Ukrainian their native language.  
Source: Rating Group survey (Rating, 2022)

Geopolitical circumstances, in particular the ongoing war, have played a crucial role in uniting Ukrainian society and shaping citizens' views on language. An overwhelming 83 percent of respondents expressed the opinion that Ukrainian should be the only official language, a sentiment

that has been reinforced by Russia's aggressive military actions (see Figure 2). In addition, in the month after 24 February 2022, support for granting Russian the status of an official language dropped significantly from 25% to 7%.



**Figure 2.** What is the optimal way for Ukrainian and Russian to exist in harmony?  
Source: Rating group survey (Rating, 2022)

Thus, as can be seen from the rating group survey, Ukrainians support the idea that Ukrainian should be the only state language in the future. To confirm this data, let us turn to the analysis of other polls. In particular, a survey made by the Kyiv International Institute of Sociology in December 2022 entitled shows noticeable shifts in language use patterns. The data showed an increase in the share of respondents who speak Ukrainian in everyday life, from 41% exclusively to 58%, including those who mainly use Ukrainian. At the same time, the share of exclusively Russian speakers decreased from 6% to 3% (Kulyk, 2023). This survey also showed a change in the dynamics of

family communication: 52% of respondents use Ukrainian as their primary language, compared to 51% in 2017. Workplaces and educational institutions reflect this linguistic transformation: 68 per cent of people reported speaking Ukrainian, compared to 11 per cent speaking Russian. These findings are confirmed by Lanvers & Lunyova (2023), who describe the language situation in Ukrainian higher education institutions (see Figure 3).

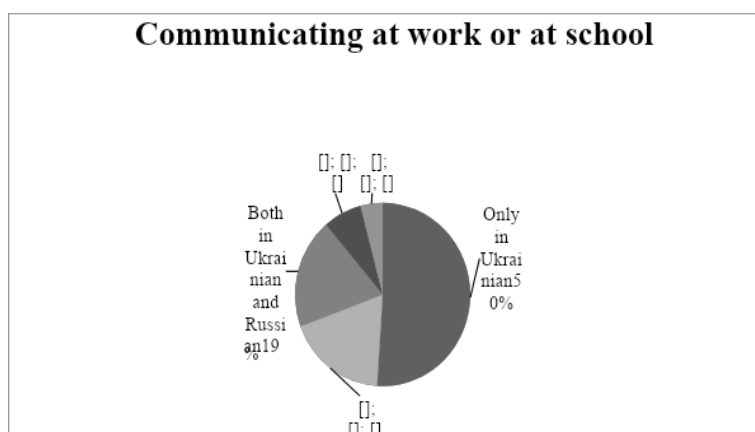
The number of respondents who consider the Russian language unimportant, reaching 58 percent, a significant increase from the 9 percent recorded in 2014. It is noteworthy that even in

traditionally Russian-speaking regions such as the South and East, 46% of residents expressed the opinion that Russian is unimportant (Kulyk, 2023).

A subsequent survey conducted this year by the Info Sapiens research agency confirmed this linguistic shift. It also identified a 16% increase in Ukrainian speakers to 62%, while the share of Russian-speaking Ukrainians decreased from 26% to 13% over the same period (InfoSapiens, 2023).

In addition to traditional polls, the digital landscape also reflects the dominance of the

Ukrainian language. Platforms such as online job boards have adapted their services to open search pages in Ukrainian for users in Ukraine. Before the war, the preference for Ukrainian among freelancers ranged from 11% to 30%. However, after the Russian invasion, this figure rose sharply to an overwhelming 96%, highlighting the expanding influence of the Ukrainian language in online spaces as well. The online language learning platform Duolingo has provided quantitative evidence of this global linguistic shift. Demand for Ukrainian language learning has experienced an incredible growth: in Ireland by 2229% and in Germany by 1651% compared to the previous year.



**Figure 3.** How do you communicate at work or at school?

Source: Kyiv International Institute of Sociology (Kulyk, 2023)

KIIS reports that 15% of Ukraine's population expresses a desire for the country to become bilingual. Looking at international examples, positive experiences of bilingualism that contribute to social satisfaction are evident in countries such as Switzerland, Canada and Belgium. However, there are also caveats, as seen in Belarus, where the trajectory towards bilingualism has led to the decline of the mother language. In the late 1980s, during the perestroika period, Belarus began attempts to secede from the USSR and elevate the Belarusian language to the status of an official language. This push included sociological surveys, the creation of NGOs, and the adoption of the 1990 Law on Languages in the Belarusian SSR, which established Belarus as a monolingual state (Suspilne kultura, 2023). However, after the 1995 referendum, this “Belarusianisation” failed. During this event, the proposal to grant Russia equal state status with Belarus was supported by 83.3% of voters. Subsequently, Luka shenko's regime favoured the Russian language, suppressing the use of living Belarusian and subjecting its speakers to humiliation. Over the years, the consequences became apparent. In

1999, 85.6 per cent of Belarusians considered Belarusian to be their native language; however, in the 2019 census, this figure plummeted to 61.2 percent. The use of the language at home has also decreased: 36.7 per cent in 1999, dropping to 23.4 per cent in 2010, and recovering moderately to 28.5 per cent by 2019. According to the current UNESCO classification, Belarusian is designated as a “fragile language”, which means it is vulnerable (Suspilne kultura, 2023; Maraieva, 2022). Although efforts are being made to preserve it, without a legislative programme of protection, the language faces an imminent risk of rapid disappearance. The Belarusian case highlights the delicate balance required in implementing bilingual policies to ensure the longevity and viability of both languages involved.

Ukraine recognises the rights of its 120 national minority groups, providing them with access to media, music, culture, literature, education, and various other services in their native languages. Current discussions focus on creating a sustainable institutional environment for the realisation of the rights and opportunities of

religious and ethnic communities, including national minorities and indigenous peoples. This involves developing intercultural competence, supporting interaction and understanding, and cultivating a culture of intelligent and friendly dialogue (Pchelintseva, 2023). This complex process therefore requires not only the recognition and protection of rights but also the active promotion of intercultural competence, interaction, and understanding. It is important to cultivate a culture of intelligent and friendly dialogue in order to maintain the unity of the nation while recognising diversity of views (Rezvorovych et al., 2023). Article 11 of the Constitution of Ukraine defines the state's obligation to develop the Ukrainian nation and its cultural heritage, as well as to take into account the ethnic, cultural, linguistic, and religious identity of all indigenous peoples and national minorities. The Laws "On National Minorities of Ukraine" and "On Indigenous Peoples of Ukraine" define the key role of the state in protecting the rights of ethnic communities. An important milestone in this process was the signing by President Volodymyr Zelenskyy of the updated law on national minorities. This step, prompted by the European Commission's recommendations, underscores Ukraine's determination to align its legal framework with the high standards of the European Union and to actively support the rights of different ethnic groups.

## New paradigms of vision for Ukraine's language policy

The Ukrainian government took an important step towards harmonising its legislation with European standards by adopting amendments to the law on national minorities on 21 September. The amendments are aimed at aligning provisions and definitions with EU standards. It now allows for the publication of advertisements in the languages of national minorities in their community, as well as for social and cultural events to be held in the minority language. It should be noted that these changes do not apply to the Russian language, but rather focus on minority languages, including Romanian and Hungarian, which are spoken in some communities in the west of the country (Svyridyuk, 2023). In addition, on 21 September 2023, the Verkhovna Rada adopted a draft law on national minorities, which contains the following key provisions:

- A clear definition of the concept of "national minority (community)";
- Granting the right to use the language of a national minority in advertising and in the provision of assistance;
- Development of a methodology for the use of national minority languages in some regions;
- Clarification of the procedure for determining settlements with a majority of representatives of national minorities (see Table 1).

**Table 1.**  
*Key aspects of the draft law on national minorities, 2023.*

Aspect	Description
Integration into Ukrainian society	The legislation emphasises that national minorities are integral, integrated, and organic components of Ukrainian society. Individuals from national minority groups are afforded diverse rights, encompassing the right to self-identification, freedom of association, peaceful assembly, freedom of expression, participation in political, economic, and social spheres, utilization of their minority language, and access to education in minority languages. These provisions aim to safeguard and uphold cultural identity.
Rights and powers	In the proposed legislation, Article 10 explicitly outlines the entitlement of individuals from national minorities (communities) to freely and without obstruction use their minority language in private and public contexts, both verbally and in written form, within the boundaries set by the law. The legislation acknowledges that public events arranged for individuals belonging to national minorities (communities) can be conducted in the languages of the respective national minorities. Such events encompass meetings, conferences, rallies, exhibitions, training courses, seminars, discussions, forums, and various other public gatherings.
Rights to use the language	
Public events in minority languages	

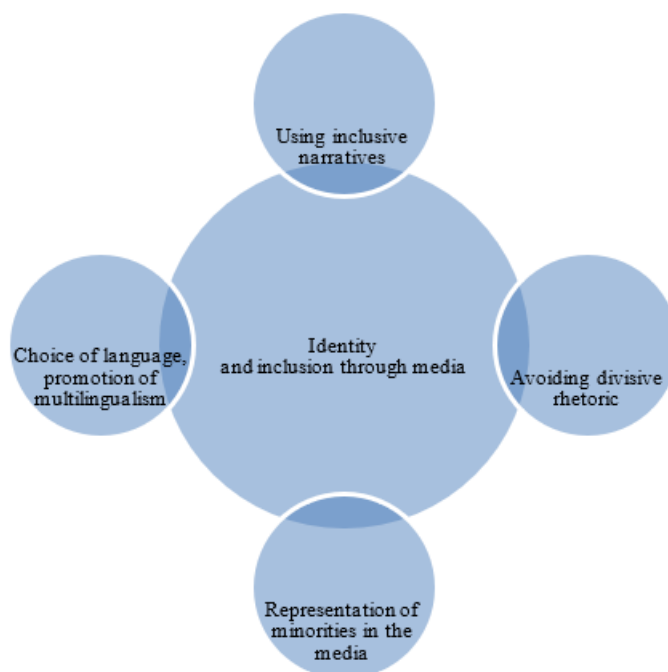
Source: compiled by the authors.



Indeed, the revision of national minority legislation aligns with one of the seven recommendations from the European Commission, which Ukraine received during its candidacy for accession to the European Union. These legislative modifications signify a significant stride taken by Ukraine to comply with European standards, fostering inclusivity,

and safeguarding the cultural heritage of its diverse population.

In the post-war inclusive language space, mass media will play a crucial role through various channels. These pathways are outlined in Figure 4.



**Figure 4.** Ways in which media influence identity and inclusion.

Source: compiled by the authors

Therefore, in the post-war period, attention should be paid to achieving inclusion and identity development of national minorities through the

media. This can be accomplished in a number of ways (see Table 2).

**Table 2.**

*Directions for the development of an inclusive language environment through the media.*

Direction	Description.
Inclusive narratives	The media can contribute to post-war recovery by presenting inclusive narratives that are sensitive to the diverse experiences of the population (Zeller, 2022). This includes representing different linguistic and ethnic groups in a balanced and respectful manner.
Language in the media	The choice of language(s) used in media, including news, television, and entertainment, can have a significant impact (Strukowska, 2023). Promoting multilingualism in the media can be a way of recognising and celebrating linguistic diversity.
Avoidance of divisive rhetoric	The media should be careful not to perpetuate divisive rhetoric or stereotypes that could exacerbate tensions. Responsible journalism plays a crucial role in shaping perceptions and promoting understanding (Shakun, 2022).
Representation of minorities	Ensuring fair representation of linguistic and ethnic minorities in the media helps to create a sense of belonging and counteracts marginalisation.

Source: compiled by the authors

At the same time, the instability of the military situation should not be neglected. With the loss of international support and the Kremlin regime's military and diplomatic pressure, serious transformations in the perception of the Russian language in Ukraine are probable. The situation surrounding Ukraine's eventual defeat is difficult to predict, and developments will depend on many factors, including international pressure, inner political processes, and public reaction. However, history shows that wars and conflicts can result in considerable changes in society, including language policy. There are scenarios in which there may be some pressure on the Ukrainian language or changes in its status. However, it should be borne in mind that different circumstances may affect the dynamics of such changes. In the event of any changes in language policy, the reaction of the public and civil society will be a significant factor. There is already strong support in Ukraine for the Ukrainian language and any attempts to change this status may cause opposition and protests.

## Conclusions

Thus, in recent years, Ukraine has demonstrated impressive progress in expanding the audience of the Ukrainian-speaking population, especially in the context of supporting national minorities. Sociological studies point to substantial changes in the language situation. Therefore, considering the attitude of the population, language policy should, on the one hand, continue to support large-scale Ukrainianisation. At the same time, the post-war language policy should aim to reform the language legislation on national minorities, giving preference to European standards and promoting inclusiveness and cultural diversity. Amendments to the law on national minorities have already been approved, allowing for the publication of advertisements and events in the languages of national minorities in their communities. These amendments do not apply to Russian, but rather to languages such as Romanian and Hungarian.

A new draft law on national minorities clearly defines the concept of a "national minority (community)" and their role as an integral part of Ukrainian society. This draft law defines the rights and obligations of persons belonging to national minorities, including the right to use their language in various areas, including advertising and public events.

These initiatives are in line with the recommendations of the European Commission, which became part of a broad package of

recommendations when Ukraine became a candidate for accession to the European Union. Overall, these legislative changes will reflect Ukraine's decisive step towards an open, inclusive society where different cultural and linguistic groups are able to preserve and develop their identities.

## Bibliographic references

- Bakishev, D., & Plumlee, M. (2022). Kazakhstan, Ukraine, and Russia: Linguistic aspects of the current regional war and implications for translators. *INContext: Studies in Translation and Interculturalism*, 2(3).  
<https://doi.org/10.54754/incontext.v2i3.31>
- Bocale, P. (2022). *Minorities in the post-Soviet space thirty years after the dissolution of the USSR*. Milano: Ledizioni.  
<http://digital.casalini.it/9788855268530>
- Brusylovska, O., & Maksymenko, I. (2022). Analysis of the media discourse on the 2022 war in Ukraine: The case of Russia. *Regional Science Policy & Practice*, 15(1), 222-235.  
<https://doi.org/10.1111/rsp3.12579>
- Cheskin, A. (2016). *Russian Speakers in Post-Soviet Latvia*. Edinburgh University Press.  
<https://doi.org/10.1515/9780748697441>
- Duszczyk, M., Górny, A., Kaczmarczyk, P., & Kubisiak, A. (2023). War refugees from Ukraine in Poland – one year after the Russian aggression. *Socioeconomic consequences and challenges, Regional Science Policy & Practice*, 15(1), 181-199.  
<https://doi.org/10.1111/rsp3.12642>
- Eras, L. (2023). War, Identity Politics, and Attitudes toward a Linguistic Minority: Prejudice against Russian-Speaking Ukrainians in Ukraine between 1995 and 2018. *Nationalities Papers*, 51(1), 114-135.  
<https://doi.org/10.1017/nps.2021.100>
- Filipova, M., Iliev, K., & Yuleva-Chuchulayn, R. (2021). A Transhumanist Legal Worldview: Responding to the Challenges of Time (Requirement, or Necessity?). *Futurity Economics&Law*, 1(1), 28-37. <https://doi.org/10.57125/FEL.2021.03.25.5>
- Holper, A., & Kyselova, T. (2021). Inclusion dilemmas in peacebuilding and dialogues in Ukraine. *Peace and Conflict: Journal of Peace Psychology*, 27(3), 475-485. <https://doi.org/10.1037/pac0000524>
- InfoSapiens. (2023). *Changes in Ukrainian society during a year of full-scale war*. Retrieved from: <https://www.sapiens.com.ua/ua/socpol-research-single-page?id=259>

- Ismailova, D. (2022). Philosophical Approach to Solving Socio-Political Issues in Kazakhstan in the Context of Modern Challenges to Society: A Theoretical and Methodological Review of the Problem. *Futurity Philosophy*, 1(2), 16-27. <https://doi.org/10.57125/FP.2022.06.30.02>
- Ivashchenko, V. (2022). *Media Language Studies in European Integration Discourse Ukraine*. DP "Express-objava". <https://doi.org/10.51587/9786-1773-89193-2022-01>
- Katerynych, P. (2023). Propaganda at Play: A Thematic Analysis of Belarusian Media Narratives in the Context of the Russo-Ukrainian War. *Media Literacy and Academic Research*, 6(1), 23-39. <https://doi.org/10.34135/mlar-23-01-02>
- Kaunert, C., & de Deus Pereira, J. (2023). EU Eastern Partnership, Ontological Security and EU- Ukraine/Russian warfare. *Journal of Contemporary European Studies*, 31(4), 1135-1146. <https://doi.org/10.1080/14782804.2023.2183182>
- Kuzio, T. (2022). *Russian Nationalism and the Russian-Ukrainian War*. Taylor & Francis Group. 10.4324/9781003191438-1
- Kulyk, V. (2023) *Language and identity in Ukraine at the end of 2022*. Zbruc. Retrieved from: <https://zbruc.eu/node/114247>
- Lanvers, U., & Lunyova, T. (2023). Language policies in Ukrainian higher education. *European Journal of Language Policy*, 15(1), 25-68. <https://doi.org/10.3828/ejlp.2023.3>
- Maraieva, U. (2022). On the formation of a new information worldview of the future (literature review). *Futurity Philosophy*, 1(1), 18-29. <https://doi.org/10.57125/FP.2022.03.30.02>
- Meylahn, J. A. (2022). Ukraine war: A war of languages and bodies. *HTS Teologiese Studies/Theological Studies*, 78(1), 8005. <https://journals.co.za/doi/abs/10.4102/hts.v78i1.8005>
- Pchelintseva, O. (2023). War, Language and Culture: Changes in cultural and linguistic attitudes in education and culture in central Ukraine after February 24, 2022. *Journal for Slavic Studies*, 68(3), 398-418. <https://doi.org/10.1515/slav-2023-0020>
- Rating. (2022). *Sixth national survey: language issue in Ukraine (March 19, 2022)*. Retrieved from: <https://acortar.link/x2lZbK>
- Rezvorovych, K., Skaletska, Z., Dorosheva, A., & Sushytska, Y. (2023). Application of law as a special form of its implementation: trends for the future. *Futurity Economics&Law*, 3(1), 28-35. <https://doi.org/10.57125/FEL.2023.03.25.03>
- Rimpiläinen, E. (2020). Victims, Villains, or Geopolitical Tools? Representations of Donbas Displacement in Ukrainian and Russian Government Media. *Europe-Asia Studies*, 72(3), 481-504. <https://doi.org/10.1080/09668136.2019.1672622>
- Shakun, N. (2022). Anthropological dilemmas of information society development modern stage in the context of globalisation challenges. *Futurity Philosophy*, 1(3), 52-63. <https://doi.org/10.57125/FP.2022.09.30.04>
- Strukowska, M. E. (2023). "Mapping and projecting otherness in media discourse of the Russia-Ukraine war". *Poznan Studies in Contemporary Linguistics*. <https://doi.org/10.1515/psicl-2022-1096>
- Suspilne kultura (2023). *Radical cannot be moderate. What are the ways to develop the Ukrainian language?* <https://acortar.link/j1Niw9>
- Svyridyuk, Y. (2023). *Zelensky approved the changes recommended by the EU to the law on national minorities*. Suspilne media. Retrieved from: <https://acortar.link/RyUlkB>
- Tkachova, N., Saienko, V., Bezena, I., Tur, O., Shkurat, I., & Sydorenko, N. (2021). Modern trends in the local governments activities. *AD ALTA: Journal of Interdisciplinary Research, Special Issue, 11(02-XXII)*, 112-118. <https://acortar.link/m99niP>
- Vicente, A., Sinovets, P., & Theron, J. (Eds.). (2023). *Russia's War on Ukraine*. Cham: Springer Nature Switzerland. ISBN: 978-3-031-32220-4
- Yatsenko, N. (2022). The philosophical content of the definition of the national mentality. *Futurity Philosophy*, 1(1), 41-56. <https://doi.org/10.57125/FP.2022.03.30.04>
- Zeller, J.P. (2022). Attitudes on languages, identities and politics at the Ukrainian Black Sea coast in 2020/21. *Russ Linguist*, 46, 291-311. <https://doi.org/10.1007/s11185-022-09264-7>



DOI: <https://doi.org/10.34069/AI/2023.71.11.20>

How to Cite:

Maharramova, M. (2023). Analysis of the role and use of prefixes in word formation in modern German compared to English. *Amazonia Investiga*, 12(71), 233-241. <https://doi.org/10.34069/AI/2023.71.11.20>

## Analysis of the role and use of prefixes in word formation in modern german compared to english

### Análisis de la función y el uso de los prefijos en la formación de palabras en el alemán moderno comparado con el inglés

Received: October 15, 2023

Accepted: November 29, 2023

Written by:

**Malahat Maharramova<sup>1</sup>** <https://orcid.org/0000-0003-1972-9064>

#### Abstract

The aim of the paper is to formulate and summarise the research on word formation in German in comparison with English. The literature review made it possible to conduct a typological analysis of word formation rules in German and English to classify the scope of current research in this area. The results showed that the paradigm shift of recent years has led to increased attention to issues related to language use and empirical issues, theories, and methods of word formation not only from a synchronic perspective but also from a diachronic one. The fact that words are formed distinguishes them from a competing process, phrase formation, in which phrases, i.e., groups of words, form collocations rather than words, i.e., groups of words to verbalise concepts. Since a phrase verbalises a concept in the same way as a word, these two methods compete both at the intra- and inter-linguistic levels. We conclude that it is the potential of word formation that distinguishes modern language from primitive language. The comparative compilation of German and English word formation models has led us to the typology of language.

**Keywords:** typology, prefixes, verbalisation, word formation, word patterns.

#### Introduction

According to Jalilbayli (2022), language typology in the most general sense means the classification of languages or language components based on common formal features, i.e., the comparison and classification of

#### Resumen

El objetivo de este artículo es formular y resumir la investigación sobre la formación de palabras en alemán. La revisión bibliográfica permitió realizar un análisis tipológico de las reglas de formación de palabras en alemán e inglés para clasificar el alcance de la investigación actual en este ámbito. Los resultados mostraron que el cambio de paradigma de los últimos años ha llevado a prestar una mayor atención a las cuestiones relacionadas con el uso de la lengua y a las cuestiones empíricas, teorías y métodos de la formación de palabras no sólo desde una perspectiva sincrónica, sino también diacrónica. El hecho de que se formen palabras las distingue de un proceso competidor, la formación de frases, en el que las frases, es decir, los grupos de palabras, forman colocaciones en lugar de palabras, es decir, grupos de palabras para verbalizar conceptos. Dado que una frase verbaliza un concepto del mismo modo que una palabra, estos dos métodos compiten tanto a nivel interno como interlingüístico.

Concluimos que el potencial de formación de palabras distingue la lengua moderna de la primitiva. La comparación de los modelos de formación de palabras alemán e inglés nos lleva a la tipología lingüística.

**Palabras clave:** tipología, prefijos, verbalización, formación de palabras, patrones de palabras.

languages or language components based on certain features that are common to two languages or distinguish them from each other. It is important to note that typology is not an independent theory of grammar. Unlike

<sup>1</sup> PhD in Philology, Associate Professor at the Department of German Grammar Azerbaijan State University of Foreign Languages, Baku, Azerbaijan.  WoS Researcher ID: JQW-4974-2023

functional, cognitive, or relational grammar or any of the many other systems designed to reveal how language works, typology aims to identify cross-linguistic patterns and relationships between these patterns (Maraieva, 2022). For this reason, the method and results of typological research are in principle compatible with any grammatical theory. Typology is the classification of languages or language components based on common formal features. It aims to identify cross-linguistic patterns and relationships between these patterns. Typology is not an independent theory of grammar and is compatible with any grammatical theory. It involves interlinguistic comparisons and studies the formal properties of languages. The selection of languages for research is a methodological challenge in typology. Typology can classify languages based on genetic affinities, geographic location, or demographics, but it primarily focuses on classifying languages based on their formal properties such as word order or morphology. While typological classification is distinct from other types of classification, it can be influenced by factors such as genetic, geographic, and demographic classifications. One specific example of how typology can be used to understand language is through the study of word order patterns and their correlations with the grammatical structure of a language. The correlation between word order and grammatical structure can extend to other linguistic features as well. Such typological studies provide valuable insights into the underlying principles and tendencies of language structures across different languages. They serve as evidence for the systematic relationship between word order, grammatical features, and broader linguistic universals. Understanding these correlations can aid linguists in predicting patterns, explaining language evolution, and unraveling the complexities of language typology.

### Theoretical Framework or Literature Review

Currently, there is a growing interest in the diachronic change of word-formation patterns in cognitive-linguistic and constructionist approaches (Körtvélyessy et al., 2018). In this work, linguists convincingly point to the need for verbal interpretation, as the extension of communication is not possible with nouns. Stewart et al., (2023) propose the term “converb” to describe such constructions that have verbal but also hybrid properties (i.e., both noun and verb). Despite this, the authors do not pay enough attention to the difference between written and spoken language, which is likely to have a significant impact on the type of noun or verb.

Thus, typology uses interlinguistic comparisons, classifies languages or certain aspects of languages, and typology studies the formal properties of languages. In this context, Aliyeva (2023) argues that any typological study is based on the comparison of languages. In her work, she concludes that English subordinate clauses follow the nouns that modify them. However, this conclusion is incomplete for a typology, as it lacks a cross-linguistic perspective. In the same vein, Rakhimov & Mukhamediev (2022) add that, in a typological approach, one might expect to find a result like that English is characterised by placing subordinate clauses after nouns that describe them in more detail, after collecting data on subordinate clauses from a representative sample of languages around the world. Only after such data collection has been evaluated is it correct to use the word 'typical' in a statement such as 'x' is typical of language y (as compared to languages p and q)'.

Making an adequate selection of languages as a basis for research is one of the main methodological problems of typology research (Zavalniuk et al., 2022). After all, typology includes either a classification of languages or their constituent parts. In the first case of language classification, the goal is to divide different languages into certain categories. This is done based on common characteristics. In the classification of language components, the focus is on a particular construction of the selected languages, such as reflexive verbs, flat or discourse particles. Then, in the next step, all types of this specific phenomenon are identified using cross-linguistic data (Iseni & Rexhepi, 2023). The goal here is to better understand how a particular aspect of language works by finding out the degree of similarities or differences. There is also a great interest in finding out if there are correlations between the different patterns that can be found in a language.

According to Twardzisz (2023), the classification of language components includes, for example, word order typology or morphological typology. Typology deals with classification based on formal properties of language.

There are several types of relationships between languages that are worth mentioning. For example, languages can be divided into different classes based on their genetic affinities (Hartmann, 2018). If we were talking about language typology, we would combine all languages that have the same origin and thus



arrive at different “language families”, such as Indo-European, Afro-Asian, etc.

Another aspect would be to group languages by their geographical location. Then we could talk about Australian or Indian languages and so on. We could also classify languages by demographics, such as languages with more than 100 million speakers, and so on (Khanetnok et al., 2023). Of course, all of these classification methods are useful in their own way to achieve a certain result, but they are not the same as typology. Typologists classify languages based on the forms they are composed of, such as morphemes, syntax, or spoken structures. However, the above differentiations do not mean that all other types of classification are not related to typological classification. Iacobini (2023), for example, notes that it is clear that there is a close relationship between typological and genetic classification.

Thus, although typological classification differs from genetic, geographical, and demographic classification, the typological characterisation of languages can be strongly influenced by these other factors.

In his work, Haspelmath (2023) uses Swiss German to show how suffixes and word-formation patterns are created through borrowing, as well as how language structure affects the formation of new suffixes, using examples of diminutive suffixes. Batool & Saleem (2023) extend the field of abbreviations through a corpus-based study, which helps to bring forward new ideas and broadens the linguistic aspect of the text.

Fabian (2023) investigates the problem of verb categorisation and finds that particle verbs can act as head verbs in complex sentences. He notes the similarities between participle verbs and verbs with prefixes, such as *bekleiden* and *erwärmen*. The author goes on to provide evidence that the resulting words, such as *Übereinkunft* or *Rückgabe*, are not nominalisations of the words *übereinkommen* and *rückgeben*, but are nominal compounds because the lexicon uses allomorphs. He also discusses infinitives, such as *Wiederaufkommen*, which are probably of the *Zusammenrückung* type. However, the author should check empirically whether the conversion from verb to noun might not be a more obvious explanation for two-component special formations or neologisms.

Gast & Borges (2023) investigates aspects of diachronic word formation. The authors investigate the interaction of noun composition in German with the recipients' prior knowledge and intra- and intertextual references using a corpus of noun compounds. This allows the authors to successfully build cultural knowledge through such word formation, for example, by recontextualising theological knowledge or differentiating Latin technical terms to create new categories. This study innovates in the field in several ways: the authors use a cultural and linguistic framework of diachronic word formation and show that in the early stages of language development, word formation is always contextualised and integrated into complex contexts.

In their study, Van Goethem, Norde & Masini (2023) analyse Schiller's vocabulary, which covers the poet's entire vocabulary, taking into account ung-derived and competing substantive infinitives. For example, some prepositions influence the formation of words, such as the preposition “nach”, which only forms ung-abstracts of perfective verbs (e.g., “nach geschehener Erkennung”). The adjectives in participial phrases also show a different distribution: participial phrases with -würdig and -wert include both ung derivatives and substantive infinitives, while formations with substantive infinitives with -voll are impossible. According to the authors, the decrease in the use of ung derivatives can be explained by their function in functional verb structures, where they continue to be used today. Since they are most often found with verbal meaning, conditions were created for the use of substantive infinitives, which further emphasise the verbal nature.

Zhuravlyova (2023) points out that even though English also has a large number of prefixes, their use may be somewhat limited compared to German. For example, the prefix “un-“ is used to form words with the opposite meaning (e.g., “happy” - happy, “unhappy” - unhappy). There are also prefixes with the meaning of “back” (e.g., “do” - to do, “undo” - to undo) or “turn” (e.g., “turn” - to turn, “return” - to return).

Compared to German, where prefixes can have many different meanings and influence the grammatical context, in English the use of prefixes can be more standardised and limited in their meaning (Baeskow, 2023). However, prefixes are still used to form new words and expand vocabulary.

Generally speaking, prefixes are an important element of word formation in both German and English. They add additional meanings to words and help to form new words. However, in German, prefixes can have a wider range of meanings and a greater influence on the grammatical structure of words than in English.

## Methodology

In this work, various techniques and tools were employed to examine and categorize the morphological structures and patterns present within the English and German languages. The following techniques were used: a corpus analysis of examples helped identifying the range of morphological phenomena present in the language; the affix analysis allowed understanding the affixes meanings, productivity and their position relative to the root word as well as the word segmentation. These analyses reveal the systems and rules underlying word formation in the language. Additionally, specific frameworks were used to categorize the languages based on their morphological typology. These methods allowed identifying unique or rare features within the language, which provide insights into its specific morphological characteristics and potentially contribute to linguistic theory. Regularities, irregularities, and patterns discovered during analysis inform linguistic descriptions and help establish a comprehensive understanding of the language's morphological structure.

To conduct the present typological analysis of the role and use of prefixes in word formation in modern German compared to English, a certain amount of lexical material was processed for further analysis. This material included words with prefixes in both languages. A literature review was used to classify prefixes in German and English. The common and distinctive characteristics of prefixes in both languages were identified. It was also investigated which prefixes can have similar meanings and be used in similar contexts. An analysis of the morphological typology of language was carried out with a special focus on German and English. The typological analysis allowed us to consider the influence of prefixes on the meaning and grammatical properties of words in German and English. The method of comparison allowed us to compare the results of research by different scholars to identify possible factors that could explain the differences, such as historical or morphological features of each language.

The conclusions and generalisations of the study include the findings on the typological differences between prefixes in German and English, as well as the possible impact of morphological typology on the process of learning these languages.

## Results and Discussion

Of the various approaches that exist within the framework of linguistic typology, morphological typology is considered in more detail in this paper in order to provide a basis for comparing German and English word formation.

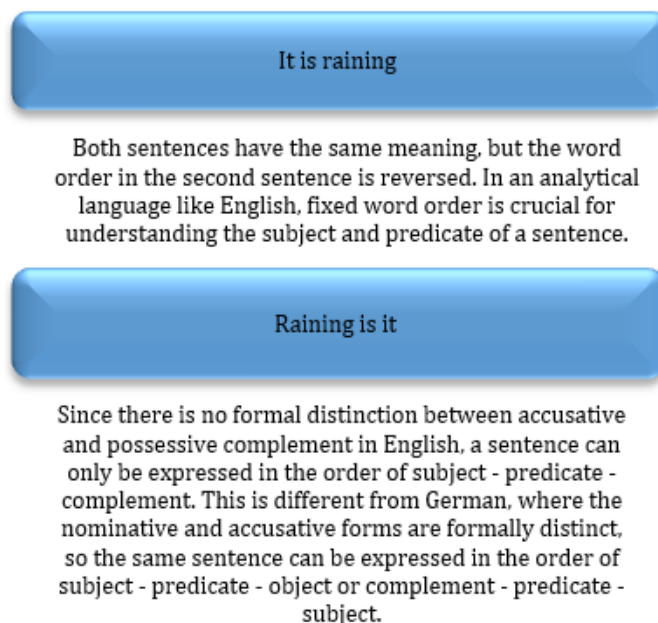
Based on morphological features, languages can be divided into different language types. This approach dates back to the classical morphological typology of the 19th century. There are synthetic-afflective, synthetic-agglutinative, and analytical or isolating languages, with most languages being classified as synthetic types (Baeskow, 2023). In a synthetic-afflective language, particles that contain grammatical information and explain the relationships in a sentence, i.e., inflectional morphemes, are attached directly to the word. A morpheme carries several pieces of information at the same time. This leads to variable word order since the relationships of the components in a sentence are unambiguous. This is the case in languages with a case system that is still largely intact, such as Latin or German.

In the group of synthetic languages, there are also languages that proceed in an agglutinative manner. Even in synthetic-agglutinative languages, morphemes are attached to the root of a word. However, a morpheme always contains exactly one piece of information, for example, the singular of a noun. If a word is in the singular genitive case, the corresponding case must also be indicated by another morpheme, which must also be added to the word. This approach allows for a clear segmentation of the word, as there is a 1:1 relationship between form and meaning (Gizi, 2018). So, a word in its existing form clearly has only one meaning. Turkish, Finnish, or Dravidian languages such as Telugu are typical examples of language agglutination.

On the other hand, such unambiguous segmentation as in the above example does not apply to inflectional languages, as an inflectional morpheme contains multiple pieces of information. In an analytic or isolating language, almost every word consists of only one morpheme, either the root or the stem morpheme (Zekun & Yuan, 2022).

A very good example of radically analytical languages is Chinese or Vietnamese, which are highly isolated and do not use declension or inflection (complete loss of inflection), but instead resort to service words, a certain sentence order, or intonation. As a result, there are no word forms and words often consist of only one morpheme. Therefore, analytical languages are languages with very low inflection. They are based on the use of free grammatical morphemes, such as prepositions, and on certain word order

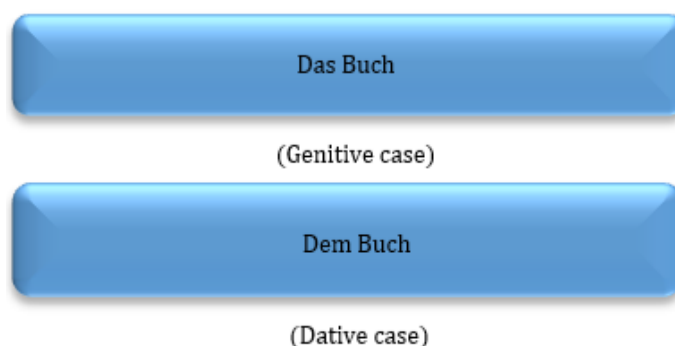
rules, such as English with its subject-predicate-complement word order. This word order has become entrenched as English has moved further and further towards an analytical/isolative language and the case system has become blurred. Thus, inflectional morphemes are largely absent, and semantic relationships would not be clear without the fixed word order. Only this provides information about the subject and object (Härtl, 2022). This is illustrated by the following example (Fig. 1).



**Figure 1.** Examples of inflectional language isolation.  
 Source: author's own design.

If we also assume that a noun is a word form in the genitive case and a second-word form in the dative case, then German is rich in word forms,

while English is poor. This is illustrated by the following example (Figure 2):



**Figure 2.** Word forms of the German language.  
 Source: author's own design.

So, we can say that nouns in German have more word forms than in English.

An important aspect that cannot be ignored is that languages cannot always be assigned to a single

group. Transitions between language types are fluid, and not all characteristics are always present (Simbikangwa, 2022). Indeed, English uses elements of both the synthetic and analytical/isolating types to form different verb

tenses. For example, the past tense is formed by adding the suffix -ed to the stem of a verb, such as “walked”. This is an example of synthetic formation.

At the same time, the future simple tense is used to form the future will with the auxiliary verb “will” and the main verb in the base form. For example, in the sentence “I will go”, the verb “to go” is used in the form will go. In this case, “will” is an isolation-type element, as it indicates the future without the use of a special suffix or ending.

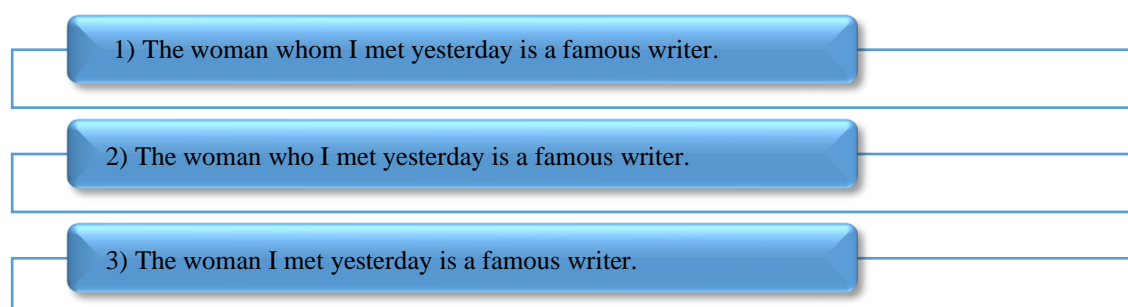
In general, we can say that the historical development of European languages has been “from synthetic to analytical languages”, for example, French compared to Latin or modern Germanic languages compared to Germanic languages 1000 years ago.

German has also lost its inflectional richness and has therefore become more analytical than before

but is undoubtedly still a synthetically inflectional language (Oke Loko, 2022).

English, on the other hand, has significantly reduced its inflectional inventory and thus undergone “radical typological changes”. Compared to Old English, it is now a very analytical language, and, according to Schweikhard & List (2020), even a largely isolated language in which individual lexemes hardly have different word forms.

Thus, nouns in English can appear in only two forms, either without case marking or in the possessive form, pronouns in these two forms and additionally with the object case (e.g., he - his - him, who - who - whom). However, in the case of relative and interrogative pronouns, the object case form (1) is becoming increasingly rare, at least in informal English, and the unmarked form (2) or the null form (3) is used instead, as in the example sentences below (Figure 3):

- 
- Figure 3 consists of three blue rectangular boxes, each containing a numbered sentence. The boxes are arranged vertically and are connected by thin blue lines. The first box contains '1) The woman whom I met yesterday is a famous writer.' The second box contains '2) The woman who I met yesterday is a famous writer.' The third box contains '3) The woman I met yesterday is a famous writer.'
- 1) The woman whom I met yesterday is a famous writer.
  - 2) The woman who I met yesterday is a famous writer.
  - 3) The woman I met yesterday is a famous writer.

**Figure 3.** English language vocabulary.

Source: author's own design.

Articles and adjectives are not case-sensitive at all. Thus, there is no congruence in an English noun phrase, i.e., there is no formal correspondence between the noun head and the components that modify it (Bauer, 2020). In English, there is also no such thing as a clause, i.e., a case where, for example, a preposition or verb requires a certain case marker in relation to the following noun argument (Hüning & Schlücker, 2023).

However, both are typical features of the German language, where, in addition to inflectional gender markers, there is also a distinction between nominative, genitive, dative, and accusative cases in nouns, pronouns, articles, and adjectives.

A typological analysis of the role and use of prefixes in word formation in modern German compared to English shows that prefixes play an

important role in word formation and are widely used in both German and English (Booij, 2020). However, there are several differences in the use of prefixes in the two languages.

In German, prefixes are often used to form new words by combining them with a root. For example, the prefix “ver” can be used to indicate reversibility or a negative meaning, as in “verlieren” (to lose). In some cases, the prefix changes the meaning of the word completely, as in the word “versprechen” (to promise). In German, a prefix can have a meaning not only at the beginning of a word but also in the middle or at the end (Sommer-Lolei et al., 2023).

English also uses prefixes to form new words with a root. However, in English, prefixes are mostly used at the beginning of a word (Schweikhard & List, 2020) (Table 1):

**Table 1.**  
*Word-forming prefixes in English and German*

English language	German language
Un-: unhappy, unfair	The prefix “un” is used for a negative meaning: unglücklich (dissatisfied, unhappy), uninteresting (uninteresting), unruhig (restless)
Dis- (cancellation or opposition): dislike, disagree	The prefix “ver-” is used to express a change, approximation, or alteration of a state: verändern (to change), verbinden (to connect), vertrauen (to trust)
Re- (repetition or again): rewind, redo	The prefix “zer-” is used to indicate breaking, removing, or destroying: zerbrechen, zerkleinern (to break), zerstören (to destroy)
Mis- (mistake or wrong): misunderstanding, misbehave	The prefix “vor-” is used to express anticipation, preliminary advance: vorbereiten (to prepare), voraussagen (to foresee), vorstellen (to imagine)
Pre- (before or before): prepare, predict	The prefix “nach-” is used to express after, approaching, or following: nachdenken (to think), nachfolgen (to follow), nachschlagen (to consult a reference book)

Source: author's own development.

Comparing the two languages, it can be noted that the use of prefixes in German is more flexible and varied, as they can be placed not only at the beginning of a word but also in the middle or at the end. However, both languages use prefixes to form new words and change the meaning of existing words.

A typological analysis of the role and use of prefixes in word formation in these languages is important for understanding the structure and functions of word formation in German and English. The study of prefixes can help to improve word formation skills and understanding of these languages.

Prefixes are one of the main types of affixes that are added to a word root to create new words. They integrate into the structure of the word before the root and change its meaning or grammatical characteristics. Prefixes can be added to verbs, nouns, adjectives, and adverbs, which allows you to expand the lexicon of a language and change their meaning.

The typological analysis allows us to classify prefixes according to various features, such as semantics, origin, function, and extension. In German, for example, there are a large number of prefixes that can have the semantics of modality formation, intensification, or vice versa, diminution of meaning, e.g: “ver-”, “ent-”, “be-”, “er-” and many others. English also has a wide range of prefixes, for example: “un-”, “re-”, “dis-”, “pre-”, “in-” and others.

Learning about prefixes in these languages can help you understand their lexical system and use them in your own word formation. For example,

knowing the prefixes can help you to form words correctly, resolve meanings, and understand the syntactic and grammatical rules of these languages.

Thus, a typological analysis of the role and use of prefixes in German and English word formation is important for improving word formation skills and understanding the structure of these languages. Without knowledge of prefixes, it is difficult to achieve full proficiency in the use of these languages.

## Conclusions

A typological analysis of the role and use of prefixes in word formation in modern German compared to English has shown a multifaceted and interesting result. Prefixes are an important component of word formation in both languages, but their use and role in modern German is different from that in English.

In German, prefixes play an important role in creating new words and changing the meaning and lexical characteristics of existing words. In English, prefixes also play an important role in word formation, but their use and role is generally less pronounced than in German. Many prefixes in English have similar meanings and are used in different words.

The typological analysis has shown that the use of prefixes in German is more extensive and flexible, with more opportunities for word formation and changes in meaning. In English, the use of prefixes is less expressive and limited, although they also play an important role in word formation.



Such a comparative analysis of the role and use of prefixes in word formation in modern German and English emphasises the importance of studying word formation in different languages and reveals the specific features of each language.

### Bibliographic references

- Aliyeva, G. B. (2023). Educational trends in the development of philological education in Azerbaijan in the era of digitalisation: a forecast of the future. *Futurity Education*, 3(1), 58-69. <https://doi.org/10.57125/FED.2023.25.03.05>
- Baeskow, H. (2023). The competition between noun-verb conversion and -ize derivation: Contrastive analyses of two productive English verb-formation processes. *Review of Cognitive Linguistics*. <https://www.jbe-platform.com/content/journals/10.1075/rcl.00155.bae>
- Batool, R., & Saleem, T. (2023). Comparative construction morphology of diminutive forms in English and Urdu. *Cogent Arts & Humanities*, 10(1), 2238998. <https://doi.org/10.1080/23311983.2023.2238998>
- Bauer, L. (2020). Compounds and minor word-formation types. *The handbook of English linguistics*, 463-482. <https://doi.org/10.1002/9781119540618.ch23>
- Booij, G. E. (2020). *Dutch morphology: A study of word formation in generative grammar* (Vol. 3). Walter de Gruyter GmbH & Co KG. <https://acortar.link/38Rjug>
- Fabian, M. (2023). *Contrastive Lexicology of English and Ukrainian*. Uzhhorod: Polygrafcentr "Lira". <https://dspace.uzhnu.edu.ua/jspui/handle/lib/54305>
- Gast, V., & Borges, R. (2023). Nouns, Verbs and Other Parts of Speech in Translation and Interpreting: Evidence from English Speeches Made in the European Parliament and Their German Translations and Interpretations. *Languages*, 8(1), 39. <https://doi.org/10.3390/languages8010039>
- Gizi, M. M. A. (2018). Word Formation in German Linguistics: Theoretical and Methodological Analysis. *Open Journal of Modern Linguistics*, 8(05), 143. DOI: 10.4236/ojml.2018.85015
- Härtl, H. (2022). Syntax des Englischen. In *Linguistics in language comparison: German studies, Romance studies and English studies* (pp. 155-187). Berlin, Heidelberg: Springer. [https://link.springer.com/chapter/10.1007/978-3-662-62806-5\\_7](https://link.springer.com/chapter/10.1007/978-3-662-62806-5_7)
- Hartmann, S. (2018). Derivational morphology in flux: A case study of word-formation change in German. *Cognitive Linguistics*, 29(1), 77-119. <https://doi.org/10.1515/cog-2016-0146>
- Haspelmath, M. (2023). Defining the word. *WORD*, 69(3). <https://doi.org/10.1080/00437956.2023.2237272>
- Hüning, M., & Schlücker, B. (2023). Approximation and comparison in word-formation: The case of denominal adjectives in Dutch, German, and English. *Zeitschrift für Wortbildung/Journal of Word Formation*, 7(1), 101-129. <https://doi.org/10.21248/zwjw.2023.1.90>
- Iacobini, C. (2023). Prefixation (Nouns and Adjectives) in Romance Languages. In *Oxford Research Encyclopedia of Linguistics*. <https://doi.org/10.1093/acrefore/9780199384655.013.458>
- Iseni, A., & Rexhepi, A. (2023). Prefixes of Germanic origin. *ANGLISTICUM. Journal of the Association-Institute for English Language and American Studies*, 12(1), 40-48. <https://anglisticum.org.mk/index.php/IJLLIS/article/view/2347>
- Jalilbayli, O. B. (2022). Philosophy of linguistic culture and new perspectives in modern Azerbaijani linguistics. *Futurity Philosophy*, 1(4), 53-65. <https://doi.org/10.57125/FP.2022.12.30.05>
- Khanetnok, P., Srihamongkhon, K., Daengsaewram, S., & Thabkhoontod, R. (2023). Morphology: Word Formation in Linguistics. *International Journal of Sociologies and Anthropologies Science Reviews*, 3(1), 83-92. <https://doi.org/10.14456/jsasr.2023.9>
- Körtvélyessy, L., Štekauer, P., Genči, J., & Zimmermann, J. (2018). Word-formation in European languages. *Word Structure*, 11(3), 313-358. <https://www.eupublishing.com/doi/abs/10.3366/word.2018.0132>
- Maraieva, U. (2022). On the formation of a new information worldview of the future (literature review). *Futurity Philosophy*, 1(1), 18-29. <https://doi.org/10.57125/FP.2022.03.30.02>
- Oke Loko, A. (2022). *Short word formation in German, English and French medical terminology: A translation-oriented investigation into the search for equivalence formations*. (Doctoral dissertation),

- University of Nairobi.  
<http://erepository.uonbi.ac.ke/handle/11295/161546>
- Rakhimov, T., & Mukhamediev, M. (2022). Peculiarities of the implementation of the principles of the education of the future analysis of the main dilemmas. *Futurity Education*, 2(3), 4-13.  
<https://doi.org/10.57125/FED/2022.10.11.29>
- Schweikhard, N. E., & List, J. M. (2020). Handling word formation in comparative linguistics. *SKASE Journal of Theoretical Linguistics*, 17(1), 2-26.  
<https://hdl.handle.net/21.11116/0000-0006-8BB5-1>
- Simbikangwa, M. (2022). *German and Kinyarwanda - a typological comparison on a phonological, morphological and syntactic level*. (Doctoral dissertation), University of Cologne. <https://kups.ub.uni-koeln.de/63596/>
- Sommer-Lolei, S., Mattes, V., Korecky-Kröll, K., & Dressler, W. U. (2023). Acquisition and processing of word formation in German. *Acta Linguistica Academica*, 70(3), 372-396.  
<https://doi.org/10.1556/2062.2023.00633>
- Stewart, J., Brown, D., Bennett, P., Robles-García, P., Sánchez-Gutiérrez, C. H., Miguel, N. M., & McLean, S. (2023). The contribution of affixes to productive English vocabulary knowledge for Chinese, German and Spanish learners: A comparison. *System*, 115, 103035.  
<https://doi.org/10.1016/j.system.2023.103035>
- Twardzisz, P. (2023). *English Complex Words: Exercises in construction and translation*. John Benjamins Publishing Company.  
<https://doi.org/10.1075/z.242>
- Van Goethem, K., Norde, M., & Masini, F. (2023). The fate of 'pseudo-'words: A contrastive corpus-based analysis. *Languages in Contrast*.  
<https://doi.org/10.1075/lic.22003.van>
- Zavalniuk, I., Kholod, I., Bohatko, V., & Pavlyuk, O. (2022). Lexical-syntactical repetition in the system of stylistic figures: status, specification, functions. *Ad Alta-Journal of Interdisciplinary Research*, 12(1), 268-274.  
<http://socrates.vsau.org/repository/getfile.php/30865.pdf>
- Zekun, W. U., & Yuan, L. İ. (2022). The use of connectors among Chinese German as a foreign language learners. A corpus linguistic study of argumentative learner texts. *Studies on German language and literature*, (48), 11-140. <https://doi.org/10.26650/sdsl2022-1166401>
- Zhuravlyova, D. (2023). Using prefixes in English word formation. In *Innovative trends in training specialists in a multicultural and multilingual globalised world*. Kyiv National University of Technology and Design.  
<https://acortar.link/0E6W1s>

DOI: <https://doi.org/10.34069/AI/2023.71.11.21>

How to Cite:

Ridei, N., Tytova, N., Sydorenko, T., Tsymbal, S., & Liashenko, M. (2023). Changes in the semantic profile to evaluate the quality and safety of life. *Amazonia Investiga*, 12(71), 242-251. <https://doi.org/10.34069/AI/2023.71.11.21>


## Changes in the semantic profile to evaluate the quality and safety of life

### Зміни семантичного профілю для оцінки якості та безпеки життя

Received: October 5, 2023

Accepted: November 28, 2023

Written by:

**Nataliia Ridei<sup>1</sup>** <https://orcid.org/0000-0002-5553-059X>**Nataliia Tytova<sup>2</sup>** <https://orcid.org/0000-0002-9415-4427>**Tetiana Sydorenko<sup>3</sup>** <https://orcid.org/0000-0002-3143-6769>**Svitlana Tsymbal<sup>4</sup>** <https://orcid.org/0000-0001-5354-6187>**Maryna Liashenko<sup>5</sup>** <https://orcid.org/0000-0002-8439-2587>


#### Abstract


The purpose of the article is to highlight the specifics of changing the parameters of the semantic profile in determining the indicators of quality and safety of life. Modern civilizational development is characterized by dynamism and flexibility, which directly affects human and social life and requires new algorithms for determining the level of quality and security in both the existential and institutional, as well as in the value and functional dimensions. The purpose of the research is to determine the relationship between socio-cultural factors that have dynamic characteristics with constant constants of the semantic differential. The research methodology focuses on the use of general scientific (primarily analytical) methods and philosophical and methodological synergistic principles. The results of the study indicate that there are three formats of this interaction: changing profile parameters under the influence of socio-cultural activity; preservation of profile constants regardless of socio-cultural realities; synergistic mutual

#### Анотація


Метою статті є висвітлення специфіки зміни параметрів семантичного профілю при визначенні показників якості та безпеки життя. Сучасний цивілізаційний розвиток характеризується динамічністю та гнучкістю, що безпосередньо впливає на життя людини та суспільства та потребує нових алгоритмів визначення рівня якості та безпеки як в екзистенційно-інституційному, так і в ціннісно-функціональному вимірі. Цілі наукової розвідки полягають у визначенні взаємозв'язку між соціокультурними факторами, які мають динамічні характеристики зі сталими константами семантичного диференціалу. Методологія дослідження зосереджена на використанні загальнонаукових (передовсім, аналітичного спрямування) методів та філософсько-методологічних синергетичних принципів. У результатах дослідження вказується, що є три формати вказаної взаємодії: зміна параметрів профілю під впливом соціокультурної активності; збереження констант профілю


<sup>1</sup> Doctor of Pedagogical Sciences, Professor of Ecology, Mykhailo Dragomanov State University of Ukraine, Ukraine.

 WoS Researcher ID: K-9259-2018


<sup>2</sup> Doctor of Pedagogical Sciences, Professor, Mykhailo Dragomanov State University of Ukraine, Ukraine.  WoS Researcher ID: B-5293-2016

<sup>3</sup> PhD in Philology, Associate Professor, State University of Information and Communication Technology, Ukraine.

 WoS Researcher ID: ACV-4910-2022

<sup>4</sup> PhD in Philosophy, Mykhailo Dragomanov State University of Ukraine, Ukraine.  WoS Researcher ID: ABF-8152-2020

<sup>5</sup> Doctor of Pedagogical Sciences, Associate Professor, Mykhailo Dragomanov State University of Ukraine, Ukraine.

 WoS Researcher ID: AAY-5342-2021

transformation of indicators of socio-cultural life and the semantic profile of its assessment. The scientific novelty of the work is focused on the introduction of a dynamic dimension to the impact assessment and measurement of the parameters of quality and safety of life using a semantic profile. Thus, the problem of quality and safety of life in both the theoretical and ideological and practice-oriented dimensions receives new mechanisms and tools for assessing and measuring the level of viability in modern civilisational progress. The semantic profile is no longer a stable format for assessing the quality and safety of life, but a dynamic method that is able to operate with variable data, transforming its own parameters.

**Keywords:** Semantic profile, quality of life, safety parameters, differential indicators, socio-cultural impact.

## Introduction

Quality and safety of life are dynamic concepts that depend on sociocultural factors. Therefore, it is important to update the characteristics of these concepts in the semantic profile to improve the accuracy of the assessment of the level of quality and safety of life.

Quality and security of life are unique concepts in the socio-cultural sense. On the one hand, they are fundamental components of the social order that define human existence in the civilization dimension; on the other hand, they are dynamic elements determined by permanent variables that depend on external local and global factors. Based on this dichotomy of sustainability and dynamism, assessing the level of quality and security of life is a rather difficult task for the scientific and sociological space. Today, there are many methods for determining the level of quality of life and human security parameters. One of the key algorithms used in such assessments is the semantic profile, which forms a corresponding scale of positive and negative aspects. At the same time, the semantic profile updates the constants - elements that have a reference dimension and determine the reference point or dimension of the scale (parameter) of improvement or deterioration of the humanitarian cluster.

The purpose of the research is to highlight the need to update the characteristics of quality and safety of life in the semantic profile. The objectives of the article are to form a clear

незалежно від соціокультурних реалій; синергетична взаємна трансформація показників соціокультурного життя та семантичного профілю його оцінки. Наукова новизна роботи сконцентрована на внесенні динамічного виміру до оцінки впливу та вимірювання параметрів якості та безпеки життя за допомогою семантичного профілю. Отже, проблема якості та безпеки життя як в теоретико-світоглядному, так і в практично-орієнтованому вимірі отримує нові механізми та інструменти для оцінки та виміру рівня життєздатності в сучасному цивілізаційному поступі. Семантичний профіль постає вже не сталим форматом для оцінки якості та безпеки життя, а динамічним методом, який спроможний оперувати змінними даними при цьому, трансформуючи власні параметри.

**Ключові слова:** Семантичний профіль, рівень якості життя, параметри безпеки, диференційні показники, соціокультурний вплив.

interaction (synergy) of the socio-cultural factors that determine the level of quality and safety of life with the parameters for assessing this level (differential scale).

The research problem is focused on finding effective tools that will make it possible to change or adjust the scale of the semantic differential since the profile format is quite difficult to transform. Therefore, the parameters that are included in the semantic structure should form a synergistic integrity with the characteristics of quality and safety of life.

## Literature Review

The scientific discourse has responded promptly to the need to transform the semantic profile in matters of quality and safety of life. The studies propose various algorithms for making changes to the differential scales that will meet the challenges of the times and become an appropriate response to natural, technological, and social factors of socio-cultural influence on human life activity.

The dynamic scale of the semantic differential (Akroyd et al., 2021) is currently hypothetical, as it is not possible to make changes to the profile online in an intuitive sense. The assessment of well-being is based on the principles of orderliness, so adding new indicators of components is a complex process. However, the conceptual dimensions of quality and security of

life are now being updated in the context of their structural and semantic analysis:

- the concept of adapting profile elements to external influences (Defila & Di Giulio, 2020);
- the concept of verification of proposed changes and adjustments (Poschmann et al., 2021);
- the concept of semantic compatibility (Adamczyk et al., 2020);
- the concept of semantic profile systematisation (Rhayem et al., 2020);
- the concept of a single semantic paradigm (Umbrico et al., 2020);
- the concept of the semantic trajectory (Arslan et al., 2019).

Changes and adjustments to the scale of the semantic differential should be accompanied and supported by appropriate methodological algorithms and tools for practical implementation: intellectual potential (Bannikova, 2022; Sirichanya & Kraissak, 2021); technological and digital resources (Buriak et al., 2022; Ghazal et al., 2020; Levchenko et al., 2022); format and design (Karana et al., 2020), behavioural and other human activity (Gevorgyan & Baghdasaryan, 2021; Fang et al., 2021).

The scientific discourse assigns a distinct role to methodological works concerning the variability of the semantic profile. A notable example of employing the semantic profile methodology to alter parameters is the use of the Likert scale (Jebb et al., 2021), which involves characterizing psychological factors that influence (or sometimes determine) the level of quality and safety of life.

The findings of the current research can be utilized when there is a need for incorporating and implementing changes to the semantic profile of quality and safety of life. Similar studies have already proven their relevance, serving as scientific justification for the necessity of modifying specific elements of the semantic differential scale, particularly gaining popularity in the field of medicine (Poudel et al., 2021).

## Methodology

The research methodology is based on the use of general scientific analytical methods. Factor analysis provides an understanding of the basic constants of quality and safety of life, which serve as guidelines for further construction of the semantic profile. The method of principal

components, which also forms the key parameters of the semantic profile, is close to factor analysis. Clusters of semantic differentials are provided through comparative analysis and modelling.

In addition to general scientific research methods, philosophical and scientific principles are actively used in scientific research. Synergistic and dialectical approaches allow us to assess the level of influence (scale, intensity, direction) of socio-cultural factors on the quality and safety of life. The dialectical vector is designed to form dichotomous dimensions of the semantic differential scales. The synergistic cluster provides an understanding of the ambiguity of the nature of all processes and phenomena that affect the assessment of the semantic profile.

The methodology could be more specific in describing the methods and techniques used. For example, the author could provide more details about how the methods and techniques were applied in the study.

The methodology could include a more detailed discussion of the limitations of the study. For example, the author could discuss how the study's findings could be influenced by external factors.

## Results and Discussion

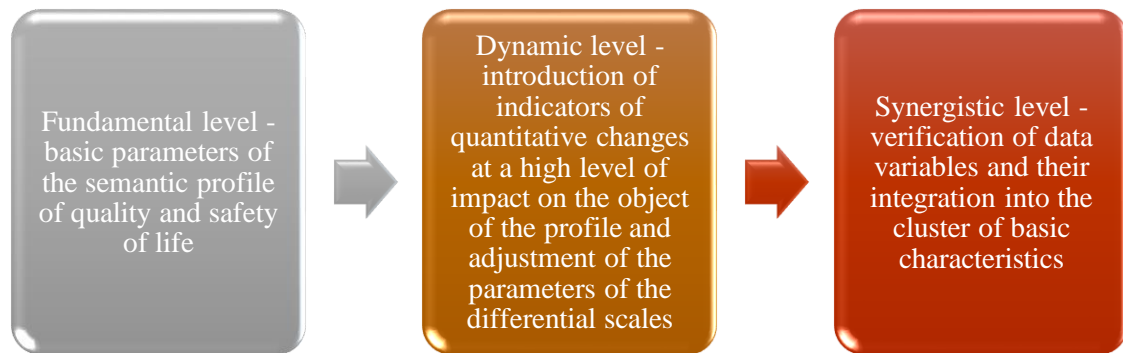
The modern socio-cultural space requires the transformation of existing paradigms for assessing the level of quality and safety of life. One of the methods actively used by the scientific community to determine security parameters is the semantic profile. However, the realities of our time require changes and adjustments to the scale of the differential, which will lead to a transformation of the understanding of the structure of life quality and security.

The expansion of the range of semantic parameters (Jiang et al., 2023) has allowed for the inclusion of more characteristics of quality and safety of life. The semantic profile parameters are often laid down at the planning stage of a certain socio-cultural activity (Yap et al., 2023), forming the main aspects of quality and safety. However, in the course of project implementation or development, there is an urgent need to change the semantic characteristic. It is clear that with the expansion of the material or spiritual component, the object of the semantic profile is replenished with new characteristics, which should be reflected in its



essential or functional quality characteristics. It is noted that it is the qualitative indicators that have a delayed effect, which forms a certain

algorithm for transforming the semantic profile (see Figure 1).



**Figure 1.** Algorithm for transforming semantic profile in the context of socio-cultural influence.  
 Source: authors' own development.

The semantic profile is used to formulate strategies (Jiang et al., 2019) for humanitarian policy and the human security paradigm, which requires an up-to-date picture of the quality of life. The semantic differential focuses on the characteristics of a single object, but in today's global integrated world, it is almost impossible to isolate oneself to achieve accurate indicators. One of the spaces that directly affects the change in the parameters of the semantic differential scale is public space (Vukmirovic et al., 2019), which often initiates the revision of the principles of quality and safety of life. To achieve this relevance of the semantic profile, it is proposed to use an adapted differential scale (Defila & Di Giulio, 2020) that will correspond to socio-cultural changes.

A special role in the semantic profile is played by the reference point or reference value from which positive and negative quality of life or safety characteristics diverge in vectors. Many assessments and calculations are involved in determining this "zero" value. However, this indicator is influenced not only by internal quality and safety factors. The external element, which is the natural, man-made, and socio-cultural space, plays an equally important role in shaping the constants of value and subjective and practical significance.

One of these external factors is social sustainability (Lee & Jung, 2019). It is noted that all indicators included in the differential scale are based on the principles of social well-being, which are relatively stable. At the same time, social resilience allows for dynamism in this structure. The ability of an individual or society to respond differently to danger and the different

ability to counteract threatening manifestations determine the variability of the parameters of the structural differential. When studying the problem of quality of life, it is necessary to take into account the subjectivity of the concept of well-being (González-Díaz et al., 2021), which determines the complexity of building the parameters of the semantic profile. Therefore, changes made to the semantic profile parameters must be verified (Poschmann et al., 2021).

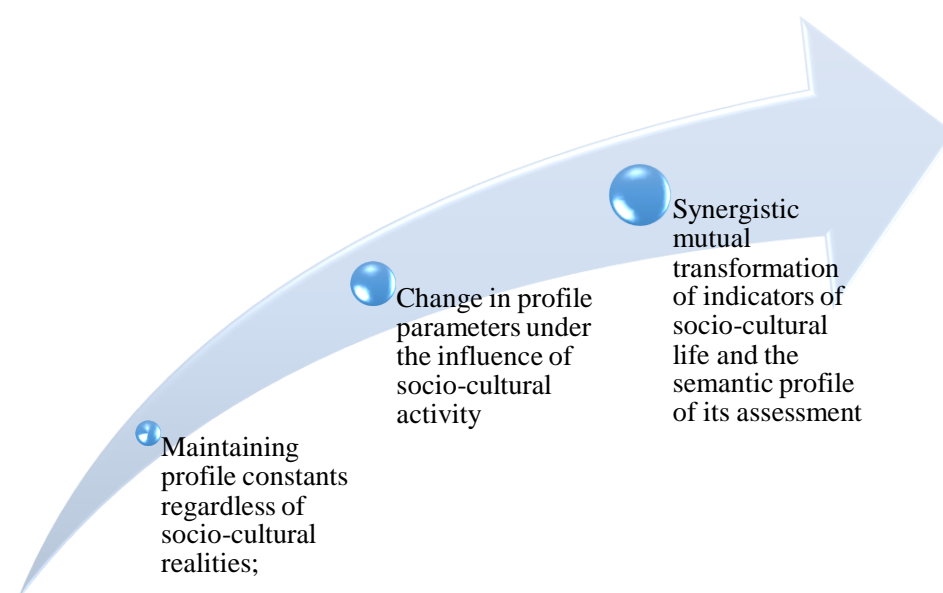
These socio-cultural changes require adjustments to the semantic profile in the context of the problem of quality indicators of human life and public security. The scientific community is faced with the question of the procedure for making changes to the semantic profile. It is obvious that innovative mechanisms are being actualised that allow the designing new algorithms for assessing human living space and including them as constants and parameters in the structural differential. Thus, one of the options for innovative construction of the semantic profile is the use of digitalisation. The "digital twin" (Boje et al., 2020) is an actual reflection of a person, but with coverage of all realised or potential elements of quality of life. It is clear that to process such an array of information, it is necessary to operate with big data and perform complex calculations. The digital world has demonstrated the ability to manage such characteristics, which allows for the dynamism of semantic profile indicators.

All the parameters of quality and safety of life that form the scales of the semantic profile need to be systematised. The standardisation of the semantic profile is a specific process that is streamlined by innovative technologies, in

particular, semantic web technologies (Rhayem et al., 2020). This positioning of characteristics also complicates the process of adjusting profile parameters. The semantic structure has its own format for any conceptual characteristics. The semantic profile of quality and safety of life has the predominant characteristics of biodesign (Karana et al., 2020) and anthropocentrism, as the key object of assessment is a person. The environmental influence (Benabdellah et al., 2021) on the parameters of the semantic profile in the quality of life cluster is increasingly established in the societal and individual dimensions.

Social mobility (Min et al., 2021) is currently the most powerful factor shaping the variability of quality-of-life indicators. The individual and social movement has significantly intensified in a globally integrated environment. Therefore, the parameters of quality of life may be different for one person in different places. And the ability of a person to change their place of residence immediately introduces a variable component to the semantic profile.

The study proposes several formats of the relationship between the semantic profile and the influence of socio-cultural factors (see Figure 2).



**Figure 2.** Formats of interrelation of semantic profile with the influence of socio-cultural factors

Source: authors' own development.

The structuring of the parameters of human life quality and safety is complicated by the inclusion of many factors of new dimensions of the modern ecosystem (Mishra & Chakraborty, 2020), which includes human, natural, and technological potential.

The active use of information technology potential contributes to the expansion of sources of data for the semantic profile. In particular, continuous quantification is becoming more relevant (Huckvale, Venkatesh, & Christensen, 2019). The variety of digital devices that are constantly with a person and are actively used by him or her contributes to obtaining operational data on his or her life. It is worth noting that today the issue of the passive status of these devices is relevant. However, with the development of technological progress, digital elements will become an active participant in human life.

Under such conditions, we can predict changes in the organisation and updating of the structure of individual and social characteristics in the semantic profile.

Under such conditions, the differential scale will finally lose its tie to the established norms, forming an online update mode. It is clear that it is extremely difficult to achieve such a level of assessment of the quality and safety of life, but the guidelines for such a prospect have already been outlined.

Any changes in the formation of the semantic characteristic paradigm should be accompanied by appropriate support tools. It is noted that innovative technological and digital (Ghazal et al., 2020) elements have all the possibilities to provide information, targeted, functional support for changes to the semantic profile.

Using the everyday example of the technological dimension of home security, we can trace changes in the inclusion of indicators in the semantic profile. In the modern technological context, security issues are focused on automating solutions (Zhong et al., 2020). Threats are classified into categories.

This structure is common for the formation of semantic differential scales. At the same time, to build an adequate semantic profile on security, a clear taxonomic correspondence at the level of the threat-parameter of the scale is required. Automation allows for the generation of big data to reconcile these indicators. Innovative elements (Artificial Intelligence, Virtual Reality, Internet of Things (Philip et al., 2021), Big Data, etc.) allow for accurate expression of real and potential danger in the characteristics of the semantic security structure. It is also worth adding that the semantic profile can be filled with indicators from remote access (Rhayem et al., 2021).

Traditional sustainable sources that fill the semantic profile paradigm are concentrated in statistical elements. An example is the International Classification of Diseases, which clearly defines human states: illness-recovery (Harrison et al., 2021). Such indicators can be used as a characteristic of semantic profile scales, which indicate the dichotomy of the state of illness and the state of human health.

For a comprehensive understanding of the algorithm for modifying the semantic profile scale in the cluster of quality and safety of life, it is advisable to consider specific examples of the impact of these changes on research and practice. The COVID-19 pandemic period vividly demonstrated the variations in the semantic profile of the medical-social issue. The global nature of the event contributed to the scaling of the problem, manifested in the diversity of variable parameters introduced into the scale to determine the quality of life under the specific circumstances of the pandemic.

Poudel et al., (2021), for instance, in assessing the quality of life of older adults during the pandemic, incorporated variable characteristics related to pandemic restrictions (social element) and health risks (medical element). The research results were influenced by several crucial factors accompanying scientific exploration - the scale and intensity of the event (COVID-19), which produced changes to the semantic profile of quality of life assessment. As a result, the authors concluded that the impact on the semantic profile

depends not only on the conceptual nature of the factors but also on the dynamics of their integration.

Further research should take into account the scale and intensity of conceptual factors that induce changes in the semantic profile. This, in turn, will ensure the dynamism of semantic scale changes and avoid excessive stability. Such positioning aligns with the requirements of the modern, rapidly evolving global sociocultural space.

The expediency of changes to the parameters of the semantic differential scales is a debatable aspect. The validity of transformations of existing models of semantic differentials and the initiation of new formats should be in demand in the scientific and sociological sense. Wu et al., (2021) point out the need for constant management monitoring of the changes made to the semantic profile.

Making adjustments to the structural elements of the semantic profile should be primarily intellectually supported (Sirichanya & Kraisak, 2021). In this context, it is important that changes are not made without rational justification, but are guided by other approaches (emotional, moral and ethical, etc.).

One of the ways to make changes to the semantic profile is the deep object-oriented semantic change detection framework (ChangeOS) (Zheng et al., 2021). This technique is effectively used in assessing humanitarian threats to the urban environment. The peculiarity of this approach is the inclusion of both global impact factors and local means of countering humanitarian threats in the parameters of the differential scale.

Usually, semantic differentials were compiled separately to determine the level of quality and safety of life at the local (state, regional) level and separately for the global dimension of these parameters. However, modern innovative models of scientific and sociological assessment allow for the integration of indicators of a local group into the global scale and vice versa. Such activity is ensured through the use of information technology tools that allow modelling the situation not in the institutional-linear, but in the functional dimension.

An integral part of the semantic structure of security is human life activity. Hazardous human behaviour (Fang et al., 2021) forms the same security parameters as external threats (natural or

technological). Human behaviour contributes to the formation of the so-called “semantic trajectory” (Arslan et al., 2019), which forms a corresponding profile dedicated to security concepts. Human activity is multidimensional, which makes it difficult to assess it in the context of quality and safety of life. It is difficult to include such dimensions as creativity or moral and volitional qualities in the parameters of a semantic profile. At the same time, without these indicators, the overall structure of a person's life activity will be lost.

The semantic focus on the institutional structure of the concepts of quality and safety of life is gradually losing weight in the scientific and practical discourse, giving way to the principle of the activity of the ecosystem of life activity (Bader et al., 2020). Corresponding changes are expected in the semantic profile methodology. The structure around individual elements (quality, safety, rights) is being replaced by a structure around the holistic life cycle of a person, in which all characteristics of their essence and being are interconnected and form a single space. With such initial data, the completeness of the parameters of the semantic profile, which will be formed by unified universals, changes.

The concept of semantic compatibility (Adamczyk et al., 2020) involves the correlation of the principles of differentiation of semantic profile scales. That is, each new level of the semantic profile scale should have a clear set of distinctive characteristics while maintaining the compatibility of common indicators (negative or positive manifestations). Given the subjectivity of the concept of human well-being, the semantic profile in this regard is mostly strategic in nature (Pomytkina et al., 2020). When the notion of making changes is actualised, it is dominated by the subjective and practical operational nature.

Such a structural transformation will involve other mechanisms for changing the principles and approaches to semantic profile parameters. The profile scales will lose their dominant dichotomous orientation, focusing on the synergistic characteristics of the interaction. In fact, the zero value (or benchmark) will no longer be considered a reference point for positive and negative manifestations of human quality of life. And these parameters themselves will acquire the ability to interchange and intersect, which is impossible in the structural sense of a semantic profile.

In order to avoid contradictions between the ontological dimension of life activity and the practical and everyday segment of quality of life, it is proposed to reconcile these parameters in a single paradigm (Umbrico et al., 2020). Only after these components have been streamlined can they be represented as parameters of the semantic profile. The modern sociocultural space is characterised by dynamic development, which leads to “concept creep”, which causes the semantic expansion of concepts, processes, and phenomena (Haslam et al., 2020). The expansion of life activity deepens the polarisation of semantic indicators of positive and negative manifestations of life well-being. At the same time, expanding human potential promotes understanding between the key principles of quality of life. This, in turn, will be a prerequisite for improving the process of making adjustments to the structure of the semantic profile.

## Conclusions

Thus, the rapid socio-cultural progress creates preconditions for the dynamism of the parameters of life quality and safety. The assessment of life activity is carried out with the help of a semantic profile, the differential scale of which includes various parameters that determine the zero indicator and the positive and negative dimensions that are formed from it. The algorithm for transforming the semantic profile in the context of socio-cultural influence has several levels: fundamental, dynamic, synergistic, which allows us to consider the problem of quality and safety of life in both a stable (mainly institutional) and dynamic (mostly functional) format.

We offer several formats for further use of the semantic profile for assessing life activity: preservation of the existing stable parameters of the differential scale; introduction of dynamic indicators; approval of a synergistic model of the relationship between indicators of living standards in the socio-cultural space and their measurement in the context of the semantic profile. The consequences of changes in the semantic profile determine new characteristics in various spheres of societal activity. Specifically, in the medical field, the scale and intensity of the COVID-19 pandemic have led to alterations in social and medical parameters that define the level of quality and safety of life.

## Bibliographic references

Adamczyk, B. S., Szejka, A. L., & Júnior, O. C. (2020). Knowledge-based



- expert system to support the semantic interoperability in smart manufacturing. *Computers in Industry*, 115, 103161. <https://doi.org/10.1016/j.compind.2019.103161>
- Akroyd, J., Mosbach, S., Bhawe, A., & Kraft, M. (2021). Universal digital twin - a dynamic knowledge graph. *Data-Centric Engineering*, 2, e14. <https://doi.org/10.1017/dce.2021.10>
- Arslan, M., Cruz, C., & Ginhac, D. (2019). Semantic trajectory insights for worker safety in dynamic environments. *Automation in Construction*, 106, 102854. <https://doi.org/10.1016/j.autcon.2019.102854>
- Bader, S., Pullmann, J., Mader, C., Tramp, S., Quix, C., Müller, W., Akyürek H., Böckmann, M., Imbusch, T., Lipp, J., Geisler, S., & Lange, C. (2020). The international data spaces information model – An ontology for sovereign exchange of digital content. In J. Z. Pan, V. Tamma, C. d'Amato, K. Janowicz, B. Fu, A. Polleres ... L. Kagal (Eds.), *The semantic web – ISWC 2020. ISWC 2020. Lecture notes in computer science*, Volume 12507 (pp. 176-192). Cham: Springer. [https://doi.org/10.1007/978-3-030-62466-8\\_12](https://doi.org/10.1007/978-3-030-62466-8_12)
- Bannikova, K. (2022). Ukrainian refugees and the European labor market: Socio-cultural markers of interaction. *Amazonia Investiga*, 11(56), 9-17. <https://doi.org/10.34069/AI/2022.56.08.1>
- Benabdellah, A. C., Zekhnini, K., Cherrafi, A., Garza-Reyes, J. A., & Kumar, A. (2021). Design for the environment: An ontology-based knowledge management model for green product development. *Business Strategy and the Environment*, 30(8), n 4037-4053. <https://doi.org/10.1002/bse.2855>
- Boje, C., Guerriero, A., Kubicki, S., & Rezgui, Y. (2020). Towards a semantic Construction Digital Twin: Directions for future research. *Automation in Construction*, 114, 103179. <https://doi.org/10.1016/j.autcon.2020.103179>
- Buriak, I., Nechyporenko, K., Chychun, V., Polianko, H., & Milman, L. (2022). Trends in the development of management and business technology in the formation of the modern Ukrainian economy. *Futurity Economics & Law*, 2(4), 29-35. <https://doi.org/10.57125/FEL.2022.12.25.04>
- Defila, R., & Di Giulio, A. (2020). The concept of “consumption corridors” meets society: How an idea for fundamental changes in consumption is received. *Journal of Consumer Policy*, 43, 315-344. <https://doi.org/10.1007/s10603-019-09437-w>
- Fang, W., Love, P. E., Ding, L., Xu, S., Kong, T., & Li, H. (2021). Computer vision and deep learning to manage safety in construction: Matching images of unsafe behavior and semantic rules. *IEEE Transactions on Engineering Management*, 70(12), 4120-4132. <https://doi.org/10.1109/TEM.2021.3093166>
- Gevorgyan, S., & Baghdasaryan, K. (2021). Toward a transhumanist transformation of human labor potential in the context of global challenges. *Futurity Economics & Law*, 1(4), 36-45. <https://doi.org/10.57125/FEL.2021.12.25.05>
- Ghazal, R., Malik, A. K., Qadeer, N., Raza, B., Shahid, A. R., & Alquhayz, H. (2020). Intelligent role-based access control model and framework using semantic business roles in multi-domain environments. *IEEE Access*, 8, 12253-12267. <https://doi.org/10.1109/ACCESS.2020.2965333>
- González-Díaz, R. R., Acevedo-Duque, Á., Salazar-Sepúlveda, G., & Castillo, D. (2021). Contributions of subjective well-being and good living to the contemporary development of the notion of sustainable human development. *Sustainability*, 13(6), 3298. <https://doi.org/10.3390/su13063298>
- Harrison, J. E., Weber, S., Jakob, R., & Chute, C. G. (2021). ICD-11: An international classification of diseases for the twenty-first century. *BMC Medical Informatics and Decision Making*, 21(6), 1-10. <https://doi.org/10.1186/s12911-021-01534-6>
- Haslam, N., Dakin, B. C., Fabiano, F., McGrath, M. J., Rhee, J., Vylomova, E., ... & Wheeler, M. A. (2020). Harm inflation: Making sense of concept creep. *European Review of Social Psychology*, 31(1), 254-286. <https://doi.org/10.1080/10463283.2020.1796080>
- Huckvale, K., Venkatesh, S., & Christensen, H. (2019). Toward clinical digital phenotyping: a timely opportunity to consider purpose, quality, and safety. *NPJ Digital Medicine*, 2(1), 1-11. <https://doi.org/10.1038/s41746-019-0166-1>
- Jebb, A. T., Ng, V., & Tay, L. (2021). A review of key Likert scale development advances: 1995–2019. *Frontier Psychology*, 12, Article 637547. <https://doi.org/10.3389/fpsyg.2021.637547>
- Jiang, P., Wen, C. K., Jin, S., & Li, G. Y. (2023). Wireless semantic transmission via revising



- modules in conventional communications. *IEEE Wireless Communications*, 30(3), 28-34.  
<https://doi.org/10.1109/MWC.009.2200515>
- Jiang, S., Wu, Z., Zhang, B., & Cha, H. S. (2019). Combined MvdXML and semantic technologies for green construction code checking. *Applied Sciences*, 9(7), 1463.  
<https://doi.org/10.3390/app9071463>
- Karana, E., Barati, B., & Giaccardi, E. (2020). Living artefacts: Conceptualizing livingness as a material quality in everyday artefacts. *International Journal of Design*, 14(3), 37-53.  
[https://pure.tudelft.nl/ws/files/86835985/3957\\_13038\\_4\\_PB.pdf](https://pure.tudelft.nl/ws/files/86835985/3957_13038_4_PB.pdf)
- Lee, K., & Jung, H. (2019). Dynamic semantic network analysis for identifying the concept and scope of social sustainability. *Journal of Cleaner Production*, 233, 1510-1524.  
<https://doi.org/10.1016/j.jclepro.2019.05.390>
- Levchenko, Y., Tsizhma, Y., Slobodyan, N., & Nehoda, O. (2022). Organization and planning of the enterprises of the future: Legal status. *Futurity Economics & Law*, 2(4), 22-29.  
<https://doi.org/10.57125/FEL.2022.12.25.03>
- Min, M., Wang, W., Xiao, L., Xiao, Y., & Han, Z. (2021). Reinforcement learning-based sensitive semantic location privacy protection for VANETs. *China Communications*, 18(6), 244-260.  
<https://doi.org/10.23919/JCC.2021.06.019>
- Mishra, K. N., & Chakraborty, C. (2020). A novel approach toward enhancing the quality of life in smart cities using clouds and IoT-based technologies. In M. Farsi, A. Daneshkhah, A. Hosseinian-Far, & H. Jahankhani (Eds.), *Digital twin technologies and smart cities. Internet of things* (pp. 19-35). Cham: Springer.  
[https://doi.org/10.1007/978-3-030-18732-3\\_2](https://doi.org/10.1007/978-3-030-18732-3_2)
- Philip, N. Y., Rodrigues, J. J., Wang, H., Fong, S. J., & Chen, J. (2021). Internet of Things for in-home health monitoring systems: Current advances, challenges and future directions. *IEEE Journal on Selected Areas in Communications*, 39(2), 300-310.  
<https://doi.org/10.1109/JSAC.2020.3042421>
- Pomytkina, L., Gudmanian, A., Kovtun, O., & Yahodzinskyi, S. (2020). Personal choice: strategic life decision-making and conscience. *E3S Web of Conferences*, 164, Article 10021.  
<https://doi.org/10.1051/e3sconf/202016410021>
- Poschmann, H., Brüggemann, H., & Goldmann, D. (2021). Fostering end-of-life utilization by information-driven robotic disassembly. *Procedia CIRP*, 98, 282-287.  
<https://doi.org/10.1016/j.procir.2021.01.104>
- Poudel, A. N., Zhu, S., Cooper, N., Roderick, P., Alwan, N., & Tarrant, C. (2021). Impact of Covid-19 on health-related quality of life of patients: A structured review. *PLoS ONE*, 16(10), Article e0259164.  
<https://doi.org/10.1371/journal.pone.0259164>
- Rhayem, A., Mhiri, M. B. A., & Gargouri, F. (2020). Semantic web technologies for the internet of things: Systematic literature review. *Internet of Things*, 11, 100206.  
<https://doi.org/10.1016/j.iot.2020.100206>
- Rhayem, A., Mhiri, M. B. A., Drira, K., Tazi, S., & Gargouri, F. (2021). A semantic-enabled and context-aware monitoring system for the internet of medical things. *Expert Systems*, 38(2), e12629.  
<https://doi.org/10.1111/exsy.12629>
- Sirichanya, C., & Kraisak, K. (2021). Semantic data mining in the information age: A systematic review. *International Journal of Intelligent Systems*, 36(8), 3880-3916.  
<https://doi.org/10.1002/int.22443>
- Umbrico, A., Cesta, A., Cortellessa, G., & Orlandini, A. (2020). A holistic approach to behavior adaptation for socially assistive robots. *International Journal of Social Robotics*, 12(3), 617-637.  
<https://doi.org/10.1007/s12369-019-00617-9>
- Vukmirovic, M., Gavrilovic, S., & Stojanovic, D. (2019). The improvement of the comfort of public spaces as a local initiative in coping with climate change. *Sustainability*, 11(23), 6546.  
<https://doi.org/10.3390/su11236546>
- Wu, H., Zhong, B., Li, H., Love, P., Pan, X., & Zhao, N. (2021). Combining computer vision with semantic reasoning for on-site safety management in construction. *Journal of Building Engineering*, 42, 103036.  
<https://doi.org/10.1016/j.jobbe.2021.103036>
- Yap, W., Chang, J. H., & Biljecki, F. (2023). Incorporating networks in semantic understanding of streetscapes: Contextualising active mobility decisions. *Environment and Planning B: Urban Analytics and City Science*, 50(6), 1416-1437.  
<https://doi.org/10.1177/23998083221138832>
- Zheng, Z., Zhong, Y., Wang, J., Ma, A., & Zhang, L. (2021). Building damage assessment for rapid disaster response with a deep object-based semantic change detection framework: From natural disasters to man-made disasters. *Remote Sensing of*

*Environment*, 265, 112636.  
<https://doi.org/10.1016/j.rse.2021.112636>  
Zhong, B., Li, H., Luo, H., Zhou, J., Fang, W., &  
Xing, X. (2020). Ontology-based semantic  
modeling of knowledge in construction:  
Classification and identification of hazards

implied in images. *Journal of Construction  
Engineering and Management*, 146(4),  
04020013.  
[https://doi.org/10.1061/\(ASCE\)CO.1943-  
7862.0001767](https://doi.org/10.1061/(ASCE)CO.1943-7862.0001767)

DOI: <https://doi.org/10.34069/AI/2023.71.11.22>

How to Cite:

Vasina, A., Monastyrskyi, G., Ivanova, V., Maistrenko, K., & Tsal-Tsalko, Y. (2023). Concepts of sustainable public administration: perspectives and challenges. *Amazonia Investiga*, 12(71), 252-262. <https://doi.org/10.34069/AI/2023.71.11.22>


## Concepts of sustainable public administration: perspectives and challenges

### Conceptos de administración pública sostenible: perspectivas y retos

Received: October 9, 2023

Accepted: November 29, 2023

Written by:


**Alla Vasina<sup>1</sup>** <https://orcid.org/0000-0001-9472-2714>**Grygorii Monastyrskyi<sup>2</sup>** <https://orcid.org/0000-0001-6694-1960>**Viktoriia Ivanova<sup>3</sup>** <https://orcid.org/0000-0003-4980-0765>**Kateryna Maistrenko<sup>4</sup>** <https://orcid.org/0000-0001-8586-9271>**Yuzef Tsal-Tsalko<sup>5</sup>** <https://orcid.org/0000-0003-4525-9449>


#### Abstract


The purpose of the study: a comprehensive analysis of the aspects of the implementation of the public administration mechanism in the context of sustainable development, identification of the main issues of the management paradigm, and variations of ways to solve them. Research methodology: logical and structural analysis, induction and deduction, comparison, abstraction, specification, generalisation, formalisation, tabular and graphical interpretation of theoretical information. Results: the main aspects of public administration based on sustainable development as an important basis for the implementation of domestic policy are formed. The main problems, challenges, and achievements of the process of transformation of socio-economic processes based on public management are considered. The experience of developed countries in public administration of the processes of society's life, its public administration, legal and organisational aspects are studied. Scientific novelty: the main


#### Resumen


Objetivo del estudio: análisis exhaustivo de los aspectos de la aplicación del mecanismo de administración pública en el contexto del desarrollo sostenible, identificación de los principales problemas del paradigma de gestión y variaciones de las formas de resolverlos. Metodología de la investigación: análisis lógico y estructural, inducción y deducción, comparación, abstracción, especificación, generalización, formalización, interpretación tabular y gráfica de la información teórica. Resultados: se forman los principales aspectos de la administración pública basada en el desarrollo sostenible como base importante para la aplicación de la política nacional. Se consideran los principales problemas, retos y logros del proceso de transformación de los procesos socioeconómicos sobre la base de la gestión pública. Novedad científica: se determinan las principales direcciones de la planificación estratégica para el desarrollo del sistema de administración pública sobre la base del desarrollo sostenible en el contexto de la globalización.

<sup>1</sup> Doctor of Economic Sciences, Professor, Department of Management, Public Administration and Personnel Faculty of Economics and Management West Ukrainian National University, Ternopil, Ukraine.  WoS Researcher ID: G-1542-2018

<sup>2</sup> Doctor of Economics, Professor of the Department of Management, Public Administration and Personal, Faculty of Economics and Management, West Ukrainian National University, Ternopil, Ukraine.  WoS Researcher ID: K-5438-2017

<sup>3</sup> Doctor of Sciences of Public Administration, Secretariat of the Cabinet of Ministers of Ukraine, Kyiv, Ukraine.  WoS Researcher ID: ADG-7645-2022

<sup>4</sup> Recipient of the Scientific Degree of Doctor of Sciences in the specialty "Public management and administration", Interregional Academy of Personnel Management, Kyiv, Ukraine.  WoS Researcher ID: GSJ-3683-2022

<sup>5</sup> Doctor of Economics, Professor of the Department of Management, Business and Marketing Technologies, Faculty of Business and Services, Zhytomyr Polytechnic State University, Zhytomyr, Ukraine.  WoS Researcher ID: W-3023-2017

directions of strategic planning for the development of the public administration system based on sustainable development in the context of globalisation are determined. Conclusions: the results of the study are of practical value for the process of formation or improvement of the modern management system based on publicity and balanced development, as well as in the formation of state management programmes in various areas of socio-economic activity.

**Keywords:** globalisation, efficiency of functioning, administration, optimisation, digitalisation.

## Introduction

The intensification of globalisation and integration processes leads to the emergence of new challenges that require appropriate dynamic adaptive changes on the part of both national structures and local authorities. The concept of sustainable development, fully implemented possible in the public administration system, is positioned as the most socially effective socially oriented trend. It is aimed at ensuring the balance of various areas of society's development and involves the development of a set of organisational foundations, effective means of implementation, and monitoring, which together aim to optimise socio-economic processes of life (Vinuesa et al., 2020). Such a concept guarantees the protection of the interests of future generations, optimisation of resource use, and synergistic development of various areas of society.

The issue of public administration in the context of sustainable development is considered by Ukrainian and foreign researchers in various scientific fields, including political science, sociology, and administrative law. Some works of modern scholars are devoted to the study of the functioning of public administration mechanisms in the context of globalisation and the research of practical projects for their implementation.

For example, modern Ukrainian scholars Masuk (2023) and Pastuch (2022) study the concept of public administration from the perspective of the complexity and complexity of the issue.

Considering the essence of public administration, scholars Vasilyeva, Vasilyeva, and Prylipko (2020) divide it into certain areas, which include the goal, means, and communication between the participants in the process. At the same time, the researchers emphasise that the potential and

Conclusions: los resultados del estudio son de valor práctico para el proceso de formación o mejora del sistema moderno de gestión sobre la base de la publicidad y el desarrollo equilibrado, así como en la formación de programas de gestión estatal en diversas esferas de la actividad socioeconómica.

**Palabras clave:** globalización, eficacia del funcionamiento, administración, optimización, digitalización.

capabilities of public administration are fully revealed only through the harmonisation of the main factors - social, economic, and environmental, which is the basis of the concept of sustainable development. Volska (2020) defines the content of the economic aspect of public administration as the peculiarities of the concept, its meaning, and functions in the system of public communications, and the prospects for implementation in the context of the formation of a market economy.

The general problems of public administration in the context of sustainable development have been studied in the works of contemporary scholars Roieva, Oneshko, Sulima, Saienk & Makurin (2023), Bannikova (2022), Gevorgyan & Baghdasaryan (2021). Certain conceptual issues are reflected in the works of Dooranov, Orozonova & Alamanova (2022), Levchenko, Tsizhma, Slobodian & Nehoda (2022), Buriak, Nechyporenko, Chychun, Polianko & Milman (2022). Despite the scientific value of the published works, many issues in the research area remain unresolved. The issues related to the analysis of the algorithm for the successful implementation of modern public administration capabilities in the context of global challenges and crises of our time, as well as the use of digitalisation opportunities in the process, remain insufficiently researched today, requiring further scientific consideration.

## Research Aim

The aim of the study is to identify the main directions of strategic planning for the development of the public administration system based on sustainable development in the context of globalisation.

### Research Questions

The main objectives of the study were to analyse modern models of public administration in the context of sustainable development, to study the dynamics of conceptual priorities in the current crisis conditions, and to form a universal approach to public administration in the context of sustainable development.

### Research hypotheses

**Hypothesis 1.** An effective public administration algorithm can intensify the processes of implementing the principles of sustainable development in any initial conditions.

**Hypothesis 2:** Digital optimisation is an effective tool in the public administration system.

### Theoretical Framework or Literature Review

The scientific and methodological basis for the study was laid by researchers whose work focuses on aspects of implementing the principles of public administration in the context of sustainable development, the problems of transforming social processes in this direction, and finding ways to solve them. There are numerous publications in scientific journals on the topics studied in this paper. Some elements of public administration mechanisms in the context of sustainable development are considered in the studies of modern scientists Noja et al., (2019), Esposito & Dicorato (2020). In their articles, scientists see the search for the most effective model of public administration in the context of sustainable development as a priority, which will maximise the efficiency of management processes, strengthen the status of greening economic processes, and strengthen the role of local development in the process of a global transformation. In their publications, scientists in the relevant scientific fields Shandryk, Zhebelev, Deliatynchuk, Maksymov & Shelest (2023), Bouilloud, Pérezts, Viale & Schaepelynck (2019) argue that one of the most effective means of optimising the functioning of the sphere of socio-economic processes is the active use of digitalisation tools in the public administration system. The main goal of the digital transformation process, according to scientists, is the synergy of data sets for optimal use. This goal can be achieved through various effective algorithms. The authors emphasise that the process of digital optimisation is influenced by several factors, including time constraints, financial capabilities, and the level of intellectual resources. It should be noted that digitalisation

requires careful selection of individual methods and approaches, as well as ensuring the security of the process of accumulation, transfer, and processing of personal information. Modern scientists Kankanhalli, Charalabidis & Mellouli (2019) also consider digitalisation to be the most promising direction for the development of the public administration system in the context of sustainable development. In their study, the researchers emphasise that today only a small number of areas of socio-economic processes are consumers of innovative technological and managerial solutions. In this regard, it can be argued that insufficient access to modern technologies and unwillingness to implement them in practice are the most significant factors limiting the potential of digital transformation within the public administration system. Thus, the realisation of digital optimisation opportunities requires proper training of personnel, reformatting approaches to understanding the principles of management processes, as well as awareness of the priority of sustainable development principles in all areas of social and economic processes. The scientific research of modern scientists Trondal (2021) and Magliacani (2023) forms the belief that public administration in the context of sustainable development requires, first, ensuring economic development based on the principles of rational environmental management, as well as increasing the effectiveness of interaction between different levels of government, society, and business on the principles of democratic balanced growth. Such an approach, as outlined in the articles of the above-mentioned scholars, will allow to accelerate the qualitative positive dynamics of the process of society transformation towards a sustainable approach to all areas of life, ensure ecological reproduction of resource potential, and make it possible to achieve financial stability of socio-economic processes.

Thus, despite the significance of scientific and practical achievements of scientists on the issues under study, it is necessary to note the need to develop scientific research in the aspects of the outlined issues in order to ensure the sustainability of positive dynamics and preventive response to new challenges in the field of public administration in the context of sustainable development.



## Methodology

### *General Background*

In the course of the research, a set of general scientific methods of cognition was applied, including methods of abstract and logical and comparative analysis, abstraction, induction, and deduction, as well as methods of specification and formalisation, tabular and graphical interpretation of theoretical information. The theoretical and methodological basis of the work was formed considering the priority principles of conducting comprehensive research, based on a systematic approach. The principle of complexity made it possible to analyse the object and subject of study as a system, with a corresponding set of interrelations.

### *Data Analysis*

The methods of analysis and synthesis were used to identify the factors and stages of development of the object under study, as well as its defining elements. The method of comparison was used during the study to determine the specifics of development and features of public administration models in the context of sustainable development. The deduction was used in the development of proposals for optimising management processes in various areas of socio-economic life. The inductive method was used in the process of forecasting indicators of future development. The abstract-logical and dialectical methods of scientific knowledge, as well as the method of scientific abstraction, were used in the study to formulate theoretical generalisations, clarify the conceptual apparatus, identify the main concepts and categories, formulate the conclusions of the study, and to form the concept of an integral process of the management system in the context of sustainable development. The method of formalisation was applied during the study at the stage of identification of priority vectors of optimisation of the public administration system based on sustainable development, as well as in the process of forming the results of scientific research aimed at active practical use in the process of establishing an effective public administration system. Thus, this method was used to structure the principles, functions, tasks, and priorities of public administration in the context of sustainable development. The general scientific method of the specification was used to position the effectiveness and expediency of enhancing the role of public administration in the process of socio-economic reforms, as well as to identify optimal solutions and conditions for

optimising the public administration system based on sustainable development. Among the data collection tools used in the research process, secondary methods of collecting informative data prevailed, with the priority use of external sources. These include publications in specialized journals, monographs, and reference books that somehow reflect the essence of the problem under study. For the most efficient process, we used analysis of variance, cluster analysis, and synthesis.

## Results and Discussion

Modern models of public administration, as one of the first prerequisites for effective implementation, provide for clear coordination of the activities of authorities at different levels. The search for consensus between the subjects of public administration is positioned as a priority vector of the concept of modern public administration of socio-economic processes. Currently, a systematic approach to the subject of this study is generally accepted, according to which three main areas of public administration are distinguished from the standpoint of sustainable development: financial and economic development, social transformation, and environmental safety guarantees. At the same time, the formation of a new management system involves taking into account the existing potential, the top priority of guaranteeing decent conditions for the life of society, taking into account changes, adaptability, and promising growth, as well as the synergy of national priorities and interests of local communities regarding the goals and means of development. It is worth noting that the term “public administration” has gained considerable popularity relatively recently. It refers to the synergy of activities of state and local authorities, the private sector, and society in identifying and implementing management decisions of public importance, within the powers and functionality defined by law (Bisogno et al., 2023). In general, public management covers the stages of planning, organising, and controlling the implementation of management decisions, using the capabilities of modern information systems and digitalisation tools, as well as regular performance monitoring (Voyer et al., 2020). The main opportunities offered by an effective public management system for modern society include depoliticisation, prioritisation of the interests of service users, systematic quality monitoring, and continuous improvement. The partnership approach, which is positioned by the public administration system, where the state and citizens are equal participants in the relationship,

is worth special attention (Lewallen, 2021). By analysing international experience in this area, it is possible to draw certain conclusions about the benefits, risks, and challenges of each of them. In general, it can be argued that public administration systems in the context of the priority of sustainable development in developed

countries are characterised by a consumer orientation and a solidarity-corporate approach to management in various socio-economic areas (Guarini, Mori & Zuffada, 2022). These principles are primarily manifested in decentralisation, democracy, and adaptability to the needs of society (Table 1).

**Table 1.**

*Principles of public administration in the context of sustainable development*

No s/n	Principle	Essence
1	Democracy	Increasing the role of public decision-making in the process of public administration
2	Adaptability	Possibility of dynamic changes in the process of implementing strategic management under the influence of external and internal factors, based on sustainable development
3	Decentralisation	Decentralisation of management systems, financial autonomy of economic processes, and investment
4	Prospects	Priority is given to the long-term development of the organisation in the future
5	Monitoring	Regular review of targets based on an assessment of the effectiveness of public administration measures and compliance with the principles of sustainable development
6	Systematic approach	The balance between state regulation of the sector and market-based financing mechanisms

Source - authors' development

In general, sustainable development implies economically, socially, and environmentally balanced growth aimed at the coordinated functioning of socio-economic processes based on rational use of all types of resources and environmental safety (Pastuch, 2022). Currently, there are countries with a high level of sustainable development (Japan, the United States, and the European Union), countries that are just beginning the path of transformation towards sustainable development, and those that have no experience of such socio-economic transformations (Zuiderwijk, Chen & Salem, 2021). The experience of developed countries is representative for the formation of a strategy for the development of public administration in the context of sustainable development of Ukraine, in terms of maximising the use of adaptive capabilities and preventive testing in pilot regional projects. After all, the concept of sustainable development is currently the only alternative to the paradigm of extensive economic development, which has devastating consequences for the environment. The processes of globalisation that are characteristic of today involve worldwide economic, cultural, and political integration, covering all areas of

social life, creating a system of interconnections and interdependencies (Tichenor et al., 2022). This inevitably leads to changes in the governance system, decentralisation of management processes, and an increase in the role of science and intellect (Yunita et al., 2022). At the same time, the phenomenon of globalisation carries a certain destructive burden on society, which is manifested in the excessive acceleration of urbanisation processes, disruption of natural ecosystems, and an increase in resource consumption. In such circumstances, the principles of sustainable development are no longer advisory but should become an integral prerequisite for the development of any modern country. The need to transform economic development models and reformat economic processes requires the introduction of fundamentally new approaches to global governance. Sustainable development implies a transition from a consumer economy to a commons economy, striking a balance between meeting needs and ensuring a safe environment for future generations (Volska, 2020). Taken together, these dynamics will make it possible to ensure high quality of life, as well as to significantly optimise and develop the public.



**Figure 1.** Algorithm of the public administration process in the context of sustainable development.  
Source: author's development

The concept of sustainable development excludes the dominance of any sphere of life - economic, social, or natural, and therefore an important issue in the process of establishing public administration is to guarantee transparency, reliability, and relevance of informative data (Marques et al., 2021). To simplify and autonomise processes, the best option for communication in the system of modern public administration is digitalisation as a key factor in optimising management mechanisms (Lewallen, 2021). Electronic information systems provide quick access to reference and statistical information, collection, and consolidation of the necessary data. It should be noted that the active implementation of such systems in different countries as a central component of the transformation of public administration of socio-economic processes has highlighted a number of risks: the complexity of standardisation and unification of documentation in different areas and organisations, staff resistance to innovation, passive participation of the population in the process, lack of software of appropriate quality, security of personalisation and data transfer (Massey, 2022). Today, there is a need to develop a perfect digitalisation product that can guarantee a more convenient and secure format of communication in various areas of social processes (Krafft et al., 2022). This issue is extremely relevant and requires priority attention, as a wide range of communications, as well as the process of introducing effective financial and administrative models into the

socio-economic processes of society, depend on digital transformation.

The implementation of the principles of modern effective public administration will contribute to the sustainable development of both individual local territories and communities and the global community in the context of globalisation. Ukraine is currently implementing several reforms aimed at transitioning from the concept of state administration to the concept of public administration. It is noteworthy that the democratisation of governance processes is based on the formation of a wide range of public self-government. The most optimal approach is the synergy of management processes with the possibilities of self-regulation of society (Benzaken et. al., 2022).

Many modern scholars see public management of socio-economic processes as the basis for the transformation of the world community towards sustainable development.

Scientists consider an effective human resource as a prerequisite for the successful implementation of public administration policy. According to the researchers, "human capital is a stock of knowledge, skills, and motivations available to each person, and for a company, the human capital of each employee is a resource that forms its economic potential" (Dooranov et.al., 2022). Scientists emphasise that "the effectiveness of human resource management

often determines the performance of the entire company, so training of human resource management specialists is one of the fundamental tasks of training for business as a whole" (Dooranov et al., 2022).

Prylypko (2023) sees the primary need to "reform the education system, taking into account the realities of today and the new challenges facing humanity". At the same time, "the very idea, essence, and purpose of legal education is that every person has a legal status and is a member of society, and therefore is endowed with a certain range of rights and obligations" (Prylypko, 2023). And this approach should be the basis for the formation of a new society of sustainable development, where every citizen is a direct participant in the public administration of socio-economic processes.

At the same time, Bannikova (2022) believes that "the main trends of the coming decades for Ukrainians are the formation of a global economic system, which will lead to competition in the labour market for the best and the best companies for employees. Global thinking and skills will be the basis for successful employees in the near future". It is hard to disagree with the scientist.

Scientists, analysing the principles of organisation and planning of enterprises of the future, emphasise that "planning of the enterprise's activities should be focused on the goals of globalisation and implementation of sustainable development, environmental and economic measures to improve the quality of life, and restore resources" (Levchenko et al., 2022). At the same time, "the choice of the legal status of the enterprise of the future should contribute to the achievement of these goals", and "enterprises in the future cannot remain outside the social sector of life" (Levchenko et al., 2022). Contemporary researchers Buriak et al., (2022) focus on trends in the development of management and business technologies in the formation of the modern Ukrainian economy. The researchers argue that "improving the management process as part of its adaptation to the digitalisation of Ukraine's economy cannot be carried out according to a single template due to the different levels of readiness of the internal environment of organisations for such a transformation". Scientists "have identified factors that indicate both readiness for the digital transformation of an organisation's management system and those that hinder its development". According to them, "for enterprises, institutions and organisations in Ukraine, medium and low

potential for transformation in the context of the introduction of the digital economy and the introduction of remote work and the widespread use of information and communication technologies creates ... risks" (Buriak et al., 2022). The scientists see the solution to the problem in "the organisation of an internal corporate system for improving the digital literacy of employees" (Buriak et al., 2022).

Gevorgyan & Baghdasaryan (2021), studying "the possibilities of new disclosure of labour potential", believe that "further research is needed on the ways of introducing technological innovations, their legal regulation and justification". According to scientists, "the modern information society faces open challenges with hidden opportunities and risks of further evolution" (Gevorgyan & Baghdasaryan, 2021). At the same time, "we are talking about the penetration of digital technologies into all areas of life, robotisation of production processes, medicine, the development of biotechnology and genetic engineering, which are already capable of making certain improvements to the human genome at the current level" (Gevorgyan and Baghdasaryan, 2021).

Roieva et al. (2023), studying the identification of digitalisation as a direction of innovative development, argue that "the lack of state involvement in the process of digitalisation at enterprises is also confirmed by the reduction in state funding for innovation activities of enterprises". They also note "the problem of a decrease in the investment attractiveness of enterprises, which is caused by a number of crisis phenomena that have befallen Ukraine in recent years" (Roieva et al., 2023).

Some researchers, in particular, van Wynsberghe (2021), Meier (2023), believe that modern public administration using digital methods is mainly an activity that is practical and advisory in nature and helps the service consumer to achieve goals and objectives by finding solutions to problems of a different nature, identifying new opportunities, implementing changes and coaching. At the same time, scientists (Hutsaliuk et al., 2020) identify specific prerequisites for the formation of an effective public administration system in the context of sustainable development, among which the main ones are the availability of an appropriate resource base and the readiness of society for dynamic change. The researchers substantiate that such conditions are an important component of the algorithm for implementing public administration in various

areas of socio-economic life, and it is difficult to disagree with them.

Among the array of results of researchers' scientific searches about the study, it is necessary to highlight the works of Bisogno et al., (2023), which fundamentally substantiate the principles of effective implementation of public administration in the context of modern global challenges of a sustainable economy. At the same time, Deslatte & Stokan (2020) draw attention to the complexity of implementing certain elements of public administration in modern society. Researchers Guarini et al., (2022) have formed the basic conceptual foundations of an effective public administration system, and Strelcow et al., (2023) highlights the need for active implementation of digitalisation and electronic document management in most areas of social and economic life.

The forecast of the trend of increasing importance of the principles of sustainable development policy shows that the current industry requirements in the future will increasingly depend on the system of management decisions, for which the principle of publicity should be a top priority (König et al., 2023). Based on the above conclusions of researchers, as well as the results of the current study, it can be argued that public administration in the context of sustainable development has significantly expanded its scope of functioning today, becoming a basic element of the system for ensuring the balance between economic, social, and environmental development (Massey, 2022). The algorithm of the modern public administration system is shown in detail in Fig. 1 above. It is worth noting that the effectiveness of implementing the principles of balanced development based on optimal public administration involves the gradual and effective achievement of goals (Meuleman, 2021).

Based on the above, we can predict an increase in the role of public administration in implementing the principles of sustainable development, which will significantly increase its productivity in terms of economic efficiency and minimising environmental impact, through the introduction of innovative technological solutions and digital optimisation opportunities.

### Limitations of the study

The limitations of this study can be characterised, first, as qualitative, and quantitative. In the first case, we are talking about eliminating low-influence and secondary factors that affect the

process of obtaining the most reliable result to prove the significance of new scientific developments. Quantitative limitations are primarily based on the assumption that certain norms and standards are fixed. They are relevant for the statistical component of the study. In addition, this study is characterised by subject and semantic limitations. The paper investigates the issues of efficiency of the public administration system in the context of sustainable development and its relevance in view of the challenges of today. At the same time, the study was developing the specifics of the subject matter, which significantly limited the scope of the object of study, but at the same time gave meaning to the work and allowed to achieve the original purpose of the study. In addition, given the complexity of practical testing of the research results due to the scale and requirements for the duration of the necessary observations, the impracticability of experimental research and hypothesis testing can also be considered one of the vectors of limitation of this study.

### Conclusions

The article defines that public administration occupies one of the key positions in the system of implementation of the concept of sustainable development of modern society. It is established that only the synergy of a professional approach, a stable position, and stable principles of forming strategic priorities for the transformation of socio-economic processes, considering global digitalisation and proper control by the State and society, allows to fully and in a short time to introduce an effective system of public administration in the context of sustainable development.

As a result of the study, it was possible to analyse the multifactorial nature of the modern model of public administration, to assess its role and place in the system of current management approaches based on the principles of sustainable development. The study found that the development of the growth of openness and publicity factors plays a significant role in improving the quality and accessibility of services, strengthening the position of the management system as an active participant in the system of modern social communications, and optimising the process of providing services to all segments of the population without exception.

Particular attention was paid to the basic principles and mechanisms of the public administration concept. The essence of such



principles as customer focus, efficiency and effectiveness is revealed. It is established that the concept is based on the idea that public organizations should function with the involvement of business sector strategies and tools, and the activities of public organizations should be aimed at achieving measurable results and efficient resource use through decentralization and effective quality management.

The concept proposed in the study promotes greater flexibility and responsiveness to customer needs and ensures greater responsibility of local governments, which will enable them to meet the needs of public service consumers more effectively and increase trust in government organizations. In addition, e-governance contributes to the convenience and speed of interaction between government agencies and citizens, as well as increases the level of accessibility and quality of public services.

Based on the results obtained in this paper, the authors proposes priority vectors for further research on the topic and argues for the need to organise accessibility and systematisation of practical information on the subject matter of the study.

An effective approach to public administration in the context of sustainable development will ensure the successful adaptation of society to the necessary socio-economic transformations. It should be based on the implementation of a development strategy formed on the principle of unimpeded access to information in a convenient format. At present, it is considered a priority to find the most effective model for the practical implementation of the public administration strategy in the context of sustainable development using the wide capabilities of digital tools, which will maximise the efficiency and accessibility of information resources, strengthen the priority status of transformations based on sustainable development in all areas of socio-economic life. Further research in this area should be aimed at a detailed identification of the conditions for systemic integration of digitalisation tools, considering the current capabilities of the existing electronic and communication base of management systems.

## Bibliographic references

Bannikova, K. (2022). To the question of migration of capital and labor force of Ukraine: forecast of future trends. *Futurity*

- Economics&Law*, 2(2), 32-41. <https://doi.org/10.57125/FEL.2022.06.25.04>
- Benzaken, D., Voyer, M., Pouponneau, A., & Hanich, Q. (2022). Good governance for sustainable blue economy in small islands: Lessons learned from the Seychelles experience. *Frontiers in Political Science*, 4. <https://doi.org/10.3389/fpos.2022.1040318>
- Bisogno, M., Cuadrado-Ballesteros, B., Rossi, F. M., & Peña-Miguel, N. (2023). Sustainable development goals in public administrations: Enabling conditions in local governments. *International Review of Administrative Sciences*, 002085232211464. <https://doi.org/10.1177/00208523221146458>
- Bouilloud, J.-P., Pérezts, M., Viale, T., & Schaepleynck, V. (2019). Beyond the Stable Image of Institutions: Using Institutional Analysis to Tackle Classic Questions in Institutional Theory. *Organization Studies*, 41(2), 153-174. <https://doi.org/10.1177/0170840618815519>
- Buriak, I., Nechyporenko, K., Chychun, V., Polianko, H., & Milman, L. (2022). Trends in the development of management and business technology in the formation of the modern Ukrainian economy. *Futurity Economics&Law*, 2(4), 29-35. <https://doi.org/10.57125/FEL.2022.12.25.04>
- Deslatte, A., & Stokan, E. (2020). Sustainability Synergies or Silos? The Opportunity Costs of Local Government Organizational Capabilities. *Public Administration Review*, 80(6), 1024-1034. <https://doi.org/10.1111/puar.13237>
- Dooranov, A., Orozonova, A., & Alamanova, C. (2022). The economic basis for the training of specialists in the field of personnel management: prospects for the future. *Futurity Economics&Law*, 2(1), 27-35. <https://doi.org/10.57125/FEL.2022.03.25.04>
- Esposito, P., & Dicorato, S. L. (2020). Sustainable Development, Governance and Performance Measurement in Public Private Partnerships (PPPs): A Methodological Proposal. *Sustainability*, 12(14), 5696. <https://doi.org/10.3390/su12145696>
- Gevorgyan, S., & Baghdasaryan, K. (2021). Toward a Transhumanist Transformation of Human Labor Potential in the Context of Global Challenges. *Futurity Economics&Law*, 1(4), 36-45. <https://doi.org/10.57125/FEL.2021.12.25.05>
- Guarini, E., Mori, E., & Zuffada, E. (2022). Localizing the Sustainable Development

- Goals: a managerial perspective. *Journal of Public Budgeting Accounting & Financial Management*, 34(5), 583-601. <https://doi.org/10.1108/jpbafm-02-2021-031>
- Hutsaliuk, O., Storozhuk, O., Zhovnirchuk, Y., Zaiarniuk, O., Kartsyhin, (2020). Public administration and legal regulation effectiveness in the field of health care in the context of sustainable development. *Revista Genero & Direito*, 9(2), 599-613. <http://dspace.kntu.kr.ua/jspui/handle/123456789/9823>
- Kankanhalli, A., Charalabidis, Y., & Mellouli, S. (2019). IoT and AI for smart government: A research agenda. *Government Information Quarterly*, 36(2), 304-309. <https://doi.org/10.1016/j.giq.2019.02.003>
- König, P. D., Wurster, S., & Siewert, M. B. (2023). Sustainability challenges of artificial intelligence and Citizens' regulatory preferences. *Government Information Quarterly*, 40(4), 101863. <https://doi.org/10.1016/j.giq.2023.101863>
- Krafft, T. D., Zweig, K. A., & König, P. D. (2022). How to regulate algorithmic decision-making: A framework of regulatory requirements for different applications. *Regulation & Governance*, 16(1), 119-136. <https://doi.org/10.1111/rego.12369>
- Levchenko, Y., Tsizhma, Y., Slobodian, N., & Nehoda, O. (2022). Organization and planning of the enterprises of the future: legal status. *Futurity Economics&Law*, 2(4), 22-29. <https://doi.org/10.57125/FEL.2022.12.25.03>
- Lewallen, J. (2021). Emerging technologies and problem definition uncertainty: The case of cybersecurity. *Regulation & Governance*, 15(4), 1035-1052. <https://doi.org/10.1111/rego.12341>
- Magliacani, M. (2023). How the sustainable development goals challenge public management. Action research on the cultural heritage of an Italian smart city. *Journal of Management & Governance*, 27(3), 987-1015. <https://doi.org/10.1007/s10997-022-09652-7>
- Marques, I., Leitão, J., Carvalho, A., & Pereira, D. (2021). Public administration and values oriented to sustainability: A systematic approach to the literature. *Sustainability*, 13(5), 2566. <https://doi.org/10.3390/su13052566>
- Massey, A. (2022). Sustainable Development Goals and their fit with Good Governance. *Global Policy*, 13(S1), 79-85. <https://doi.org/10.1111/1758-5899.13037>
- Masuk, M. (2023). Methodology of research of institutional sustainability of public governance in conditions of ensuring sustainable development. *Topical issues in modern science*, 1(7). Retrieved from [https://doi.org/10.52058/2786-6300-2023-1\(7\), 182-191](https://doi.org/10.52058/2786-6300-2023-1(7), 182-191).
- Meier, D. S. (2023). The evolution of SDG-related third sector and public administration literature: an analysis and call for more SDG-related research. *Sustainability: Science Practice and Policy*, 19(1). <https://doi.org/10.1080/15487733.2023.2236501>
- Meuleman, L. (2021). Public administration and governance for the SDGs: Navigating between change and stability. *Sustainability*, 13(11), 5914. <https://doi.org/10.3390/su13115914>
- Noja, G. G., Cristea, M., Sirghi, N., Hategan, C.-D., & D'Anselmi, P. (2019). Promoting good public governance and environmental support for sustainable economic development. *International Journal of Environmental Research and Public Health*, 16(24), 4940. <https://doi.org/10.3390/ijerph16244940>
- Pastuch, K. (2022). Public management and administration in provision sustainable development of territories: theoretical and organizational aspect. *Scientific Herald: Public Administration*, 1(11), 186-206. [https://doi.org/10.33269/2618-0065-2022-1\(11\)-186-206](https://doi.org/10.33269/2618-0065-2022-1(11)-186-206)
- Prylypko, V. (2023). Current issues and problems of legal training of specialists in non-legal specialties. *Futurity Economics&Law*, 3(1), 53-62. <https://doi.org/10.57125/FEL.2023.03.25.06>
- Roieva, O., Oneshko, S., Sulima, N., Saienk, V., & Makurin, A. (2023). Identification of digitalization as a direction of innovative development of modern enterprise. *Financial and credit activity-problems of theory and practice*, 1(48), 312-325. DOI: 10.7769/gesec.v14i10.2820
- Shandryk, V., Zhebelev, I., Deliatynchuk, A., Maksymov, V., & Shelest, V. (2023). Modern concepts of public administration in the context of sustainable development. *Revista de Gestão e Secretariado*, 14(10), 17291-17313. Doi: 10.7769/gesec.v14i10.2820
- Strelcow, W., Padafet, I., & Ulyanchenko, Y. (2023). Approaches for assessing the public administration activities in the field of ensuring sustainability. *IOP Conference Series. Earth and Environmental Science*, 1150(1), 012017.

- <https://doi.org/10.1088/1755-1315/1150/1/012017>
- Tichenor, M., Merry, S. E., Grek, S., & Bandola-Gill, J. (2022). Global public policy in a quantified world: Sustainable Development Goals as epistemic infrastructures. *Policy & Society*, 41(4), 431-444.  
<https://doi.org/10.1093/polsoc/puac015>
- Trondal, J. (2021). Public administration sustainability and its organizational basis. *International Review of Administrative Sciences*, 87(2), 399-415.  
<https://journals.sagepub.com/doi/full/10.1177/0020852319869430>
- Wynsberghe, A. (2021). Sustainable AI: AI for sustainability and the sustainability of AI. *AI and Ethics*, 1(3), 213-218.  
<https://doi.org/10.1007/s43681-021-00043-6>
- Vasilyeva, N., Vasilyeva, O. & Prylipko, S. (2020). Public management of sustainable development of territories. *Integración de las ciencias fundamentales y aplicadas en el paradigma de la sociedad post-industrial*. 2020.  
<https://doi.org/10.36074/24.04.2020.v2.03>
- Vinuesa, R., Azizpour, H., Leite, I., Balaam, M., Dignum, V., Domisch, S., Felländer, A., Langhans, S. D., Tegmark, M., & Fuso Nerini, F. (2020). The role of artificial intelligence in achieving the Sustainable Development Goals. *Nature Communications*, 11(1).  
<https://doi.org/10.1038/s41467-019-14108-y>
- Volska, O. (2020). Public management as a systemic phenomenon in modern society. *Taurida Scientific Herald. Series: Economics*, (3), 15-20.  
<https://doi.org/10.32851/2708-0366/2020.3.2>
- Voyer, M., Farmery, A. K., Kajlich, L., Vachette, A., & Quirk, G. (2020). Assessing policy coherence and coordination in the sustainable development of a Blue Economy. A case study from Timor Leste. *Ocean & Coastal Management*, 192, 105187.  
<https://doi.org/10.1016/j.ocecoaman.2020.105187>
- Yunita, A., Biermann, F., Kim, R. E., & Vijge, M. J. (2022). The (anti-)politics of policy coherence for sustainable development in the Netherlands: Logic, method, effects. *Geoforum; Journal of Physical, Human, and Regional Geosciences*, 128, 92-102.  
<https://doi.org/10.1016/j.geoforum.2021.12.002>
- Zuiderwijk, A., Chen, Y.-C., & Salem, F. (2021). Implications of the use of artificial intelligence in public governance: A systematic literature review and a research agenda. *Government Information Quarterly*, 38(3), 101577.  
<https://doi.org/10.1016/j.giq.2021.101577>

DOI: <https://doi.org/10.34069/AI/2023.71.11.23>

How to Cite:

Faichuk, T., Myroshnichenko, I., Vakulych, M., Fihol, N., & Stohnii, I. (2023). War memes: language transformations after the Russian invasion of Ukraine. *Amazonia Investiga*, 12(71), 263-270. <https://doi.org/10.34069/AI/2023.71.11.23>


## War memes: language transformations after the Russian invasion of Ukraine

### Мемі війни: мовні трансформації після російського вторгнення в Україну

Received: October 9, 2023

Accepted: November 29, 2023

Written by:

**Tetiana Faichuk<sup>1</sup>** <https://orcid.org/0000-0001-6357-8158>**Iona Myroshnichenko<sup>2</sup>** <https://orcid.org/0000-0003-1681-3893>**Mariia Vakulych<sup>3</sup>** <https://orcid.org/0000-0002-1429-8237>**Nadija Fihol<sup>4</sup>** <https://orcid.org/0000-0002-2503-7243>**Iryna Stohnii<sup>5</sup>** <https://orcid.org/0000-0002-1436-1195>

#### Abstract

The study of media viruses and memes that have emerged as a result of the Russian invasion of Ukraine represents a relevant interdisciplinary approach that brings together philology, cultural studies, history, psychology, social communications and social sciences. Memes ("bavovna", "zeleni cholovichky") have become not only symbols-viruses, but also effective means of mass communication and expression of national identity.

The study of memes includes the following aspects: a selection of headline titles with a meme component, analysis of their semantics; disclosure of the social and cultural context and history of events that led to their emergence; study of perceptions and reactions to memes, their impact; determination of the role of memes in order to form public consciousness.


The study of the "bavovna" and "zeleni cholovichky" memes was carried out on the basis of online media headlines in Ukrainian, Polish, Lithuanian and English, which provides a wide range of analysis and clarification of the impact


#### Анотація


У дослідженні медіа-вірусів і мемів, які з'явилися внаслідок російського вторгнення в Україну, використано актуальний міждисциплінарний підхід, який об'єднує філологію, культурологію, історію, психологію, соціальні комунікації та соціальні науки. Мемі («бавовна», «зелені чоловічки») стали не лише символами-вірусами, а й ефективними засобами масової комунікації та вираження національної ідентичності.


Аналіз мемів має такі аспекти: виділення заголовків із мемним компонентом, аналіз їх семантики; розкриття соціокультурного контексту та історії подій, що призвели до їх виникнення; вивчення сприйняття та реакції на мемі, їхнього впливу; визначення ролі мемів у формуванні суспільної свідомості.


Мемі «бавовна» та «зелені чоловічки» вивчали на основі заголовків інтернет-ЗМІ українською, польською, литовською та англійською мовами, що дає широкий спектр аналізу та з'ясування впливу цих елементів на

<sup>1</sup> PhD, O. O. Potebnia Institute of Linguistics of the National Academy of Sciences of Ukraine, Kyiv, Ukraine.  WoS Researcher ID: AAO-9729-2020

<sup>2</sup> PhD, O. O. Potebnia Institute of Linguistics of National Academy of Sciences of Ukraine, Ukraine.  WoS Researcher ID: JTV-4075-2023

<sup>3</sup> Junior scientist, O.O. Potebnia Institute of Linguistics of National Academy of Sciences of Ukraine.  WoS Researcher ID: JUK-1418-2023

<sup>4</sup> Dr. Sc (Journalism), Associate Professor, Chair of the Department of Media Production and Publishing, Faculty of Journalism of Borys Grinchenko Kyiv University, Kyiv, Ukraine.  WoS Researcher ID: I-3121-2018

<sup>5</sup> Senior lecturer, National Academy of Statistics, Accounting and Auditing, Ukraine.  WoS Researcher ID: K-6853-2018

of these memes on different cultures and societies, interpretation of events and realities related to the war in Ukraine.

The use of memes as components of media headlines demonstrates the importance of the information space and its impact on the perception of geopolitical events and threats. The media use these symbols to emphasise the seriousness of issues, shape positions, and provoke discussion. This approach helps to understand better the important factors of society, the relationship with historical events and political realities, the specifics of the emergence of new memes, algorithms for their transformation into viruses, and the peculiarities of development, spread and transformation in social media.

**Keywords:** media viruses, memes, semantics, transformations, English language, Lithuanian language, Polish language.

## Introduction

Media viruses are used to spread information rapidly on a large scale in the media space. Media viruses describe ideas, events, and phenomena with the speed and scope of spread characteristic of a virus. Media viruses as content are gaining popularity due to the large number of audience reach, comments, reactions and reposts on social media and media platforms.

Memes are responsible for the spread of media viruses. Memes can take different forms (graphic images, phrases, videos, gestures, behavioural patterns, etc.); they can be humorous, political, cultural, and reflect any aspect of life. They are usually spread through social networks, media, and communication between people.

The specific objectives of this study are to analyze the impact of the memes that emerged after the Russian military invasion of Ukraine on public opinion, culture and society. Specifically, the following aspects will be studied:

- the role of memes in the spread of information about the war in Ukraine.
- the influence of memes on the formation of public opinion about the war in Ukraine.
- the impact of memes on Ukrainian culture and society as well.

The study of memes that arose after Russia's military invasion in Ukraine ("bavovna", "zeleni cholovichky") is a relevant interdisciplinary study that combines philology, cultural studies,

різні культури та суспільства, інтерпретацію подій і реалій, пов'язаних з війною в Україні.

Використання мемів як компонентів заголовків у ЗМІ демонструє важливість інформаційного простору та його вплив на сприйняття геополітичних подій і загроз. Медіа використовують ці символи, щоб підкреслити серйозність питань, сформувати позицію та розкрити дискусійні питання. Такий підхід допомагає краще зрозуміти важливі чинники суспільства, зв'язок з історичними подіями та політичними реаліями, специфіку появи нових мемів, алгоритми їх перетворення на віруси, особливості розвитку, поширення та трансформації в соціальних мережах.

**Ключові слова:** медіавіруси, мему, семантика, трансформації, англійська мова, литовська мова, польська мова.

history, psychology, social communications and social sciences.

## Theoretical Framework

Russia's military invasion of Ukraine has given a number of memes that have had a great impact on public opinion and culture. For example, the "bavovna" meme, which depicts a cotton plant with an open boll, became a reference to a series of explosions due to a mistake in its translation into Russian. The term "media virus" does not have a specific author or definition, as the concept has become popular among media researchers and the public. Malcolm Gladwell, in *The Tipping Point: How Little Things Can Make a Big Difference* (Gladwell, 2000), discusses the impact of media viruses on society and culture. Jonah Berger, in his book *Contagious. Why Things Catch On* (Berger, 2016), examines how ideas and information spread through social networks and media, and explores the factors that influence the virality of content. Douglas Rushkoff, in *Media Virus: Hidden Agendas in Popular Culture* (Rushkoff, 1994), uses the term "media virus" to analyse the impact of the media on society and the spread of ideas through media channels. Karen Nelson-Field, in her work *Viral Marketing: The Science of Sharing* (Field, 2013), analyses the psychology and social dynamics underlying viral marketing, the mechanisms of creating content that has the potential to become viral. Henry Jenkins, Sam Ford and Joshua Green, in *Spreadable Media: Creating Value and Meaning in a Networked*



Culture (Jenkins, Ford & Green, 2013), explore the phenomenon of social interaction in digital networks, the consumers' role in the process of dissemination and distribution of information, the importance of their involvement and interaction in the media sphere and the impact of these processes on the media industry.

Douglas Rushkoff classifies viral messages in the media into three main groups. The first group includes messages that are created intentionally; the second group includes messages that are created accidentally but quickly adapted to specific needs; the third group includes messages that arise on their own, without the influence of external factors, they are self-sufficient and attractive (Rushkoff, 1994).

The term "meme" was coined by the British ethologist Richard Dawkins, in *The Selfish Gene* (Dawkins, 1976) to denote an idea, concept, image, or behavior that can be transmitted from person to person by imitation or copying, similar to how genes transmit from generation to generation in the biological evolutionary process. Thus, a "meme" is a cultural unit that can be spread and reproduced in society.

In Ukraine, the functioning of media viruses is covered in the works L. Kompantseva (2020) (media viruses as a genre of Internet communication); H. Semeniuk (2012) (media viruses against the background of the evolutionary processes of the media space); K. Sokolova (2012) (memes as means of communication in the Internet environment).

The "bavovna" and "little green men" memes have become the most relevant since Russia's invasion of Ukraine. Starting in 2014, when Russian troops entered the Crimean peninsula, the term "little green men" acquired a negative meaning as it was associated with the military invasion. Analysis of positive statements by social media users about the successes of the Ukrainian armed forces on the battlefield is associated with the "bavovna" meme.

## Methodology

The research methodology primarily includes general scientific methods of analysis, synthesis and qualitative sampling, which made it possible to determine the object; collect data; analyze the origin and semantics of memes. Descriptive methods are used, in particular the method of typology, which is focused on the search for stable features and properties of the studied objects. The method of typological analysis made

it possible to study the sociocultural context; explore the perception and reactions of the audience, the impact on society; outline algorithms for the spread of memes in social networks, their transformation and evolution, find out the role in the formation of public consciousness and the reflection of national identity.

The method of studying texts is involved, namely content analysis as a method of collecting data on the phenomenon or process under study. For the automated search for information, the content monitoring was used, which is caused by the need to systematically track trends and processes in a constantly updated information environment.

The article also uses Case Study method – a method of qualitative research in the social sciences, which involves the study of a single social object in order to comprehend a wider class of similar cases. In the context of this article is a study of memes that emerged after Russia's military invasion of Ukraine for a generalized explanation of the phenomenon of the appearance and spread of memes in the Internet space.

Criteria for memes selection: relevance to Russia's military invasion of Ukraine; virality and popularity; variety of themes and formats; geographical and cultural representation; evolution over time.

Limitations of the study. Sampling bias is that the study's reliance on online sources may introduce some sampling bias. Temporal Constraints: the study's focus on memes which had emerged after the invasion may not fully capture the historical context and nuances leading up to the event. The analysis is limited to a specific time frame. Ethical Considerations: due to the nature of the topic, ethical concerns may arise in the selection and analysis of certain memes. Generalizability: while Case Study methodology provides in-depth insights into a specific context, generalizing findings to a broader context may be challenging.

## Results and Discussion

The origin of the "Bavovna" meme. In the 2010s, Russia began to introduce actively the "new language" and the "regime of information assistance", which were expressed in the artificial creation of words with the change of concepts using euphemisms. The main purpose of using this method is to simplify the perception of various events, including natural disasters and

military events. One of the most significant steps in this process was the transition of the Russian media to the use of the word "khlopók" (Ukrainian: "liask") to refer to explosions. Even with serious explosions with a significant number of victims, the term "khlopók" was used. Instead, other languages use the lexemes ukr. "vybukh", pol. "wybuch", "eksplozja", lit. "sprogimas", English. "explosion".

Semantics of the "Bavovna" meme. It is worth to note that the word "khlopók" in Russian has a homograph – "khlópok", in Ukrainian – "bavovna". The meme was created in response to the events in Bryansk in April 2022, when explosions occurred in a military unit and an oil depot. The news about these events was translated from Russian sources using an online translator, which misinterpreted the context and made a mistake with the choice of words, so the text in Ukrainian could be read as "pered pochatkom pozhezhi chulasia potuzhna bavovna". This misunderstanding became the basis for the creation of the meme and its spread on the Internet (Visit Ukraine, 07.10.2023).

Since then, the word "bavovna" has been used in the Ukrainian segment of the Internet to refer to explosions in the temporarily occupied territories of Ukraine and Russia: Sezon "bavovny" u Krymu tryvatyme shche dovho - Humeniuk (Ukrinform, 20.07.2023); Do bielhoroda vnochi zavitala bavovna: shcho vidomo (Ukrinform, 17.01.2023); "Bavovna" in Kreminna znyshchyla maizhe 400 zaharbnykiv - Haidai (Ukrinform, 05.09.2022); Dva holovni varianty i odyn ukrainskyi: Reznikov nazvav dzherela "bavovny" v Rosii (24 channel, 20.08.2023); "Bavovna" zavitala do Rostova i Kaluhu (galinfo, 21.08.2023). Korotko pro 18 serpnia: ZSU atakuiut, "bavovna" u Moskvii i F-16 dlia Ukrainy (TSN, 18.08.2023). In our opinion, the cases of fixing the word "bavovna" in the headlines in the direct meaning of plants are interesting, although in these contexts additional semantic connotations and the connection with the meme are preserved: "Bavovny" bahato ne buvaie: volonterzy prodaiut rosliny zadlia dopomohy "Hospitalieram" (Dim, 21.08.2023).

Thus, the "bavovna" meme spread rapidly in social media, websites and media platforms in a short time. We note the processes of migration and borrowing of memes from the Ukrainian language to other languages due to a number of factors and mechanisms.

With this in mind, let us consider the mechanisms of borrowing the meme "bawełna" in Polish. The

meme "bawełna" in Polish is used to describe events related primarily to the war in Ukraine. In the context of the headlines we can understand the meme "bawełna" as explosions in the temporarily occupied territories of Ukraine and Russia, which cause fear and panic among the occupier: "Bawełny będzie dużo! Dlaczego Rosjanie tak się jej boją, że aż uciekają z Krymu?" (Gazeta Wyborcza, 23.08.2022); Od hełmów do obrony elektronicznej. Ukraine: "Bawełna" wspiera obronę (Defence 24, 25.07.2023); "Bawełna" w Rosji. Tego Putin tej nocy się nie spodziewał (WP, 02.01.2023); Panika w rosyjskim wojsku przez wybuchy w Mariupolu. Ukrainian army informs, how Russians have been attacking "bawełnę" (Gazeta prawna, 26.02.2023); "Tajemnicza bawełna" in akcji. Krym zaatakowany, zniszczone rosyjskie pociski (Salon 24, 21.03.2023).

The origin of the meme "zeleni cholovichky." The meme "zeleni cholovichky" appeared in February-March 2014, when armed Russian troops entered the Crimea, dressed in a green military uniform without identification marks. This meme played an important role in attracting international attention to the events in Ukraine and establishing links between Russia and military aggression in Ukraine, despite its refutation of its participation in the conflict.

Semantics of the meme "zeleni cholovichky". The term originally came into use to refer to aliens after reports about UFO in the 1950s; accordingly, we record single titles with this meaning: Zeleni cholovichky. Ucheni ne zaperechuiut, shcho u Vsesviti mozht zhyty liudynopodibni istoty (Fokus, 25.11.2021). At the present stage, the meme reflects the unofficial nature of the Russian invasion of Ukraine: Visim rokiv okupatsii Krymu: yak "zeleni cholovichky" z Rosii zakhopyly ukrainskyi pivostriiv (Uainfo, 20.02.2022); V okupovanomu Krymu oblyly farboiu pamiatnyk rosiiskym "zelenym cholovichkam" (TSN, 28.01.2019); Putin vpershe vyznav, shcho "zeleni cholovichky" - yogo viiskovi (Ukrainian pravda, 17.04.2014). We record the use of memes to reflect Russian aggression and military intervention in other countries: "Zeleni cholovichky" Putina rushyly do Minska (DailyLviv, 20.08.2020); U Moldovi vzhe zavylysia rosiiski "zeleni cholovichky", yaki verbuiut naimantsiv (TSN, 08.09.2014), as well as cases of introduction of the relevant term and concept into national legislation: U Finliandii zaboronyly "zelenykh cholovichkiv" (VolynPost, 16.07.2017). We highlight the use of the meme in comparative contexts: unofficial

actions of armed persons (capture, invasion) in military or camouflage uniform without identification marks: "Bukovel" atakuiut "zeleni cholovichky" (Konkurent News Agency, 26.09.2018); Herashchenko vyklykaiut na profilnyi komitet cherez yii porivniannia nardepiv zi «Sluhy narodu» iz «zelenymy cholovichkami» (TSN, 11.09.2019). Noteworthy are the names of American tabloids, in which during the protests in Washington, the presence on the streets of armed people without identification marks is directly compared with the Russian green men who flooded the city: Pid chas protestiv u Vashynhtoni pomityly "zelenykh cholovichkiv": khto vony - v ohliadi ZMI (BBC News Ukraina, 08.06.2020). The context in which the meme was used in relation to the infiltration of armed people from Belarus into Poland is shown: "Zeleni cholovichky" z'iavylysia vzhe y u Polshchi (Hlavlkom, 04.11.2021).

In Polish, the meme "zielone ludziki" is consistently presented in headlines in similar meanings and contexts to those in Ukrainian: Brejza: Rząd PiS nie powinien spotykać się z "zielonymi ludzikami" Putina (Rzeczpospolita, 22.02.2022). We distinguish the names of illegal military seizure not only of territories but also of objects: "Małe, zielone ludziki" zajęły ukraiński statek ratunkowy. "To piractwo" (Rzeczpospolita, 09.03.2022).

Most examples of the meme being used to reflect Russian aggression and military intervention in other countries were recorded: Kryzys na granicy polsko-białoruskiej. Kamiński: Nie pozwolimy, żeby przy granicy biegały zielone ludziki (Gazeta Wyborcza, 27.07.2023); Zielone ludziki w Wenezueli (Fakt, 28.01.2019); Zielone ludziki u Łukaszenki? (Rzeczpospolita, 29.07.2020); Co w Rosji piszczy? Rosyjskie psy wojny na straży Maduro, czyli zielone ludziki poleciały w tropiki (Gazeta Wyborcza, 26.01.2019); Łukaszenka boi się zielonych ludzików Putina (Gazeta Wyborcza, 13.03.2015). We highlight the use of the meme in articles describing possible attacks by Ukrainian sabotage and reconnaissance groups on the territory of Russia: Ukraińcy też mają swoje zielone ludziki (Gazeta Wyborcza, 23.05.2023), as well as in the context of measures to counter and prevent military intervention by little green men: Zielone ludziki chcą nam zabrać surowce, czyli największe w tym roku manewry NATO (Gazeta Wyborcza, 21.09.2017). The practice of using memes in comparative contexts is also consistent: Zielone ludziki prezesa. Zachód powinien traktować ludzi Kaczyńskiego tak, jak

traktował ludzi Putina po ataku Rosji na Krym (Gazeta Wyborcza, 16.12.2017); Kreml wypiera się hakerów w USA jak "zielonych ludzików" na Krymie - niby nie nasi, ale orderzy dostaną (Gazeta Wyborcza, 28.07.2016); Finansowa wojna hybrydowa w Mołdawii. Zielone zamiast zielonych ludzików (Gazeta Wyborcza, 15.08.2016).

English-language publications in the UK and America have also been using the "little green men" meme in headlines since 2014. The contexts refer to events related to Russia's aggression against Ukraine. The analytics of the materials aims to identify the Russian military: Ukraine crisis: Meeting the little green men (BBC News, 30.04.2014); "Little green men" or "Russian invaders?" (BBC News, 11.03.2014) (the article contains subheadings: Polite men, Little green men, Russian invaders, which are different names for the same concept). We would like to highlight the use of the meme in a figurative sense in relation to armed, camouflaged people without identifying markers who were involved in the United States during the protests: Why is Donald Trump using little green men in American cities? (The Washington Post, 22.07.2020). Special attention should be paid to the headlines in which the meme is used with the opposite meaning, when the concept of "little green men" can lead to serious negative consequences for the aggressor country and anti-Kremlin little green men can already carry out offensive actions on the territory of Russia: Belgorod attack: Ukraine has turned Putin's little green men against him (The Telegraph, 23.04.2023).

The title names of Lithuanian Internet media actively use the meme "žalieji žmogeliukai" in view of the possible risks of the development of aggression similar to the Ukrainian scenario: Jei ateitų "žalieji žmogeliukai," Lietuvos kariai stovėtų nuleidę ginklus? (Lrt.lt, 14.12.2014); Latviai bijo „žaliųjų žmogeliukų“ iš Rusijos ir hibridinio karo (Lrt.lt, 20.04.2015). We also record analytical materials on the struggle and counteraction to armed groups: Žalių jų žmogeliukų istorija: receptų, kaip elgtis su niekieno pajėgomis, yra (15min.lt, 06.04.2016); regarding the identification of participants of Russian aggression other than green men: Ne vien žalieji žmogeliukai - Krymo aneksijoje aktyviai dalyvavo ir Maskvos popai (Lrt.lt, 19.03.2020). We also highlight the titles of articles in which the meme is used in the context of Russian military aggression against Ukraine: Vėl pasirodys "Žalieji žmogeliukai?" Skelbiamas pavojus - juda didžiulė karinė kolona be

skiriamųjų ženklų (Technologijos.lt, 24.02.2023), and in relation to other countries (Syria, Belarus): Sirijos kare - naujas posūkis: prie Rusijos aviacijos prisijungė ir "žalieji žmogeliukai" (Lrt.lt, 12.10.2015); "Žalieji žmogeliukai" jau Minske. Kas toliau?" (Lrt.lt, 31.08.2020). There are a number of examples of the transformation of meme semantics in comparative contexts, in which, in particular, refugees (migrants) are equated with "little green men": Pabėgėliai - žalieji žmogeliukai Europai? (Darbopartija.lt, 07.03.2016); Pabėgėliai – žalieji žmogeliukai? (Silales-artojas.lt, 12.07.2021); Radikali Kuodžio idėja dėl Baltarusijos migrantų: siūlo juos sodinti ir prilyginti žaliems žmogeliukams (Delfi.lt, 02.07.2021). Comparative contexts are also used in headings with a meme-composite: Žirvintas atvyksta "žalieji žmogeliukai" (Sirvinta.net, 10.09.2022). At the same time, the comparison of political protests of the League of Young Conservatives (interference in the internal affairs of a foreign municipality) with green men is accompanied by a lengthy description of their appearance in Ukraine.

## Conclusions

The results of the study made it possible to clarify the mechanisms of functioning of media viruses, to single out the most important algorithms for interlanguage borrowing of text memes. First of all these are translation and adaptation (memes and viral content can be easily translated into other languages and adapted to a new audience); historical connections (international relations promote the spread of memes and viral content from one language to another, and the commonality and unity of positions create common conceptual points that facilitate their understanding); multicultural communities (global networks and social media facilitate the exchange of popular content; a meme popular in one community is borrowed and adapted to its contexts in another); media globalization (a meme or viral content intended for a global audience can easily move from one language to another).

Thus, media viruses migrate from one language to another due to the global possibilities of the Internet and communication, as well as due to common cultural and historical points that facilitate their understanding and spread in different linguistic environments.

The "bavovna" and "zeleni cholovichky" memes are not only popular, they have become an important part of media culture in Ukraine and

other countries, and are actively used in headlines and articles in various media to attract readers' attention.

The use of memes by the media of other countries is primarily associated with Russian military aggression in Ukraine, which demonstrates the strong condemnation of any interference in the territory of independent states.

Comparative contexts of memes demonstrate transformation and expansion of semantics. Journalists and media compare "little green men" with other phenomena. It can be interpreted as analogies between different situations and challenges for society.

The use of memes as components of media headlines demonstrates the importance of the information space and its impact on the perception of geopolitical events and threats. The media use these symbols to emphasise the seriousness of issues, shape positions, and provoke discussion.

The general trend is that memes play an important role in the media space of different countries, helping society to perceive and analyse geopolitical events and risks.

## Bibliographic references

- Bergerk, J. (2016). *Contagious. Why Things Catch On*. Simon and Schuster, 244 p.
- BBC News Ukraine (June 8, 2020). *During the protests in Washington, "little green men" were noticed: who are they - in the media overview*. URL: <https://cutt.ly/3wWo355T>
- BBC News (30.04.2014). *Ukraine crisis: Meeting the little green men*. URL: <https://cutt.ly/RwWNIGT9>
- BBC News (11.03.2014). *"Little green men" or "Russian invaders"?* URL: <https://cutt.ly/JwWNnJC1>
- Dawkins, R. (1976). *The Selfish Gene*. Oxford University Press, 192 p. URL: <https://alraziuni.edu.ye/uploads/pdf/The-Selfish-Gene-R.-Dawkins-1976-WW-.pdf>
- Galinfo (21.08.2023). *"Bavovna" has come to Rostov and Kaluga*. URL: <https://bit.ly/3ZOvgW9>
- Gazeta Wyborcza (23.08.2022). *"There will be plenty of bavovna!". Why are Russians so afraid of her that they are fleeing from the Crimea?* URL: <http://surl.li/keikt>
- Gazeta prawna (26.02.2023). *Panic in the Russian army due to explosions in Mariupol. The Ukrainian army informs how the*



- Russians reacted to the "bavovna". URL: <http://surl.li/keilr>
- Gazeta Wyborcza (27.07.2023). *Crisis on the Polish-Belarusian border. Kaminski: We will not allow the little green men to run around the border.* URL: <http://surl.li/keime>
- Gazeta Wyborcza (26.01.2019). *What's going on in Russia? Russian attack dogs defend Maduro, or the little green men fly to the tropics.* URL: <http://surl.li/keinl>
- Gazeta Wyborcza (13.03.2015). *Lukashenko is afraid of Putin's little green men.* URL: <http://surl.li/keiqv>
- Gazeta Wyborcza (23.05.2023). *Ukrainians also have their own little green men.* URL: <http://surl.li/lfxsh>
- Gazeta Wyborcza (21.09.2017). *The little green men want to take away our raw materials, or the largest NATO manoeuvres this year.* URL: <http://surl.li/keipj>
- Gazeta Wyborcza (16.12.2017). *The president's green figures. The West should treat Kaczyński's people the same way it treated Putin's people after Russia's attack on Crimea.* URL: <http://surl.li/keioz>
- Gazeta Wyborcza (28.07.2016). *The Kremlin disowns hackers in the US like "little green men" in Crimea - they are not ours, but they will get orders.* URL: <http://surl.li/keipz>
- Gazeta Wyborcza (15.08.2016). *Hybrid financial war in Moldova. Green ones instead of the little green men.* URL: <http://surl.li/keipr>
- Gladwell, M. (2000). *The Tipping Point: How Little Things Can Make a Big Difference.* Back Bay Books. 280 p.
- DailyLviv (20.08.2020). *The Putin's "little green men" moved to Minsk.* URL: <https://cutt.ly/IwQGQsx7>
- Darbopartija.lt (07.03.2016). *P. Markauskas. Are refugees "the little green men" for Europe?* URL: <https://cutt.ly/HwW3CULL>
- Delfi.lt (02.07.2021). *Kuodis's radical idea about Belarusian migrants: he proposes to put them in jail and equate them with the "little green men".* URL: <https://cutt.ly/JwW3BMXn>
- Defence 24 (25.07.2023). *From helmets to electronic protection. Ukraine: "Bavovna" supports defence.* URL: <http://surl.li/keikz>
- Dim (21.08.2023). *"You can never have too much "bavovna": volunteers sell plants to help the "Hospitaliers".* URL: <https://bit.ly/48PAPHZ>
- Fakt (28.01.2019). *The "little green men" in Venezuela.* URL: <http://surl.li/keiox>
- 15min.lt (06.04.2016). *History of the Green Men: There are recipes for dealing with nobody's powers.* URL: <https://cutt.ly/mwW3ZkOS>
- Fokus (25.11.2021). *The little green men. Scientists do not deny that humanoid creatures may live in the Universe.* URL: <https://cutt.ly/SwWo8ILk>
- Hlavkom (04.11.2021). *"Green men" have already appeared in Poland.* URL: <https://cutt.ly/5wWo1a0L>
- Jenkins, H., Ford, S., & Green, J. (2013). *Spreadable media: Creating Value and meaning in A Networked Culture.* New York: New York University Press, 352 p.
- Kompantseva, L. (2020). *Linguistic examination of social networks under conditions of hybrid challenges to Ukraine's national security.* Actual problems of Ukrainian linguistics: theory and practice. Kyiv: Vyp, pp. 119-139. URL: <https://apultp.knu.ua/index.php/APULTP/article/view/84/80>
- Konkurent News Agency (26.09.2018). *"Bukovel" is attacked by the "little green men" (video, photos).* URL: <https://cutt.ly/cwWoBcOa>
- Lrt.lt (14.12.2014). *If "the little green men" came, would the Lithuanian soldiers stand with their weapons lowered?* URL: <https://cutt.ly/dwW3PIIZ>
- Lrt.lt (20.04.2015). *Latvians are afraid of the "little green men" from Russia and the hybrid war.* URL: <https://cutt.ly/vwW3DWhV>
- Lrt.lt (19.03.2020). *Not only the little green men - Moscow priests also took an active part in the annexation of Crimea.* URL: <https://cutt.ly/lwEwilyU>
- Lrt.lt (12.10.2015). *The Syrian war - a new turn: the "green men" have joined the Russian aviation.* URL: <https://cutt.ly/swW3Gkuo>
- Lrt.lt (31.08.2020). *Vytautas Bakas. "Green men" are already in Minsk. What's next?* URL: <https://cutt.ly/fwW3Hitx>
- Nelson-Field, K. (2013). *Viral Marketing: The Science of Sharing.* Oxford University Press, 1st edition, 128 p.
- Rushkoff, D. (1994). *Media Virus: Hidden Agendas in Popular Culture.* Ballantine Books, 338 p.
- Rzeczpospolita (22.02.2022). *Breza: The PiS government should not meet with Putin's little green men.* URL: <http://surl.li/keiyyz>
- Rzeczpospolita (09.03.2022). *The "little green men" seize a Ukrainian rescue ship. "This is piracy".* URL: <http://surl.li/keiwh>
- Rzeczpospolita (29.07.2020). *Are there any little green men in Lukashenko's office?* URL: <http://surl.li/kejam>
- Semeniuk, G. (2012). *Media viruses in the context of the evolutionary processes of the media space: essence and problems. Information society: scientific journal/editor-*



- in-chief. VV Rizun, boss. ed. VF Ivanov, Taras Shevchenko Institute of Journalism KNU, 46-51.
- Salon 24 (21.03.2023). *"Mysterious Bavovna" in action. The Crimea is attacked and Russian missiles are destroyed.* URL: <http://surl.li/keilz>
- Silales-artojas.lt (12.07.2021). *Are refugees the little green men?* URL: <https://cutt.ly/mwEwwcx1>
- Sirvinta.net (10.09.2022). *The "little green men" arrive in Shirvintos.* URL: <https://cutt.ly/twEq5g62>
- Sokolova, K. (2012). Memes as a means of communication in the Internet environment. *Ghumanitarnyj chasopys*, Vol. 1, pp. 118-123. URL: <https://cutt.ly/iwFbXru1>
- Technologijos.lt (24.02.2023). *Green Men Coming Back? Danger is announced - a huge military column without distinguishing marks is moving.* URL: <https://cutt.ly/lwEwgpBu>
- TSN (18.08.2023). *Briefly about 18 August: The Ukrainian Armed Forces attack, "bavovna" in Moscow and F-16s for Ukraine.* URL: <https://bit.ly/3LQUE80>
- TSN (28.01.2019). *In occupied Crimea, a monument to Russian "green men" was covered with paint In occupied Crimea, a monument to Russian "green men" was covered with paint.* URL: <https://cutt.ly/WwQHqlpq>
- TSN (08.09.2014). *Russian "little green men" who recruit mercenaries have already appeared in Moldova.* URL: <https://cutt.ly/ewQHlf1t>
- TSN (11.09.2019). *Gerashchenko is summoned to the profile committee because of her comparison of people's deputies from "Servants of the People" with "little green men".* URL: <https://cutt.ly/RwWoN9Y2>
- The Telegraph (23.04.2023). *Belgorod attack: Ukraine has turned Putin's little green men against him.* URL: <https://cutt.ly/MwWMF14J>
- The Washington Post (22.07.2020). *Why is Donald Trump using little green men in American cities?* URL: <https://cutt.ly/EwWMOAxw>
- 24 channel (20.08.2023). *Two main options and Ukrainian one: Reznikov named the sources of "bavovna" in Russia.* URL: <https://bit.ly/46HNBGN>
- Uainfo (20.02.2022). *Eight years of occupation of Crimea: how Russia's "little green men" seized the Ukrainian peninsula.* URL: <https://cutt.ly/nwQGcCvq>
- Ukrainian pravda (17.04.2014). *Putin admitted for the first time that the "little green men" - are his military.* URL: <https://cutt.ly/3wWTZAZy>
- Ukrinform (20.07.2023). *The "bavovna" season in the Crimea will last for a long time - Humeniuk.* URL: <https://bit.ly/3FunCHr>
- Ukrinform (17.01.2023). *"Bavovna" came to Belgorod at night: what is known.* URL: <https://bit.ly/3PQP9Ht>
- Ukrinform (05.09.2022). *"Bavovna" in Kreminna killed almost 400 invaders - Haiday.* URL: <https://bit.ly/3FatIfJ>
- Visit Ukraine (07.10.2023). *The World Bavovna Day: a new meaning of the holiday for Ukrainians in wartime conditions.* URL: <https://cutt.ly/awHHqMNH>
- VolynPost (16.07.2017). *Finland has banned the "little green men".* URL: <https://cutt.ly/OwWo4cze>
- WP (02.01.2023). *"Bavovna" in Russia. Putin did not expect this last night.* URL: <http://surl.li/keilk>
- Zaitaseva, D. (2022). Editorial: La inteligencia artificial como nueva forma de vida: la evolución digital en la escritura. *Amazonia Investiga*, 11(60), 7-9. <https://doi.org/10.34069/AI/2022.60.12.0>

DOI: <https://doi.org/10.34069/AI/2023.71.11.24>

How to Cite:

Kondratska, H., Grigorieva, N., Kugai, K., Vyshnevskaya, M., & Sapozhnykov, S. (2023). European experience of dual education for future teachers in Ukraine. *Amazonia Investiga*, 12(71), 271-283. <https://doi.org/10.34069/AI/2023.71.11.24>


## European experience of dual education for future teachers in Ukraine

### Європейський досвід дуальної освіти в Україні для майбутніх педагогів

Received: October 6, 2023

Accepted: November 28, 2023

Written by:

**Halyna Kondratska<sup>1</sup>** <https://orcid.org/0000-0001-8856-1125>**Natalya Grigorieva<sup>2</sup>** <https://orcid.org/0000-0002-7650-4577>**Kseniia Kugai<sup>3</sup>** <https://orcid.org/0000-0001-9838-904X>**Maryna Vyshnevskaya<sup>4</sup>** <https://orcid.org/0000-0003-1536-9102>**Stanislav Sapozhnykov<sup>5</sup>** <https://orcid.org/0000-0001-6674-7631>

#### Abstract

The aim of the research is to determine the effectiveness of the European experience of dual education in Ukraine for future teachers. The aim was achieved through the use of comparison, SWOT analysis, calculation of selectivity factor, effectiveness, correlation index. The comparison of dual education systems in Germany, Austria, Switzerland, Poland was used to determine their impact on the effectiveness of education and employment. It was established that the experience of Germany is the most effective for acquiring the necessary practical skills ( $f_c=14.2$ ). The dual system of Switzerland is the most favourable for employment (14.5), as it is aimed at adopting the practical experience of the most competitive institutions. It was established that the experience of Germany can be the most positive dual system for Ukrainian education ( $f_c=14.4$ ) and Poland ( $f_c=14.2$ ). SWOT analysis was applied to establish that the dual education system has greater advantages compared to traditional education. The practical significance of the research is the possibility of providing a dual system during the teachers'

#### Анотація

Мета роботи полягає у визначенні ефективності європейського досвіду дуальної освіти в Україні для майбутніх педагогів. Мету роботи стало можливим досягнути внаслідок використання методів порівняння, SWOT-аналізу, розрахунку коефіцієнтів вибірковості, результативності, індексу кореляції. За допомогою порівняння дуальних систем освіти у Німеччині, Австрії, Швейцарії, Польщі було визначено їхній вплив на ефективність для навчання, працевлаштування. Встановлено, що досвід Німеччини є найбільш ефективним для здобуття необхідних практичних навичок ( $f_c=14,2$ ). Дуальна система Швейцарії є ж найбільш сприятливою для працевлаштування (14,5), оскільки направлена на перейняття практичного досвіду найбільш конкурентоспроможних установ. Встановлено, що найбільш позитивною дуальною системою для української освіти може бути досвід Німеччини ( $f_c=14,4$ ) та Польщі ( $f_c=14,2$ ). За допомогою SWOT-аналізу встановлено, що дуальна система навчання має більші переваги в порівнянні з традиційним навчанням.

<sup>1</sup> Doctor of Pedagogical Sciences, Professor, Head of the Department of Physical Therapy, Occupational Therapy and Health, Faculty of Human Health and Natural Sciences, Drohobych Ivan Franko State Pedagogical University, Drohobych, Ukraine.

<sup>2</sup> Senior Lecturer of the Department of Preschool Education, Faculty of Preschool, Special and Social Education, Berdyansk State Pedagogical University, Zaporizhzhia, Ukraine.

<sup>3</sup> Associate Professor of the Department of Philology and Translation, Institute of Law and Modern Technologies, Kyiv National University of Technologies and Design, Kyiv, Ukraine.

<sup>4</sup> Associate Professor of the Department of Philology and Translation, Institute of Law and Modern Technologies, Kyiv National University of Technologies and Design, Kyiv, Ukraine.

<sup>5</sup> Doctor of Pedagogical Science, Professor of the Department of Innovative Technologies in Pedagogy, Psychology and Social Work, Alfred Nobel University, Dnipro, Ukraine.

training as a result of focusing on the favourable experience of Germany and Poland. The prospects for further research may be related to the comparison of dual education experience of European countries, America for Ukraine.

**Keywords:** educational standards, English language, practical skills, preschool education, professional level, SWOT analysis.

## Introduction

Achieving a high professional level is one of the main tasks of modern education. The development of practical skills is given the greatest attention, as it allows to ensure all the necessary educational processes. A developed form of education is the interaction of students directly with employers, which motivates students to obtain a higher level of practical experience. Therefore, the relevance of the research is the increasing popularity of dual education.

Dual education is a type of education that provides for the study of theoretical information during classes, and the practical consolidation of knowledge in the classroom (Juan Rubio & García Conesa, 2018). It should be taken into account that practical classes do not only involve training practical skills in the dual system. And they are related to their real study as a result of the training of other students by students studying to become future teachers. The dual approach for future teachers helps to understand all educational approaches, methods of presenting material, assessment of students' knowledge, etc (Konotop et al., 2021). The dual approach allows for a higher rate of student employment than during the traditional education system (Hu et al., 2022; Varela-Losada et al., 2022). Dual education allows for the training of competitive specialists who are able to perform professional tasks (Salas-Velasco, 2022).

The dual form of education was first used in Germany in the 70's of the 20th century (Rustico et al., 2020). Later, dual education was spread in other European countries (Switzerland, France, Great Britain, Austria). The European experience of this education system involves the creation of specialized educational centres aimed at acquiring a high level of practical knowledge (Rustico et al., 2020). A common approach of dual education in Europe is to study theory during offline classes for three months. The

Практичне значення роботи полягає у можливості забезпечення дуальної системи під час підготовки викладачів внаслідок орієнтації на сприятливий досвід Німеччини, Польщі. Перспективи дослідження можуть бути пов'язані із порівнянням досвіду дуальної освіти європейських країн та Америки для України.

**Ключові слова:** англійська мова, дошкільна освіта, освітні стандарти, практичні навички, професійний рівень, SWOT-аналіз.

practical skills are acquired directly in the field, in the organization. The approach aims to earn wages by students together with employees (Wibowo et al., 2022). Another approach is also common, which involves taking the first course of training directly in organizations to acquire practical skills (Brankovic & Cantwell, 2022; Rott et al., 2022). After acquiring practical skills, the study of theory begins in classrooms. This approach contributes to better memorization of the necessary information, as there is already a visual example, understanding of specific professional processes. Focusing on the dual system of education of European countries in Ukraine allows to reduce the difference between theory and practice. This directly reflects in the professionalism of future specialists (Pastore et al., 2022).

The purpose of the work is to study and generalize the effectiveness of the European experience of dual education in Ukraine for future teachers. The aim was achieved through the fulfilment of the following research objectives:

- conduct a comparative analysis of the dual education system in Germany, Austria, Switzerland, Poland and determine the most effective approach for education and employment;
- identify the experience of European countries most favourable for Ukraine for the introduction of dual education and determine the elements that will contribute to this the most;
- determine the level of theoretical and practical knowledge among future preschool teachers and foreign language teachers who studied according to the dual system or the traditional one;
- determine the level of children's satisfaction (preschoolers and fifth-graders) with classes conducted by students;

- determine advantages and disadvantages, opportunities and threats from the introduction of a dual education system and a traditional one in educational institutions.

## Literature Review

Studying in higher education institutions (HEIs) contributes to the provision of a new paradigm in the sustainable development of an individual country. First, it is connected with the possibility of training future teachers who have a high level of professional skills. This affects the improvement of the learning efficiency of other students. The dual education system promotes practical training of future teachers under the daily impact of professional tasks, which promotes thinking development. This affects the expansion of students' knowledge and values based on the skills developed by future teachers (Bugallo-Rodríguez & Vega-Marcote, 2020). The effectiveness of learning a second language was influenced by new pedagogical approaches, in particular, the dual education system. This made it possible to ensure the use of innovative principles of teaching foreign languages as a result of focusing on one's own experience. Dual education has become one of the most popular pedagogical approaches, allowing for a dual vision of teaching opportunities (Rubio, & Conesa, 2023). The dual education system enables meeting the employers' expectations, which contributes to the training of highly qualified personnel. It is necessary to ensure the preparation of theoretical materials that meet the needs of basic qualifications in accordance with the employers' expectations during the development of the dual education system (Juhasz et al., 2022).

Dual education facilitates a complex interpretation system for acquiring high practical skills. In Italy, this approach allows for greater flexibility in developing professional skills. This approach ensures the demand for specialists with appropriate qualifications and promotes students' learning motivation. However, theoretical and practical material must be interconnected and meet the requirements of highly qualified activities (Pastore, 2019). The reform of higher education contributes to the diversity of the educational process, which also affects academic mobility. One of the directions of such an approach can be a dual system of education, which should be connected with preparing the curriculum. Also, by understanding the specifics of the professional direction, including the cultural nature, Standardization of the educational process should consist in

understanding the educational load for students' most effective perception of information (Cheng, 2018).

Professional training of future specialists can be implemented as a result of orientation towards a dual education system. The task of the dual education system is to eliminate the shortcomings of the traditional education system. Bridging the gap between theory and practice should also be ensured. The educational process should be interconnected with the main professional processes. For this purpose, the development of professional and social opportunities, the interaction of the legislative framework must be ensured. At the same time, monitoring of the process of development of students' practical skills should be ensured, which corresponds to updated educational standards (Kalenskyi et al., 2023). Improvement of the education system can be achieved due to the use of innovativeness and orientation to market mechanisms. A high level of organization of the educational process should be ensured, which will be aimed at meeting the students' needs and will provide for their autonomy. This approach will allow developing the leadership qualities of future teachers, which will be reflected in the competence and acquisition of practical skills (Balasi et al., 2023).

Dual education is a clear correlate of high-quality professional training and adjustment of the professional career of education recipients (Findeisen et al., 2023). The use of a dual model of practical professional-pedagogical training of the future specialist makes it possible to achieve a high level of practical skills for education seekers, to attract the best experience, to establish a balance between the educational needs of young people, the requirements of the labour market and educational opportunities. (Turchyn et al., 2022).

Scientific studies emphasize the effectiveness of dual education. However, this efficiency is considered when training workers, specialists in the production sphere. The experience of using dual education in the context of training future teachers remains overlooked. This necessitates a thorough analysis of the effectiveness of dual education for training specialists in pedagogical specialties.

A review of the existing literature identified the advantages of the dual education system, which were considered either in a separate country or in general. Therefore, the limitations and gaps of these studies are related to the lack of comparison

of the experience of the dual education system between different countries.

## Methods

### *Research design*

The first stage of the research involved the determination of the most developed system of dual education in European countries. The most influential countries with a developed system of dual education were selected for the study, which were determined on the basis of academic materials (Miller et al., 2022; Fassbender, 2022; Barraza & Rodríguez, 2023; Fan, 2023; Jacobs & Perez, 2023). The authors selected efficiency for education and efficiency for employment among the countries selected for the study (Germany, Austria, Switzerland, Poland). At the first stage of the research, it was also determined which country's dual education system could be introduced in Ukraine. This contributed to the definition of specific elements of the dual system of European countries that can be used in Ukraine.

The second stage of the study included a comparison of the traditional and dual education systems. The results were obtained for four groups of students, which made it possible to determine the level of theoretical and practical skills. The groups were distributed as follows:

- students of Groups 1 (preschool education) and 2 (English language) studied according to the dual system;
- students of Groups 3 (preschool education) and 4 (English language) studied according to the traditional system.

The dual system provided a mixed type of education, combined with the acquisition of practical skills in preschool and school institutions. Theoretical knowledge was acquired by students directly during offline classes. During the dual education system, students studied theoretical materials for 2 days and spent 3 days in other educational institutions. Students of Group 1 provided preparation and organization of classes for preschool children. It was necessary to provide students with education and entertainment. Students of Group 2 had to develop a curriculum for learning English for fifth-graders. In accordance with the developed programme, classes were to be held in looking for approaches to students' assimilation of the necessary information, excluding the uniformity of presentation.

The traditional education system for students of Groups 3 and 4 provided for offline classes during the research period only. The training involved lectures and practical work with the completion of various assignments, the construction of situational models. During the traditional education system, practical classes in other educational institutions were excluded. It was intended to provide education for preschool children and fifth-graders to learn English.

The training took place during 3 months (March 2023 - May 2023), after which it was possible to determine the level of theoretical and practical skills.

The third stage of the study involved determining the schoolchildren's satisfaction with teaching by students of Groups 1 and 2. The schoolchildren who determined the level of satisfaction with the presentation of information by students were represented by preschoolers and fifth-graders who studied English. The education of preschoolers involved comprehensive development of personality. At the third stage of the research, the authors of the article identified strengths, weaknesses, as well as opportunities and threats of various education systems. A dual system and a traditional training system were selected for comparison by using a SWOT analysis (Li et al., 2022).

### *Sampling*

The conditions of the study were to include several groups of respondents to understand the advantages of the dual education system. The research involved a total of 256 students who were studying to become future preschool teachers and English language teachers. The sample was formed based on the restrictions on the year of study of students. It was intended to involve first-year students for the study. Since they have already familiarized themselves with the system of education in educational institutions, but do not have sufficient professional knowledge to ensure teaching activities. Students studied at Kyiv National University of Technology and Design (the Department of Philology and Translation), Berdyansk State Pedagogical University (the Department of Preschool Education). The students were randomly divided into 4 groups. The students were distributed using the Random Number Generator application separately among future preschool teachers and English teachers. Group 1 included 64 students who were studying to be future preschool teachers, but acquired skills with the help of a dual education system.



Students of Group 3 (64 people) obtained the same specialization, but were trained using the traditional system. Students of Group 2 were trained as future English teachers using a dual education system. The students of Group 4 obtained the appropriate specialization but were trained according to the traditional system. The study also involved 150 preschoolers and 170 fifth-graders who were learning English. All participants studied for 5 days a week according to the approved training system.

### Methodology

The study covered 256 students, 150 children of preschool age, 170 students in the fifth grade. Students are students of pedagogical specialties (preschool education, foreign language).

The authors first used a general theoretical comparison method to determine the advantages of dual education systems in European countries. The features of dual education in Germany, Austria, Switzerland, and Poland were studied for comparison. Understanding these features makes it possible to use the experience of European countries in the dual education system of Ukraine. The selection coefficient was calculated after establishing the features of the dual education system in five countries. The coefficient made it possible to assess the overall importance of the dual education system, as well as the possibilities of its use in the Ukrainian higher education system. The formula was proposed by the authors of the article.

$$f_c = \frac{p_t + x_p + h_{term}}{y_{max}} \times d \quad (1)$$

$y_{max}$  – overall effectiveness of the dual education system of a particular country;

$p_t$  – the efficiency of the dual education system for acquiring theoretical skills;

$x_p$  – the efficiency of the dual education system for the development of practical skills;

$h_{term}$  – an indicator of the possibility of achieving the required level of knowledge in the specified terms of study;

$d$  – a coefficient that indicates the possibility of employment after dual education (it can be equal to 0.01 to 0.2, where 0.2 is the maximum value).

Determining the level of theoretical and practical skills of students of four groups involved calculations of the effectiveness ratio. The coefficient was developed by the authors of the article to determine the level of acquired knowledge of the corresponding group.

$$k_r = \frac{\sum u_{t/p} + \sum d_{t/p}}{m(m-1)}, \quad (2)$$

$u_{t/p}$  – a score for acquired theoretical/practical knowledge;

$d_{t/p}$  – assessment for the possibility of using the obtained theoretical/practical knowledge to solve non-standard problems;

$m$  – the total number of participants in one group.

A high level was achieved if the calculated value ranged within 0.68 – 0.8; average level – 0.50 – 0.65; low level – below 0.49.

The level of schoolchildren's satisfaction in education was determined among preschoolers and fifth-graders. A questionnaire survey was conducted among them to determine the quality of classes held by students of Groups 1 and 2. The students of Groups 1 and 2 were selected for the study, who studied according to the dual education system and conducted practical classes. The survey was conducted in written form under the parents' supervision. The schoolchildren should have determined the level of satisfaction with learning as a result of the division into high, medium, and low levels. The use of e-mail enabled data collection, which eliminated errors in schoolchildren's responses. The survey took place for 4 hours and additionally included a brief description of the advantages and disadvantages of such training.

The SWOT analysis used to compare the dual and traditional education system provided for a well-founded determination of the strengths and weaknesses of different education systems. It was also intended to identify the threats and opportunities that could arise from providing such a training approach. SWOT analysis is a method that takes into account the opinion of one party, which is based on confirmed values, but excludes mathematical calculations. The SWOT analysis was focused on the established features of the experience of dual education in different European countries.

### Data analysis

Data analysis included the possibility of conducting additional statistical calculations aimed at eliminating possible errors. The correlation index was calculated in the work (Juan Rubio & García Conesa, 2018). The correlation index indicates the degree of correspondence of established factors that have equivalent initial conditions. Calculating the correlation index allows for greater correctness of the presented calculation data due to the

availability of stable indicators for calculation. The correlation index was calculated to confirm the obtained data on the importance of dual education in different countries and also to compare the effectiveness of the traditional and dual education system between different student groups. The correlation index was also used to compare schoolchildren's satisfaction with learning.

$$J_r = \sqrt{1 - \frac{(y_i - \hat{y}_1)^2}{(y_i - \bar{y}_1)^2}}, \quad (3)$$

$y_i$  – dynamic indicators for calculation;

$\hat{y}_1$  – the average value of indicators for comparison;

$\bar{y}_1$  – a theoretical estimate of the most significant indicators.

#### *Ethical criteria*

Ethical regulations were followed in accordance with the Guidelines for Research Ethics

(The Norwegian National Committee for Research Ethics in Science and Technology, 2016). Ethical regulations provided for equality of conditions for all research participants. The voluntary participation of respondents in the study was ensured. The authors confirm that they received written consent for the participation of students of Groups 1, 2, 3, 4. Permits to participate in the study of preschoolers and fifth-graders will also be obtained.

#### **Results**

The dual system in different European countries has its own features, which were introduced in it and contributed to the acquisition of professional knowledge. A comparison was made between Germany, Austria, Switzerland, and Poland to determine the country that promotes the most effective process of providing a dual education system. The results were obtained through the use of the selectivity factor (Table 1).

**Table 1.**

*Comparative analysis of the effectiveness of the dual system of European countries for education and for employment*

Country	Effectiveness for learning	Effectiveness for employment	Correlation index
Germany	14.2	14.1	0.080
Austria	13.9	14.0	0.083
Switzerland	13.1	14.5	0.948
Poland	13.3	13.6	0.074

The experience of Germany in the dual education system involves the interaction of theoretical information with practical classes as a result of the preliminary study of theoretical information. This is confirmed directly and in the place of delivering practical classes during the training of other students. This approach is aimed at ensuring a high level of responsibility of institutions for carrying out the practical part of assignments. Dual education is aimed at the inseparable interaction of educational and practical spheres.

The Austrian system of dual education provides for giving preference to practical training directly in the institution for 4 years. This involves establishing an agreement between the educational institution and another institution in which the student will acquire practical skills. After the end of the agreement, it is planned to ensure admission to an educational institution or search for a new job. Education according to the dual system includes more than 200 areas of training. In Austria, individual, double, group training can be provided under the dual system.

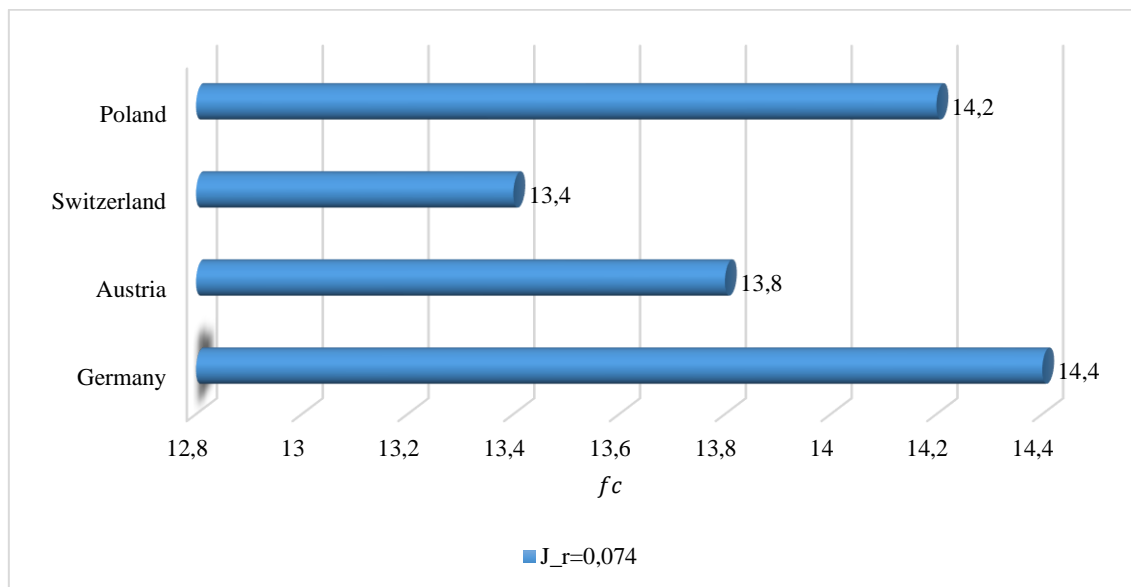
At the same time, 20% of training takes place directly in the educational institution and 80% is allocated to practical classes.

Switzerland adheres to three principles for the development of practical skills — knowledge, understanding, action. This is related to the combination of European aspects of the dual system and our own. During training, students are offered modern theoretical materials that correspond to the existing labour market. This approach enables providing serious professional training, which contributes to employment in different companies.

In Poland, practical training is provided, which was proposed by the employer based on the theoretical material that was studied in the education system. The Polish system of dual education provides for 3 years of study, which is aimed at the study of theoretical material and its further consolidation in the relevant organization. The most common system is the ratio of 3 days of practical classes with 2 days of training in educational institutions.

Further, the work provided for determining which country's experience is the most favourable for Ukrainian education. The results

were obtained through calculations of the selectivity factor (Figure 1).



**Figure 1.** The experience of dual education in European countries which is the most favourable for Ukrainian education.

The results of the study revealed that the experience of Germany is the most favourable dual system for adaptation in Ukraine. This is due to the maximum combination of theoretical and practical material, which ensures training directly during the training of other students. Training can take several forms. The first provides an opportunity for training with partner companies, which helps to take into account the need to create additional training and laboratory classes. training can also take place under a contract, which involves the provision of necessary services for conducting practical classes outside the main educational institution. Based on the experience of Germany, it is possible to develop regulatory provisions aimed at the implementation of a dual education system.

The authors believe that the experience of Poland may be the second most important, as the learning process primarily consists in the study of theoretical material, which is the basis for understanding the specifics of educational qualifications. The Polish system also provides alternating studies at a university (academy) and conducting practical classes in the relevant organization. The experience of Austria will ensure the search for the most favourable conditions for the development of practical skills. Such an approach to dual education will ensure understanding of the processes of lesson organization, presentation of educational materials to students, etc.

The experience of Switzerland has the least importance of the dual world, which is connected with its high requirements. It is not always possible to provide the opportunity to teach in the most rated secondary education institutions. However, the advantage of the Swiss system is to ensure the study of the most up-to-date theoretical material that meets the needs of the labour market.

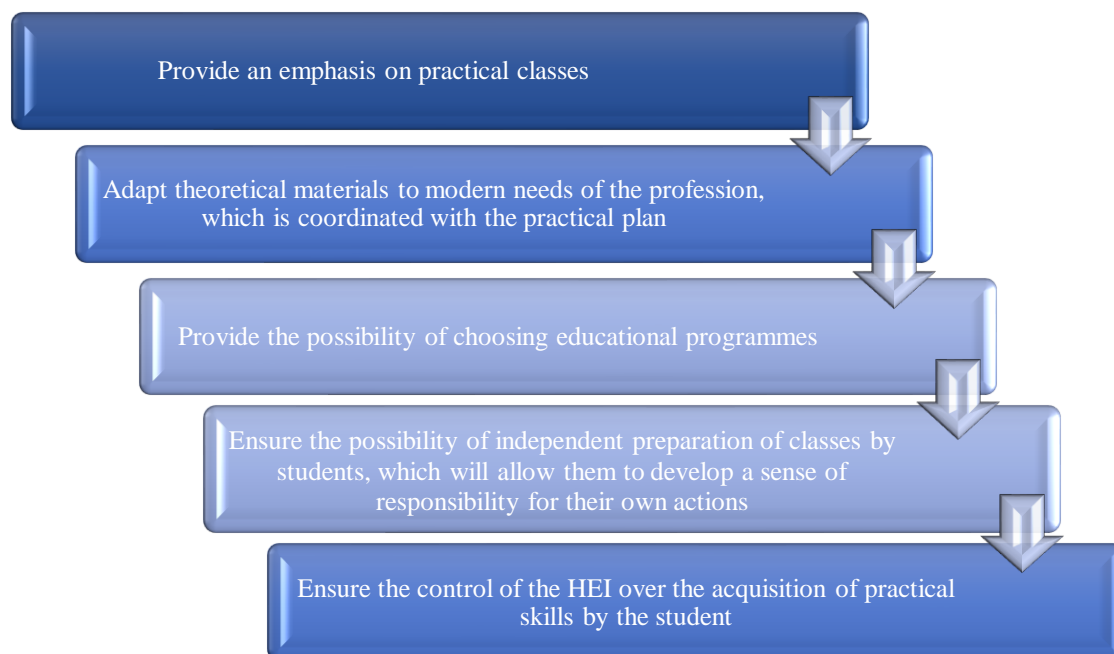
When focusing on the experience of European countries, the following elements can be included in the dual system of Ukraine (Figure 2).

Further, the dynamics of student learning will be determined using a comparison of the effectiveness of traditional and dual education. The results were obtained by calculating the effectiveness ratio (Table 2).

The results showed that students of Groups 1 and 2, who were taught using the dual system, gained a higher level of practical skills. This is related to the consolidation of theoretical material in practice. The results showed that Group 1 received a higher level of practical skills. This is related to the search for interesting approaches to delivering materials to students (using games, modern technologies). It was also related to the correctness of the material used and the approach to its presentation. The level of theoretical knowledge among the participants of Group 1 was lower than the acquired practical skills. This

is due to the understanding of the main educational processes, but the lack of a sufficient

number of offline classes aimed at understanding the theoretical material.



**Figure 2.** Elements of the dual system of European countries that can be used in Ukraine for future teachers.

**Table 2.**

*Effectiveness of acquired theoretical and practical knowledge by different groups of students*

Group number	Theoretical knowledge	Practical experience	Correlation index
Group 1	0.72	0.77	0.053
Group 2	0.74	0.73	0.067
Group 3	0.75	0.56	0.972
Group 4	0.71	0.61	0.085

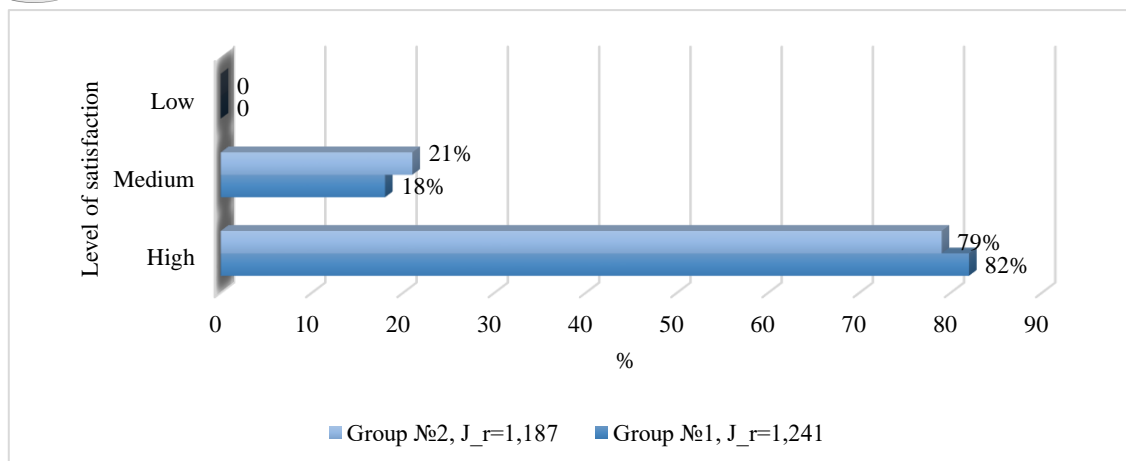
It was established that the participants of Group 2, who studied to become English teachers, achieved almost the same level of theoretical and practical knowledge. The same results were associated with the consolidation of theoretical laws, which are applied in the English language, in practice. Students were able to achieve high results, because they followed the developed student training programme and systemically consolidated new words, rules and exceptions in practice.

Students of Group 3, who studied according to the traditional system to become future preschool teachers were able to achieve a high level of theoretical knowledge. Practical skills were achieved at a lower level. This is due to a detailed approach to the study of all theoretical aspects, knowledge testing, conducting seminars.

However, practical classes were connected with theoretical classes, which precluded the possibility of students conducting classes directly in educational institutions.

Equivalence of practical and theoretical skills was achieved in Group 4, which is associated with memorizing a large amount of information. However, during memorization, students did not always use a meaningful approach, which was reflected in the variation of the received information.

The quality of acquired practical skills in education was determined among the students of Group 1 and Group 2. For this purpose, the level of schoolchildren's satisfaction with education was determined by students of two groups (Figure 3).

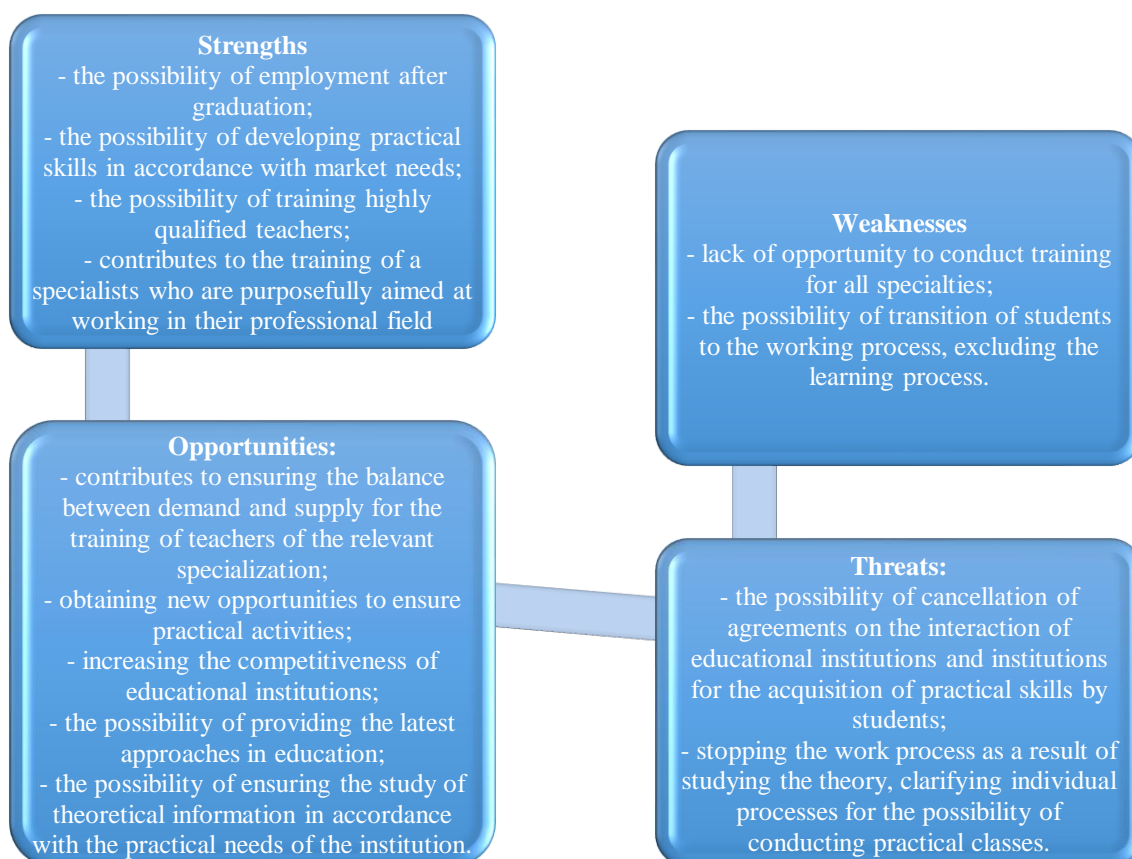


**Figure 3.** The level of schoolchildren's satisfaction with teaching by students of Groups 1 and 2

It was established that the highest level of schoolchildren's satisfaction is observed during teaching by students of Group 1. The teaching was game-based, which eliminated the difficulty in assimilating information. Students were able to provide a personal approach to the development of preschoolers during teaching. This ensured the development of spiritual values, to develop creative abilities. A slightly lower level of schoolchildren's satisfaction was observed during the teaching of English by

students of Group 2. The results are related to the difficulty of memorizing a large amount of information to master new words and language rules.

The final stage of the study provide for determining the advantages of the dual system and the traditional system of education. The comparison was made using SWOT analysis (Figures 4, 5).

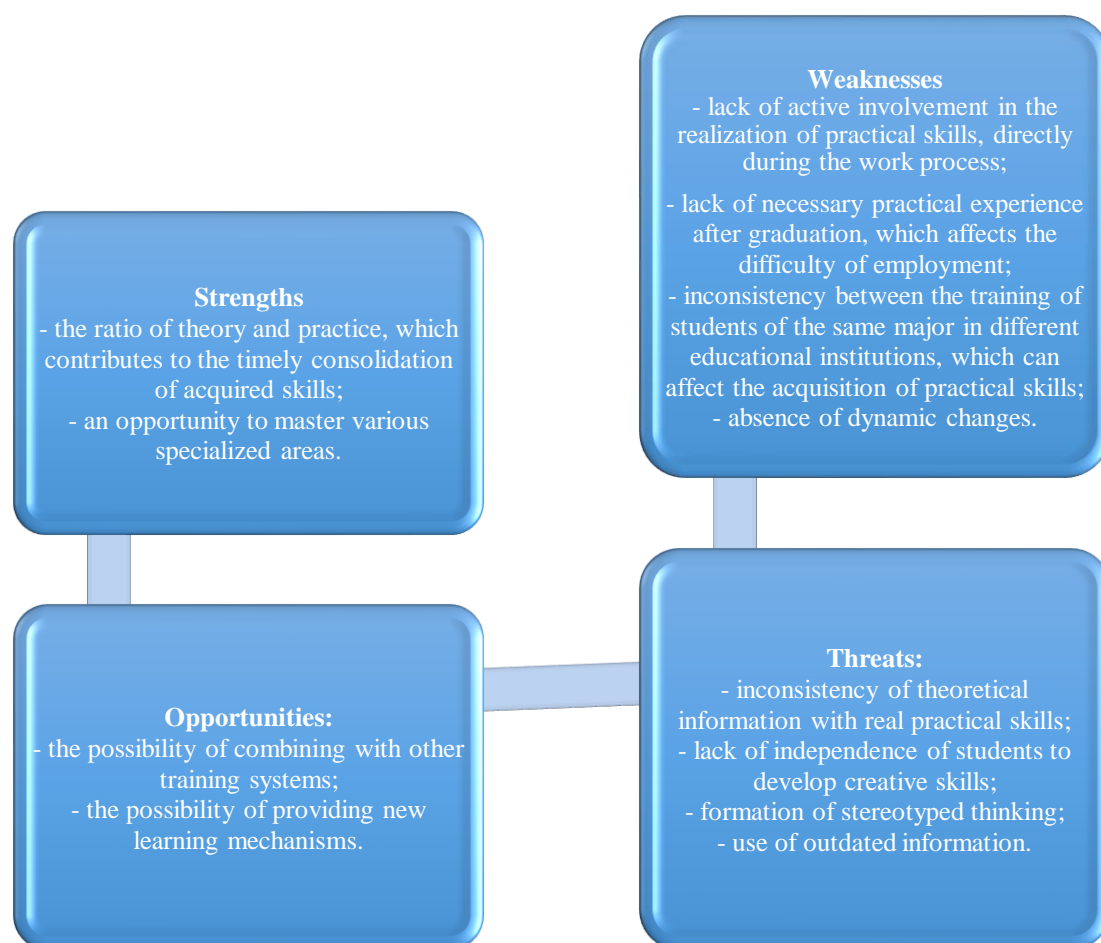


**Figure 4.** SWOT analysis of dual education systems



The SWOT analysis was followed by establishing that the dual system has more advantages and opportunities than the traditional system. The dual system helps to prepare a highly qualified specialist who is interested in

continuing to acquire professional skills after graduating from an educational institution. The dual system also allows training the necessary number of specialists for a particular institution.



**Figure 5.** SWOT analysis of traditional education systems

## Discussion

The dual education system should be based on theoretical, methodological, didactic principles. This will ensure the preparation of competitive specialists during the practical training of future preschool teachers. The experience of the EU countries reveals the opportunities for ensuring the innovation of education that meets social, pedagogical, and economic criteria. This approach affects the professional development of future teachers (Melnyk et al., 2019; Sheremet et al., 2021). Teaching in accordance with the dual system should include a reasonable examination of students' knowledge and providing feedback. During student training, the approach can be implemented by using special software. When writing works on the English language, the software will enable checking the correctness of the content and the sentences. This approach will

contribute to reducing the number of lexical errors and will facilitate the interaction of future teachers and computer technologies (Echitchi, 2019; Chacón-Beltrán, & Echitchi, 2022). The published works present the possibility of using innovative technologies for education. In this article, the emphasis is on determining the features of dual education in Germany, Austria, Switzerland, and Poland. The possibility of using their experience for training and employment is also determined.

Dual education makes it possible to meet the needs of students and ensure better success in higher education, as well as to develop practical skills according to the chosen specialization. Such an approach will also contribute to meeting market needs during graduate studies. The dual education system provides a mechanism of two-level attention. This is the result of the control of

teachers and managers allocated during the development of practical skills. At the same time, the organization of training should be thought out, pre-processed, which contributes to the improvement of professional activity. Dual education eliminates the gaps in the traditional education system and provides the relationship between theory and practice (Zhu, 2021). The reviewed studies omitted the aspects of the transformation of education using the dual system and teacher control. This study identified the level of effectiveness of dual education based on the practical and theoretical knowledge gained by students of different groups.

The dual education system promotes interaction between educational departments and professional institutions. Such a system of education provides real opportunities for professional activity and helps to identify problems to ensure students' learning, focusing on the acquired theoretical knowledge and the generation of creative skills. This affects the development of students' thinking and an in-depth approach to acquiring professional knowledge, which will be reflected in the avoidance of routine learning (Hu et al., 2020).

We determined the features of dual education in Germany, Austria, Switzerland, Poland, and considered the possibility of using their experience to train and employ Ukrainian students. The key research direction is the study of practical skills students acquire during dual education. We found that dual education improves the level of knowledge acquisition, acquisition of skills and abilities of future preschool education and foreign language teachers compared to traditional education.

The study's main limitation is that it covers students of only two specialties (preschool education, foreign language). In the future, it is expedient to study the influence of dual education on the quality of professional training of students of all pedagogical specialties.

## Conclusions

The aim of the work was achieved, as a parallel was drawn between determining the effectiveness of dual and traditional education among students of different groups. The advantages of dual education were also determined using a SWOT analysis.

The comparison of dual education in European countries established that the experience of Germany (14.2) and Austria (13.9) have the

greatest importance for ensuring the educational process. In Germany, there is a strong interrelation between theoretical and practical knowledge, while in Austria there is an emphasis on practical skills, which provides 80% of training. For employment, the experience of the dual system of Switzerland has the greatest effectiveness (14.5), which ensures employment in the most developed companies. The study established that the experience of Germany (14.4) and Poland (14.2) is the most favourable for Ukraine to spread dual education. This is due to the correct distribution of theoretical and practical classes.

The authors found that the dual education system has higher opportunities for acquiring practical skills. These data were established as a result of comparing the acquired knowledge of students who studied according to the dual system of education and the traditional one. Therefore, the practical skills of students of Groups 1 (future preschool teachers) and 2 (future English teachers) were related to the direct conduct of classes in educational institutions. Theoretical knowledge was mastered the most by students of Group 3, who studied according to the traditional system to become future preschool teachers. It became possible to achieve this as a result of attending theoretical seminars.

It was established that schoolchildren for whom future teachers conducted classes were the most satisfied with students of Group 1. This is explained by the provision of a game-based approach to the education of preschool children. Conducting a SWOT analysis determined the possibilities of dual education, which consisted in increasing the competitiveness of educational institutions and future teachers during the job search.

The practical significance of the work is the possibility of determining the advantages of dual education in different European countries, which can be implemented in Ukrainian education as well. Prospects for research may be related to determining the effectiveness of the dual system of Europe and America.

## Bibliographic references

Balasi, A., Iordanidis, G., & Tsakiridou, E. (2023). Entrepreneurial leadership behaviour of primary school principals across Europe: a comparative study. *International Journal of Educational Management*, 37(5), 1067-1087.

- Barraza, P., & Rodríguez, E. (2023). Executive Functions and Theory of Mind in Teachers and Non-Teachers. *Heliyon*, 9(9), e19915.
- Brankovic, J., & Cantwell, B. (2022). Making sense of change in higher education research: exploring the intersection of science and policy. *Higher Education*, 84(6), 1207-1226.
- Bugallo-Rodríguez, A., & Vega-Marcote, P. (2020). Circular economy, sustainability and teacher training in a higher education institution. *International Journal of Sustainability in Higher Education*, 21(7), 1351-1366.
- Chacón-Beltrán, R., & Echitchi, R. (2022). Improving lexical errors in EFL writing by using software-mediated corrective feedback: The efficiency of software-mediated corrective feedback. *Porta Linguarum Revista Interuniversitaria de Didáctica de las Lenguas Extranjeras*, 37, 275-290.
- Cheng, M. W. (2018). The Southeast Asian higher education space: Transnational, international or national in new ways? *European Educational Research Journal*, 17(6), 793-808.
- Echitchi, R. (2019). Official bilingualism and indigenous language loss: The case of Cameroon. *Elia*, 19, 65-88.
- Fan, J. (2023). Challenges and responses to sustaining action research: A systematic review. *Progress in Education*, 76, 1-27.
- Fassbender, U. (2022). Collective Skill Formation Regimes in Times of Covid-19: A Governance-Focused Analysis of the German Dual Training System. *International Journal for Research in Vocational Education and Training*, 9(2), 167-194.
- Findeisen, S., Ramseier, L., & Neuenschwander, M. P. (2023). Changing occupations or changing companies—Predictors of different types of premature contract terminations in dual vocational education and training programs. *Vocations and Learning*, 2023, 1-33. <https://doi.org/10.1007/s12186-023-09338-7>
- Hu, H., Du, S., Liang, J., & Kang, Z. (2022). Towards a Prediction Model of Learning Performance: Informed by Learning Behavior Big Data Analytics. *Frontiers of Education in China*, 17(1), 121-156.
- Hu, H., Li, Y., Yang, Y., Su, Y., & Du, S. (2020). The relationship between STEAM instruction, design thinking and deeper learning. *International Journal of Engineering Education*, 36(5), 1448-1460. [https://www.medsci.cn/sci/show\\_paper.asp?id=788c712319622c32](https://www.medsci.cn/sci/show_paper.asp?id=788c712319622c32)
- Jacobs, J., & Perez, J. I. (2023). A qualitative metasynthesis of teacher educator self-studies on social justice: Articulating a social justice pedagogy. *Teaching and Teacher Education*, 123, 103994.
- Juan Rubio, A. D., & García Conesa, I. M. (2018). The new school for social research as a patron of European scholars. *Review of International American Studies*, 11(2), 95-111.
- Juhász, T., Andrasi, G., Gal, L., & Cseko, K. (2022). Competitiveness Experiences of Dual Training in a University of Higher Education in Economics. *European Journal of Contemporary Education*, 11(3), 778-790. <https://doi.org/10.13187/ejced.2022.3.778>
- Kalenskyi, A., Gerliand, T., Kravets, S., Homeniuk, D., & Nagayev, V. (2023). Dual Educational System of Professional Training of Future Skilled Workers. In *Design, Simulation, Manufacturing: The Innovation Exchange* (pp. 369-378). Cham: Springer Nature Switzerland.
- Konotop, O., Bykonja, O., Bondar, O., Shevchenko, Y., & Kasianchuk, N. (2021). Practice of using GoToMeeting/Zoom in the study of foreign languages. *Journal for Educators, Teachers and Trainers*, 12(3), 176-186. <https://doi.org/10.47750/jett.2021.12.03.017>
- Li, N., Jiang, P., Li, C., & Wang, W. (2022). College Teaching Innovation from the Perspective of Sustainable Development: The Construction and Twelve-Year Practice of the 2P3E4R System. *Sustainability (Switzerland)*, 14(12), 7130.
- Melnik, N., Bidiuk, N., Kalenskyi, A., Golub, N., ... & Maksymchuk, I. (2019). Models and organisational characteristics of preschool teachers' professional training in some EU countries and Ukraine. *Zbornik Instituta za Pedagoska Istrazivanja*, 51(1), 46-93.
- Miller, N. C., Kumar, S., Pearce, K. L., & Baldock, K. L. (2022). Primary School Educators' Perspectives and Experiences of Nature-Based Play and Learning and Its Benefits, Barriers, and Enablers: A Qualitative Descriptive Study. *International Journal of Environmental Research and Public Health*, 19(6), 3179.
- Pastore, F. (2019). Why so slow? The school-to-work transition in Italy. *Studies in Higher Education*, 44(8), 1358-1371.
- Pastore, F., Quintano, C., & Rocca, A. (2022). The duration of the school-to-work transition in Italy and in other European countries: a flexible baseline hazard interpretation. *International Journal of Manpower*, 43(7), 1579-1600.

- Plokhikh, V., Popovych, I., Zavatska, N., Losiyevska, O., Zinchenko, S., Nosov, P., & Aleksieieva, M. (2021). Time Synthesis in Organization of Sensorimotor Action. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience*, 12(4), 164-188.  
<https://doi.org/10.18662/brain/12.4/243>
- Rott, K.J., Lao, L., Petridou, E., & Schmidt-Hertha, B. (2022). Needs and requirements for an additional AI qualification during dual vocational training: Results from studies of apprentices and teachers. *Computers and Education: Artificial Intelligence*, 3, 100102.
- Rubio, A. D. J., & Conesa, I. M. G. (2023). Benefits of the Application of Task-Based Learning Within the Bilingual Field in Primary Education. In *Handbook of Research on Training Teachers for Bilingual Education in Primary Schools* (pp. 292-320). IGI Global.
- Rustico, L., David, R., & Ranieri, A. (2020). 'Apprenticeship' in the Italian approach to the dual system. *Transfer*, 26(1), 91-103.
- Salas-Velasco, M. (2022). Vocational Education and Training Systems in Europe. In: A Ratté (Ed.), *Education Systems: Past, Current and Future Trends* (pp. 103-121). Nova Science Publishers. <https://acortar.link/IE7BU2>
- Sheremet, O. S., Voluiko, O. M., Posmitna, V. V., Poda, T., & Bidzilya, Y. M. (2021). Sociocultural dominants of developing students' value intentions: Context of civilization challenges. *Amazonia Investiga*, 10(45), 31-41.  
<https://doi.org/10.34069/AI/2021.45.09.3>
- The Norwegian National Committee for Research Ethics in Science and Technology (2016). Guidelines for Research Ethics in Science and Technology.  
<https://acortar.link/63VU62>
- Turchyn, A., Kashuba, O., Kravchuk, T., Navolska, H., & Derkach, H. (2022). The Dual Model of Practical Professional and Pedagogical Training of Future Teachers for Vocational Schools in Germany. *Journal of Education Culture and Society*, 13(2), 713-728.  
<https://bibliotekanauki.pl/articles/18105171.pdf>
- Varela-Losada, M., Pérez-Rodríguez, U., Lorenzo-Rial, M.A., & Vega-Marcote, P. (2022). In Search of Transformative Learning for Sustainable Development: Bibliometric Analysis of Recent Scientific Production. *Frontiers in Education*, 7, 786560.
- Wibowo, R. A., Myau-Lyau, N., Christy, N. N., & Albert, N. (2022). The Challenges for Indonesia to Integrate Dual Vocational Education and Training System. *Journal of Technical Education and Training*, 14(2), 79-90.
- Zhu, Q. (2021). Network Course Recommendation System Based on Double-Layer Attention Mechanism. *Scientific Programming*, 2021, 7613511.

DOI: <https://doi.org/10.34069/AI/2023.71.11.25>

How to Cite:

Levitskaia, A. (2023). The impact of digital technologies on the effectiveness of english language learning by medical students. *Amazonia Investiga*, 12(71), 284-292. <https://doi.org/10.34069/AI/2023.71.11.25>

## The impact of digital technologies on the effectiveness of english language learning by medical students

### Вплив Цифрових Технологій на Ефективність Вивчення Англійської Мови Студентами-Медиками

Received: October 18, 2023

Accepted: November 28, 2023

Written by:

Anna Levitskaia<sup>1</sup> <https://orcid.org/0000-0002-5563-3353>

#### Abstract

Globalization and increasing demands on specialists determined the need to learn a foreign language in the modern world. Consequently, higher education institutions need to improve the educational programme for the preparation of future specialists for professional activities. The aim of this research was to determine the effectiveness of the use of modern digital technologies during the study of a foreign language by medical students. The research employed the methods of expert evaluation, pre- and post-testing (CEFR), a survey with the inclusion of a technology perception model. Cronbach's alpha was used to check the reliability of the used questionnaires. Cohen's kappa coefficient and Pearson's chi-squared test were used for statistical processing of the results. The study found that students of the experimental group who studied using different digital technologies showed significantly more success in improving foreign language skills after the final test than students of the control group. The novelty of this study is that the study of English by medical students was carried out using digital technologies that were chosen according to the age, profession and foreign language proficiency level of the experimental sample of students. Prospects for further research may be to determine the effectiveness of artificial intelligence during foreign language learning by medical students.

**Keywords:** foreign language training, independent learning, language learning, medical HEI, technologies.

#### Анотація

Необхідність у вивченні іноземної мови у сучасному світі продиктовано глобалізацією та збільшенням вимог до спеціалістів. Через це, заклади вищої освіти потребують вдосконалення освітньої програми під час підготовки майбутніх фахівців до професійної діяльності. Метою поведеного дослідження стало визначення ефективності використання сучасних цифрових технологій під час вивчення іноземної мови студентами медиками. Методами дослідження стали: експертна оцінка, пре- та пост- тестування (CEFR), опитування з включенням моделі сприйняття технологій. Для перевірки надійності використаних анкет було використано альфа Кронбаха. Для статистичної обробки результатів застосовано коефіцієнт Коена та критерій Пірсона. В ході дослідження було виявлено що студенти експериментальної групи які походили навчання з використанням різних цифрових після проведення кінцевого тестування показали значні успіхи у покращенні володіння іноземною мовою ніж студенти контрольної групи. Новизна цього дослідження полягає в тому, що вивчення англійської мови студентами-медиками здійснювалось за допомогою використання цифрових технологій, які були обрані відповідно до віку, фаху та рівня володіння іноземною мовою вибірки студентів експериментальної вибірки. Перспективами майбутніх досліджень може стати визначення ефективності штучного інтелекту під час вивчення іноземної мови студентами медичного напряму підготовки.

**Ключові слова:** вивчення мови, іншомовна підготовка, медичні ЗВО, самостійне навчання, технології.

<sup>1</sup> Candidate of Pedagogical Sciences, Senior Lecturer, Department of Philosophy, Bioethics and Foreign Languages, Odessa National Medical University, Odessa, Ukraine.



## Introduction

Globalization has created an opportunity for specialists from any field to work around the world, and companies have adopted innovative technologies to facilitate work. In this context, Higher Education Institutions (HEIs) must qualitatively prepare specialists to their future work in the company. The need arises for a new educational system, Education 4.0, to improve the training of students (Dhivya et al., 2023). This modern approach to teaching and learning English becomes crucial, especially when faced with common complications and difficulties, as noted by Srivani, Hariharasudan, Nawaz, and Ratajczak (2022), due to the use of traditional educational methods that affect students' learning motivation and effectiveness. In this context, Various studies, such as that of Desta, Workie, Yemer, Denku and Berhanu (2021), have shown that the implementation of digital technologies in the education of medical students has a positive impact on their English proficiency. The present study aimed to analyze the level of English language proficiency of medical students, identify the best digital technologies and implement them, determine and analyze the results obtained after the introduction of these technologies, and conduct a survey to know the attitude of students toward these innovations.

The aim involved the fulfilment of the following research objectives:

1. Analyse the level of English language proficiency of medical students before starting the research;
2. Identify the best digital technologies and implement them in the educational process;
3. Determine and analyse the obtained results of the foreign language proficiency level of medical students after the introduction of digital technologies;
4. Conduct a survey of students to determine their personal attitude to the proposed digital technologies.

## Literature Review

The global pandemic caused a rapid transformation of education, which became the impetus for a dynamic transition to online learning using digital technologies, namely: online platforms, web conferences, electronic diaries, etc. (Cachia et al., 2021; Pratiwi & Waluyo, 2023). This made it possible to continue the educational process with minimal impact on the quality and convenience of teaching for both teachers and students of educational institutions

(Mustapha et al., 2021; Zalite & Zvirbule, 2020). Researchers were quite interested in the impact and effectiveness of digital learning, an overview of which is given below.

Yan and Li (2023) focused on analysing the impact of digital technologies on the cognitive abilities of secondary school students. For the experimental part, the researchers surveyed 20,000 students to determine their logical thinking and problem-solving skills after using technologies such as the Internet and Personal websites were chosen. However, the researchers noted that the study needs further observations of the impact of digital technologies during education, as digital educational technologies are included as a tool for other educational methods.

Jeong (2022) decided to investigate the impact of using digital technologies — mobile applications — to help students improve efficiency and support independent foreign language learning while developing digital literacy and technological competence. To conduct the study, the researcher conducted a pre-test and a post-test using the shortened version of the TOEIC and a questionnaire. However, the study had a limitation due to the analysis of only mobile applications on the involvement of students in learning a foreign language.

Liu, Hua and Zhang (2022) and Hoppin et al., (2023) tested the effectiveness of virtual language learning instructions. Salem (2022) studied the impact of online digital storytelling on the development of students' argumentative writing skills and its impact on improving independent learning skills and overall independence of students in learning a foreign language. Dağdeler and Demiröz (2022) also tested the teachers' attitudes towards using digital technologies during foreign language learning. Therefore, it can be concluded that traditional education, especially related to the study of foreign languages, is gradually moving into the online environment with the involvement of various digital tools. Also, the conducted review part of the study gives reasons to claim that there is a limited number of studies on the use of digital technologies during foreign language learning by students of narrow fields of study, namely future doctors. This fact makes it possible to study in more detail and conduct a corresponding study.

## Methodology

### Design

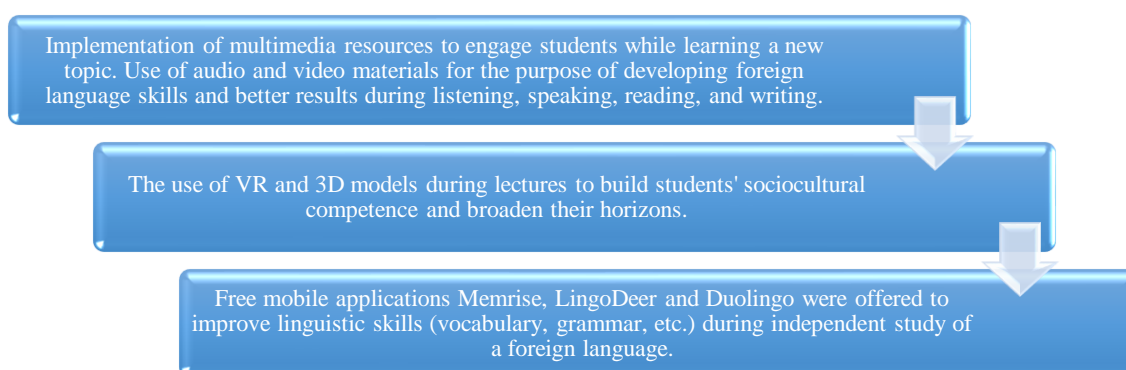
The experimental part of the study was conducted during the 2022/2023 academic year and included the following stages.

**Summative stage.** This stage involved an assessment of the level of English language proficiency of medical students. After that, the students were divided into homogeneous groups for conducting the experiment. This stage also included the selection of digital technologies according to the students' age and their language proficiency level. Digital technologies were chosen by analysing the following variables: the possibility of free use (or the availability of a demo version), appropriateness to the students' age, the possibility of changing or adding

educational material. The digital technologies were selected by analysing international rankings and academic articles. Duration (November-December 2022).

**Research stage.** Conducting the experimental part of the research. Implementation of an additional programme for classroom and independent study of a foreign language by medical students using digital technologies (Figure 1). Conducting final testing and interviews with students and teachers to determine the effectiveness and personal relationship to the implemented digital technologies. Duration (January-June 2023)

**Analytical stage.** Statistical processing of the obtained results. Summing up. Duration (June-July 2023).



**Figure 1.** The scheme of implementation of digital technologies in the educational environment of medical students during foreign language learning.

### Participants

A thorough study was conducted in this research to collect, evaluate, and summarize empirical evidence related to the research items. The study involved 198 medical students of the 2<sup>nd</sup>-3<sup>rd</sup> year of undergraduate studies. Three of them were absent during the testing, so they were excluded from the sample. The gender distribution was (m = 23%, f = 77%). The average age of the students was 21.4 years. Six teachers were also involved in the experiment for expert evaluation. The students were divided into homogeneous groups by random selection for conducting the experiment. The experimental group (EG) consisted of 97 students who studied a foreign language using digital technologies. The control group (CG) consisted of 98 participants and studied using a traditional programme. The experimental part of the study was conducted at Odessa Medical University.

### Data collection

The research was conducted using a mixed method and followed a sequential explanatory design (Creswell & Plano Clark, 2011). In the conducted experiment, the quantitative results indicate the use of digital technologies for various educational tasks during foreign language learning. The qualitative results provide descriptive data on participant motivation related to competence, autonomy, and relationship. The students were also interviewed about problems during learning a foreign language with the help of digital technologies. Quantitative data were collected using a questionnaire before and after the experiment. The proposed questionnaire included 10 questions that were divided into sections: a motivational block for learning a foreign language and a second block for determining language skills. After the experiment, the technology acceptance model (TAM) was incorporated into the survey (Davis et al., 2023).

A total of 25 elements divided into dimensions were selected in this model (Figure 2). It was decided to apply TAM to determine students'

personal attitude to the use of digital technologies during education.



**Figure 2.** Organization of elements included in the perception model.

#### Instruments

Qualitative analysis included the methods of observation, testing and expert evaluation for the diagnostics of foreign language competence criteria. The evaluation was made according to the scale:

- 0 (point) – not developed;
- 1 (point) – minimum level of development;
- 2 (point) – developed, but there are certain gaps;
- 3 (point) – sufficient level of development.

The initial and final testing to determine the impact of digital technologies during English language learning was conducted according to the Common European Framework of Reference (CEFR) methodology (Council of Europe, 2023) using the EF Standard English Test (EF SE) service (EF SET, 2023). The results obtained at the end of the test were distributed and compared to the foreign language proficiency level corresponding to other gradations (Table 1).

**Table 1.**

Grading of English language proficiency levels in accordance with the international assessment methodology

CEFR	EF SET	IELTS	Cambridge English Scale	TOEFL iBT	TOEIC (R&L) Total Score	Global Scale of English
< A1	1 - 10	n/a	80 – 99	n/a	n/a	n/a
A1 Beginner	11 - 30	n/a	100 – 119	n/a	120 - 220	22 - 29
A2 Elementary	31 - 40	n/a	120 – 139	n/a	225 - 545	30 - 42
B1 Intermediate	41 - 50	4.0 - 5.0	140 – 159	42 - 71	550 - 780	43 - 58
B2 Upper Intermediate	51 - 60	5.5 - 6.0	160 – 179	72 - 94	785 - 940	59 - 75
C1 Advanced	61 - 70	6.5 - 7.5	180 – 199	95 - 120	945 - 990	76 - 84
C2 Proficient	71 - 100	8.0 - 9.0	200 – 230	n/a	n/a	85 - 90

So, an appropriate methodological framework was formed for carrying out this study with the aim of refuting or confirming the hypothesis that supplementing traditional classes on learning a foreign language by the use of digital technologies will be effective in obtaining the appropriate qualification levels in the knowledge of the English language.

The obtained data were statistically processed using IBM SPSS Statistics 22, Cohen's kappa coefficient and Pearson's chi-squared test were used for statistical analysis of the obtained results.

The reliability of the questionnaire was checked by using Cronbach's alpha. The obtained data of the questionnaire survey results showed a reliability coefficient of 0.76, which exceeds the threshold value of 0.70 for acceptable reliability of the questions.

#### Ethical criteria

Participation of students and teachers was voluntary. The research was based on the principles of impartiality and objectivity in the course of the research. Before the experiment, each participant signed an informed consent for the processing of the obtained results. Personal information of respondents is confidential and not subject to disclosure.

#### Results

Before and after the experiment, medical students were tested to determine the level of motivation and personal assessment of the foreign language proficiency level. Table 2 provides a comparison of the obtained results.

**Table 2.**  
Distribution of responses of EG and CG respondents before and after the experiment (%)

Blocks	Questions	CG	EG	CG	EG
		before	before	after	after
Motivational	Every educated person should know at least one foreign language	65	65	68	79
	Knowledge of a foreign language is required for further employment	52	50	60	67
	A foreign language is a means of satisfying one's own extracurricular interests	33	29	40	49
	The study of a foreign language is required as a compulsory subject only, in which they want to have a good grade or credit	78	78	75	52
	Do you study English outside the university?	32	34	31	57
	In your opinion, does your level of a foreign language proficiency meet the necessary requirements for studying abroad?	13	12	20	19
	Is the knowledge of the English language that you receive at the higher education institution sufficient for your future professional activity?	53	57	60	62
	Do you use foreign language resources to find the necessary specialized information?	15	15	13	42
	Do you use professional information obtained from foreign sources when preparing for lectures?	5	4	9	49
	Does your knowledge of a foreign language help you deepen your knowledge of your major?	2	5	10	76
Possession of foreign language skills					

Source: Developed by the authors

The obtained results of the questionnaire survey before and after the experiment provide quite clear information about the impact of digital technologies during learning a foreign language. A wide scatter of students' answers is observed in questions about the use of a foreign language to deepen professional knowledge ( $R=63\%$ ), as well as the use of foreign sources to prepare for classes ( $R=41\%$ ). In general, the answers of the EG students are 18.5% on average higher than the answers of the CG students who studied using traditional educational methods. However, it is worth noting that there are answers that did not have a sufficient difference between EG and CG. The introduction of digital technologies did not have a significant impact on the assessment of

students' foreign language preparation for professional activities. The results obtained among the CG and the EG students increased uniformly ( $R_{EG}=5\%$ ;  $R_{CG}=7\%$ ). The students also had the same tendency to increase the percentage of positive answers regarding the need for a high level of a foreign language proficiency for studying abroad ( $R_{EG}=7\%$ ;  $R_{CG}=7\%$ ).

After completing the questionnaire survey, the CG and EG students took pre- and post-testing in accordance with the international methodology for assessing the foreign language proficiency level. Table 3 provides the obtained results.

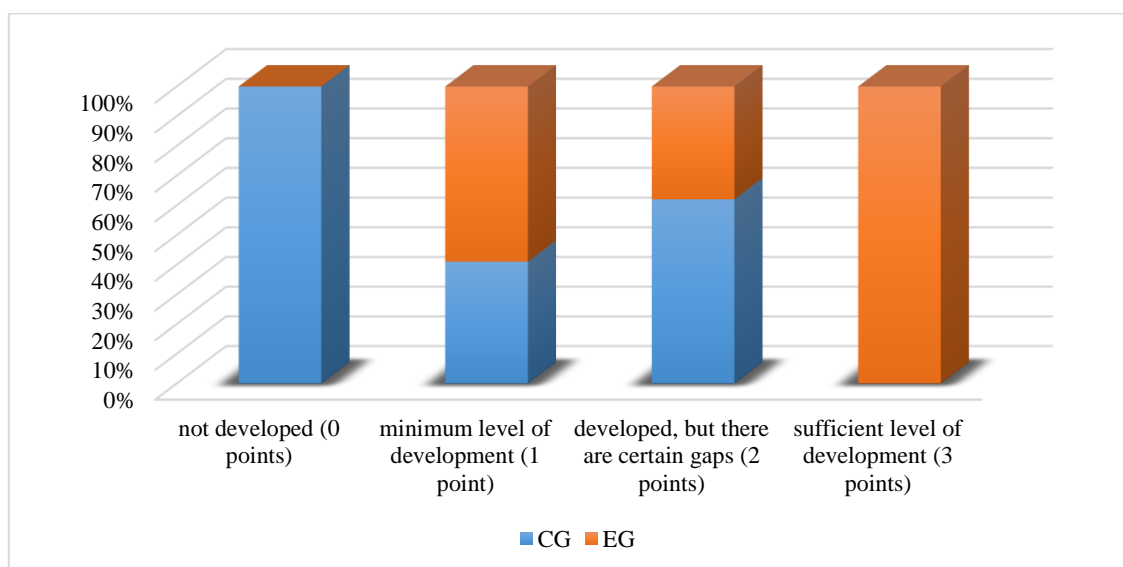
**Table 3.**  
Test results according to the Common European Framework of Reference for Languages (Council of Europe,) before and after the experiment

	Before			After		
	Arithmetic mean	median	Mean square deviation	Arithmetic mean	median	Mean square deviation
Calculated values	$\mu$	Me	$\Sigma$	$\mu$	Me	$\sigma$
Control group (CG)	40.83	40	9.28	41.73	40	9.57
Experimental group (EG)	43.09	43	8.04	49.16	49	5.70

Source: Developed by the authors

As Table 3 shows, the test results of the CG students remained almost unchanged ( $R=0.9$ ). According to the international evaluation methodology, the majority of CG students, after completing the 2<sup>nd</sup> semester, were able to pass to the B1 level, which corresponds to the curriculum. However, this indicates that the students were not motivated to study an additional foreign language in order to obtain better results, which is not the case for EG. The

difference before and after the introduction of digital technologies is quite noticeable ( $R=6.07$ ) and almost corresponds to Level B2. This gives grounds to conclude that students were additionally engaged in studying a foreign language in extracurricular hours. After passing the test, the expert group assessed the level of students' foreign language competence after the experiment (Figure 3).

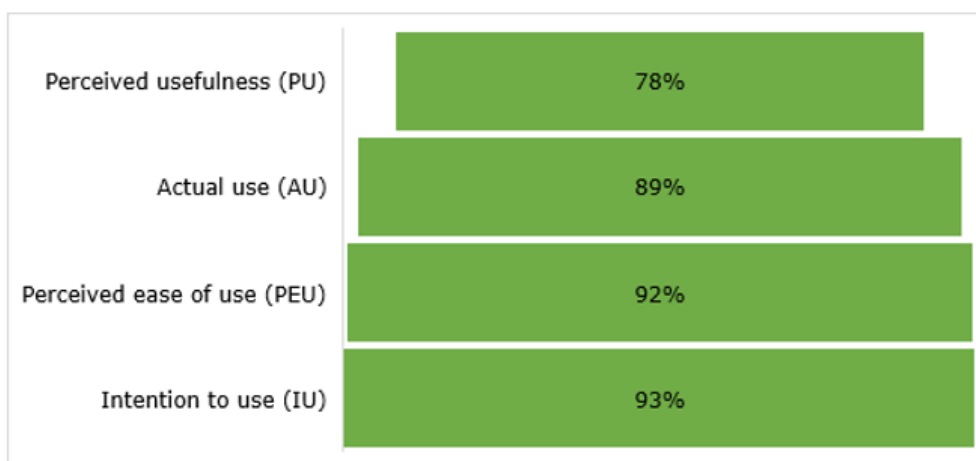


**Figure 3.** Distribution of expert assessment for the control and experimental groups regarding the formation of foreign language competence after the experiment.

Source: Developed by the authors

The obtained results in Figure 3 indicate that the EG students have sufficiently developed foreign language competences compared to EG. All EG students have basic foreign language skills, which is evidenced by the absence of 0 points. In our opinion, the students understood the presented information better thanks to the

interactivity and interest of the implemented digital technologies, due to which the final results became higher than the CG results. The TAM model was applied in order to determine the students' personal perception of the implemented technologies. The results are shown in Figure 4.



**Figure 4.** Assessment of students' perception of implemented digital technologies according to the TAM model after the experiment.

Source: Developed by the authors



The obtained results confirm the previous conclusions that the use of digital technologies during the educational process is perceived by students better than the usual traditional methods. This is the reason why the final results of checking foreign language proficiency level are higher than those of CG students. Figure 4 shows that students plan to continue using digital technologies for independent learning. It is also important that it was easy for students to switch to learning a foreign language with the help of digital technologies.

The statistical analysis using the Pearson's chi-squared test determined that the values of EG obtained during the study are greater than those of CG. Therefore, it can be stated that there is a certain connection between the organization of the programme of classes with the use of digital technologies. When calculating Cohen's kappa coefficient, a value from 0.8 to 1.17 was obtained. This indicates a high effect of the use of the proposed digital technologies. In the CG trained using traditional methods, the Cohen's kappa coefficient was 0.5, indicating a medium effect.

## Discussion

The obtained results indicate that the use of digital technologies is an effective tool both for conducting educational classes and for independent learning of a foreign language. Upon completion of the experimental course, the EG students almost reached the B2 (Upper Intermediate) level in learning a foreign language. The CG students could not show such bright results. In our opinion, this is explained by the fact that the experimental group was involved in independent, additional learning of a foreign language with the help of mobile applications. The obtained results confirm the results of researchers regarding the effectiveness of mobile applications in independent foreign language learning (Rintaningrum, 2023; Konotop et al., 2021; Maszkowska, 2017). Putra et al., (2020) determined that students who had used Hello English for more than three months felt the effect of this application on their communicative competence better than those who had used it for less than three months. Moreover, experienced users also show a higher intention to use Hello English to learn English in the future. The conducted research also confirmed that EG students plan to use digital technologies to learn a foreign language even after the experiment.

It was determined that digital literacy is required for working with new technologies, which is an

important condition for further professional growth (Spurava & Kotilainen, 2023; Spante et al., 2018). A study conducted among medical students using digital technologies during their studies proved that the digital literacy of the EG students significantly improved with the help of additional digital tools. However, Waemusa and Jongwattanapaiboon (2023) showed a difference in mobile phone use between young students' daily life and schooling. It was confirmed that using mobile phones to develop digital literacy in school did not have a positive impact during learning. We believe that the difference in the obtained results can be caused by a different age sample. In our study involved students of the medical HEI. They were also motivated for learning a foreign language to improve professional competencies (Semaan & Yamazaki, 2015; Kryshko et al., 2020).

The conducted research confirms that students must take responsibility for their motivation to continue learning and improving English (Rashid & Howard, 2023). They should take an active part in group classes, conversation clubs and English language assignments. Communicating in English with the teacher and classmates can improve foreign language competence and enhance motivation and self-confidence (Li, 2017). Considering that students were born in the era of digitalization, they should be able to find and use available online opportunities for the development of professional competencies. For example, multimodal online interaction with different people in English (acquaintances, friends, native speakers) can be used.

## Research limitations

The study's main limitations are a convenient sample of students who studied in the 2<sup>nd</sup>-3<sup>rd</sup> year of one HEI. This fact may limit the results obtained and the conclusions drawn. The limited number of used digital technologies does not enable students to state the effectiveness of all digital technologies during foreign language learning. However, it is worth noting that the conducted research was able to provide empirical evidence of the effectiveness of certain digital technologies when learning a foreign language in medical HEIs. The obtained results can be used during the curriculum development for foreign language subjects.

## Recommendations

A random sample shall be chosen for further research, as well as other digital technologies to confirm the obtained results.

## Conclusions

The relevance of the conducted research as well as the obtained results is confirmed by the fact that knowledge of a foreign language and its further improvement is an important skill both in professional life and for personal needs. The results confirmed the advanced hypothesis that the use of digital technologies when learning a foreign language is more interesting, motivating, and effective in learning than traditional methods. The study found that the EG students trained using various digital technologies (mobile applications, 3D visualization, multi-projectors, etc.) after the final test showed significantly progress in improving their foreign language skills than the CG students. It is also worth noting that EG students were more motivated to use digital technologies after the experiment. Most EG students were motivated by the fact that they need a foreign language for professional development and the possibility of using foreign sources to find and use professional information. The novelty of this research is that the study of English by medical students was carried out using digital technologies chosen according to the experimental sample of students' age, profession and foreign language proficiency level. Future research may include determining the effectiveness of artificial intelligence during foreign language learning by medical students.

## Bibliographic references

- Cachia, R., Velicu, A., Chaudron, S., Di Gioia, R., & Vuorikari, R. (2021). *Emergency remote schooling during COVID-19*, EUR 30866 EN. Publications Office of the European Union. <https://doi.org/10.2760/613798>
- Council of Europe. (2023). *Common European Framework of Reference for Languages (CEFR)*. Retrieved from <https://acortar.link/RXP3y3>
- Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research (2nd ed.)*. Los Angeles: SAGE Publications.
- Dağdelen, K. O., & Demiröz, H. (2022). EFL instructors' perceptions of utilizing mobile-assisted language learning in higher education. *Acta Educationis Generalis*, 12(2), 22-40. <https://doi.org/10.2478/atd-2022-0012>
- Davis, F. D., Granić, A., & Marangunić, N. (2023). *The technology acceptance model 30 years of TAM*. New York, NY: Springer.
- Desta, M. A., Workie, M. B., Yemer, D. B., Denku, C. Y., & Berhanu, M. S. (2021). Social media usage in improving english language proficiency from the viewpoint of medical students. *Advances in Medical Education and Practice*, 12, 519-528. <https://doi.org/10.2147/AMEP.S310181>
- Dhivya, D. S., Hariharasudan, A., Ragmoun, W., & Alfalih, A. A. (2023). ELSA as an Education 4.0 tool for learning business English communication. *Sustainability*, 15(4), paper 3809. <https://doi.org/10.3390/su15043809>
- EF SET. (2023). *Our short English quiz*. Retrieved from [efset.org/quick-check](https://efset.org/quick-check)
- Halian, A., Halian, I., Popovych, I., Zavatskyi, Y., Semenov, O., & Semenova, N. (2021). Stress Resistance in the Situation of Uncertainty as a Factor of Development of Adaptive Ability of Medical Personnel. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience*, 12(1), 251-264. <https://doi.org/10.18662/brain/12.1/181>
- Hoppin, K. M., Knollman, G., Rice Doran, P., & Hong, H. (2023). Teacher trainees' perspectives on remote instruction for multilingual learners of English. *Languages*, 8(1), 85. <https://doi.org/10.3390/languages8010085>
- Jeong, K. O. (2022). Facilitating sustainable self-directed learning experience with the use of mobile-assisted language learning. *Sustainability*, 14(5), 2894. <https://doi.org/10.3390/su14052894>
- Konotop, O., Bykonina, O., Bondar, O., Shevchenko, Y., & Kasianchuk, N. (2021). Practice of using GoToMeeting/Zoom in the study of foreign languages. *Journal for Educators, Teachers and Trainers*, 12(3), 179-185. <https://dialnet.unirioja.es/servlet/articulo?codigo=8041664>
- Kryshko, O., Fleischer, J., Waldeyer, J., Wirth, J., & Leutner, D. (2020). Do motivational regulation strategies contribute to university students' academic success? *Learning and Individual Differences*, 82, 101912. <https://doi.org/10.1016/j.lindif.2020.101912>
- Li, K. (2017). *Motivational regulation in foreign language learning*. Singapore: Springer.
- Liu, Z., Hua, J., & Zhang, Z. (2022). Scaffolding instruction in virtual language learning. *Journal of Language Teaching and Research*, 13(2), 386-391. <https://doi.org/10.17507/jltr.1302.20>
- Maszkowska, N. (2017). *The use of technology in English language teaching. English in interdisciplinary context of life-long*

- education. Torun: Nicolaus Copernicus University Poland Publ.
- Mustapha, I., Van, N. T., Shahverdi, M., Qureshi, M. I., & Khan, N. (2021). Effectiveness of digital technology in education during COVID-19 pandemic. A bibliometric analysis. *International Journal of Interactive Mobile Technologies*, 15(8), 136-154. <https://doi.org/10.3991/ijim.v15i08.20415>
- Pratiwi, D. I., & Waluyo, B. (2023). Autonomous learning and the use of digital technologies in online English classrooms in higher education. *Contemporary Educational Technology*, 15(2), ep423. <https://doi.org/10.30935/cedtech/13094>
- Putra, I. D. G. R. D., Saukah, A., Basthomi, Y., & Irawati, E. (2020). The acceptance of the English language learning mobile application Hello English across gender and experience differences. *International Journal of Emerging Technologies in Learning (iJET)*, 15(15), 219-228. <https://doi.org/10.3991/ijet.v15i15.11077>
- Rashid, S., & Howard, J. (2023). Blogging with smartphones for independent writing practice beyond the EFL classroom. *Indonesian Journal of Applied Linguistics*, 12(3), 777-788. <https://doi.org/10.17509/ijal.v12i3.46086>
- Rintaningrum, R. (2023). Technology integration in English language teaching and learning: Benefits and challenges. *Cogent Education*, 10(1), 2164690. <https://doi.org/10.1080/2331186X.2022.2164690>
- Salem, A. A. M. S. (2022). Multimedia presentations through digital storytelling for sustainable development of EFL learners' argumentative writing skills, self-directed learning skills and learner autonomy. *Frontiers in education*, 7. <https://doi.org/10.3389/feduc.2022.884709>
- Semaan, G., & Yamazaki, K. (2015). The relationship between global competence and language learning motivation: An empirical study in critical language classrooms. *Foreign Language Annals*, 48(3), 511-520. <https://doi.org/10.1111/flan.12146>
- Spante, M., Hashemi, S. S., Lundin, M., & Algers, A. (2018). Digital competence and digital literacy in higher education research: Systematic review of concept use. *Cogent Education*, 5(1), 1519143. <https://doi.org/10.1080/2331186X.2018.1519143>
- Spurava, G., & Kotilainen, S. (2023). Digital literacy as a pathway to professional development in the algorithm-driven world. *Nordic Journal of Digital Literacy*, 18(1), 48-59. <https://doi.org/10.18261/NJDL.18.1.5>
- Srivani, V., Hariharasudan, A., Nawaz, N., & Ratajczak, S. (2022). Impact of Education 4.0 among engineering students for learning English language. *PLoS ONE*, 17. <https://doi.org/10.1371/journal.pone.0261717>
- Waemusa, Z., & Jongwattanapaiboon, A. (2023). Divergence of everyday practices and school policy on mobile use: Challenges to developing EFL learners' digital literacies. *International Journal of Technology in Education (IJTE)*, 6(1), 37-48. <https://doi.org/10.46328/ijte.294>
- Yan, D., & Li, G. (2023). A heterogeneity study on the effect of digital education technology on the sustainability of cognitive ability for middle school students. *Sustainability (Switzerland)*, 15(3), 2784. <https://doi.org/10.3390/su15032784>
- Yuriy, R., Huzchenko, S., Lobach, N., Karbovanets, O., Bokova, S., & Isychko, L. (2022). Modern digital learning and simulation technologies in higher medical education: definitions, innovative potential. *Amazonia Investiga*, 11(60), 53-61. <https://doi.org/10.34069/AI/2022.60.12.6>
- Zalite, G. G., & Zvirbule, A. (2020). Digital readiness and competitiveness of the EU higher education institutions: The COVID-19 pandemic impact. *Emerging Science Journal*, 4(4), 297-304. <https://doi.org/10.28991/esj-2020-01232>

DOI: <https://doi.org/10.34069/AI/2023.71.11.26>

How to Cite:

Akhtyrskaya, N., Kostiuchenko, O., Sereda, Y., Vynohradova, A., & Miroshnykov, I. (2023). The role of transnational electronic evidence in the investigation of crimes. *Amazonia Investiga*, 12(71), 293-303. <https://doi.org/10.34069/AI/2023.71.11.26>

## The role of transnational electronic evidence in the investigation of crimes

### Роль транскордонних електронних доказів у розслідуванні злочинів

Received: October 4, 2023

Accepted: November 25, 2023

Written by:


**Nataliia Akhtyrskaya<sup>1</sup>** <https://orcid.org/0000-0003-3357-7722>**Olena Kostiuchenko<sup>2</sup>** <https://orcid.org/0000-0002-2243-1173>**Yurii Sereda<sup>3</sup>** <https://orcid.org/0000-0001-5244-3573>**Anna Vynohradova<sup>4</sup>** <https://orcid.org/0009-0007-3147-0821>**Ivan Miroshnykov<sup>5</sup>** <https://orcid.org/0000-0002-1851-075X>


#### Abstract


The purpose of the study was a comparative analysis of the police practice of EU member states and Ukraine regarding transnational electronic evidence. Taking into account the goal, the practice of law enforcement of EU member states and Ukraine was chosen for comparative analysis. The method of comparative law and statistical methods were effective methodological tools and the basis of this research. The conducted research revealed that the international community is making a lot of efforts to reform the procedure for obtaining transnational electronic evidence when adapting to the current requirements. The new EU rules on the provision and storage of transnational electronic evidence cover the categories of subscriber data, access to transactions, and content. It was established that the SIRIUS and TREIO projects are important tools for supporting EU law enforcement agencies in matters related to transnational electronic evidence. In Ukraine, it is necessary to improve


#### Анотація


Метою дослідження був порівняльний аналіз поліцейської практики країн ЄС та України щодо транснаціональних електронних доказів. З огляду на поставлену мету для порівняльного аналізу було обрано практику правозастосування країн ЄС та України. Ефективним методичним засобом і основою цього дослідження були метод порівняльного правознавства та статистичні методи. Проведене дослідження показало, що міжнародне співтовариство докладає багато зусиль для реформування процедури отримання транснаціональних електронних доказів під час адаптації до сучасних вимог. Нові правила ЄС щодо надання та зберігання транснаціональних електронних доказів охоплюють категорії даних абонентів, доступу до транзакцій та контенту. Встановлено, що проекти SIRIUS і TREIO є важливими інструментами для підтримки правоохоронних органів ЄС у питаннях, пов'язаних з транснаціональними електронними доказами. В Україні необхідно вдосконалити

<sup>1</sup> PhD in Law, Associate Professor, Department of Criminal Process and Criminalistics, Educational and Scientific Institute of Law, Taras Shevchenko National University of Kyiv, Kyiv, Ukraine.  WoS Researcher ID: GMQ-1294-2022

<sup>2</sup> PhD in Law, Associate Professor, Head of the Department of Criminal Process and Criminalistics, Educational and Scientific Institute of Law, Taras Shevchenko National University of Kyiv, Kyiv, Ukraine.  WoS Researcher ID: IVN-8144-2023

<sup>3</sup> PhD in Law, Associate Professor, Department of Public and International Law, Educational and Scientific Institute "Law Institute of the Kyiv National Economic University named after Vadym Hetman", Kyiv, Ukraine.  WoS Researcher ID: ABD-5660-2021

<sup>4</sup> PhD in Law, Associate Professor, Department of Criminal Process and Criminalistics, Educational and Scientific Institute of Law, Taras Shevchenko National University of Kyiv, Kyiv, Ukraine.  WoS Researcher ID: JVG-2974-2024

<sup>5</sup> PhD in Law, Associate Professor, Department of Criminal Procedure and Criminalistics, Educational and Scientific Institute of Law, Taras Shevchenko National University of Kyiv, Kyiv, Ukraine.  WoS Researcher ID: GLS-8393-2022



the legislation on the procedure for obtaining transnational electronic evidence with due regard to the international practice. The use of the recommendations of the SIRIUS and TREIO projects in Ukraine can contribute to improving the procedure of international cooperation regarding access to transnational electronic evidence in criminal investigations.

**Keywords:** communication infrastructure, digitization, electronic evidence, investigative actions, pre-trial investigation.

## Introduction

The development of information and communication technologies is directly related to the increasing transnational data flows. The evolution of the provision of electronic communication services and information society with the help of hosting and cloud computing is ongoing. The most acceptable conditions of interaction between Internet users are created. Internet infrastructure service providers assign domain names and numbers to users, are responsible for confidentiality and the creation of proxy servers.

This evolution is characterized by new challenges in the process of criminal prosecution in cyberspace (Casino et al., 2022). The number of crimes that have an electronic trail and do not belong to cybercrimes is increasing. Information and communication technologies and their technical devices facilitate traditional crimes, such as crimes against property and those that cause harm to personal health. Access to electronic evidence, such as text messages, emails, and instant messaging applications, is becoming an important component of investigations.

Law enforcement agencies began to use transnational requests for access to electronic evidence more often. Requesting an IP address as well as an access number and related information are becoming essential components in criminal investigations to identify the user. The introduction and intensification of the use of transnational exchange of electronic evidence entails an increasing effectiveness of investigations. The technical requirements of such investigations are becoming very important, the role of cooperation between law enforcement agencies of different countries is growing.

A secure communication channel provides opportunities for the exchange of electronic

законодавство щодо порядку отримання транснаціональних електронних доказів з урахуванням міжнародної практики. Використання рекомендацій проєктів SIRIUS та TREIO в Україні може сприяти вдосконаленню процедури міжнародного співробітництва щодо доступу до транснаціональних електронних доказів у кримінальних розслідуваннях.

**Ключові слова:** комунікаційна інфраструктура, оцифрування, електронні докази, слідчі дії, досудове розслідування.

documents between law enforcement agencies of different countries, conducting the necessary consultations (Vyshnevskaya et al., 2021). There is also a growing need to adapt jurisdictional issues when collecting and sharing electronic evidence. Attention must be paid to the fact that the retention of different types of data may represent different levels of interference with the right to respect for private life (Gascón, 2023).

A problem in obtaining transnational electronic evidence for EU countries is a disparate legal framework consisting of national, European, and international laws and regulations. Bilateral and multilateral agreements have a major impact on regulating the collection, analysis and sharing of digital evidence (Tudorica & Bonnici, 2023). The role of electronic service providers and the terms of implementation of the necessary procedures has become the focus to overcome the relevant problems.

International cooperation with Ukraine is carried out in the areas of combating international terrorism, crime, and cyber threats, regardless of the military aggression on the part of the Russian Federation. The use of transnational electronic evidence in the investigation of war crimes is becoming increasingly relevant. It becomes necessary to study new initiatives of countries regarding the organization of cooperation at the international level during criminal proceedings regarding the procedure for obtaining electronic evidence.

In view of the foregoing, the aim of the article is to determine the role of transnational electronic evidence in the investigation of crimes. The aim of the research involves the fulfilment of the following research objectives:

- 1) determine the current trends in the legislative regulation of the procedure for



obtaining transnational electronic evidence in the investigation of crimes using the example of the EU and Ukraine;

- 2) group and propose new tools for supporting EU law enforcement agencies in matters related to the procedure for providing transnational electronic evidence for further implementation of positive experience in Ukraine.

The first section of the study is devoted to a comparative analysis of the legal regulation of cross-border exchange of electronic evidence on European territory. This section introduces the reader to the leading e-evidence tools used in the EU. Special attention was paid to such a tool as the European Investigation Warrant Training Project - TREIO, as well as to the definition of the main tasks of this tool.

The second section of the work reveals the main vectors of reforming Ukrainian legislation in the field of cross-border electronic evidence. At this stage, the positive practices of the SIRIUS and TREIO projects discussed in the previous section and other EU law enforcement support tools were considered. This section provided statistical data on the number of criminal offences in Ukraine for which it is necessary to receive electronic evidence. Also, the problems hindering the effective exchange of electronic evidence have been revealed.

## Literature Review

Marandici et al., (2022) notably influenced the author's position, highlighting the need for a comprehensive analysis of the European legal framework for the transnational collection of electronic evidence. However, despite these advances, there are significant gaps, as evidenced in the findings of Gascón (2023), which highlight the problems in the European Union's decisions on access to electronic evidence for criminal investigations. These gaps and challenges in the existing literature justify the need for our current study to determine the role of transnational electronic evidence in investigating crimes. In the course of solving existing problems, it becomes important to evaluate existing alternatives and determine their advantages and limitations. In this regard, it is worth referring to the scientific work (Abraha, 2021), which examines various initiatives to improve law enforcement agencies' access to cross-border electronic evidence. The work concludes with the suitability and sustainability of various approaches compared to the stated goals and

some key principles, making it possible to choose the optimal approach.

In separate works, it is proposed to use new tools for collecting electronic evidence across borders to solve existing problems. Toza (2020) emphasizes the importance of an appropriate enforcement and protection procedure and examines the systemic implications of the implementation tools of the European production order model.

Some studies have emphasized the need to establish proper cooperation between relevant national authorities regarding the exchange of electronic evidence. Ontsanou (2023), whose achievements were considered in the author's research, notes the importance of communication between competent national authorities during the collection of evidence. In this context, the scientist analyzed the decentralized information technology system used in this process to facilitate access to justice with digital support. The researcher concludes that the new procedure for providing cross-border electronic evidence will work taking into account national and EU realities. Roishchak (2022) analyzes the new rules for the exchange of cross-border electronic evidence from the point of view of facilitating cooperation between law enforcement agencies. The author concludes that there is a need to introduce obligations on digital service providers.

The author emphasized that it is possible to create data exchange rules addressed to foreign service providers only with the simultaneous harmonization of national criminal laws.

The studies (Tudorica & Bonnici, 2023; Amato & Velicogna, 2022) consider the importance of new central legal instruments for the exchange of transnational digital evidence in EU countries. The need to use the experience of the TREIO project was noted. The importance of using a secure and reliable communication infrastructure based on e-CODEX is emphasized. A conclusion was made about the need to make significant investment in relevant educational initiatives. The author took the mentioned works into account during the formation of the approach to the implementation of the positive experience of the EU countries in Ukraine. At the same time, problems existing in Ukrainian practice were identified, in which the author noted the position (Akhtyrskaya & Kostyuchenko, 2022). Researchers paid attention to the issues of international cooperation during criminal proceedings, the collection of electronic evidence, which are

managed by a foreign service provider. The gaps in the current legislation of Ukraine regarding the procedure of international mutual legal assistance for obtaining electronic evidence were noted.

An active study of the issues under research points to the need to pay special attention to the procedure for providing and storing transnational electronic evidence in the investigation of crimes. The diversity of research in this field is also stated. Therefore, it is necessary to carry out studies according to new research criteria.

### Methodology

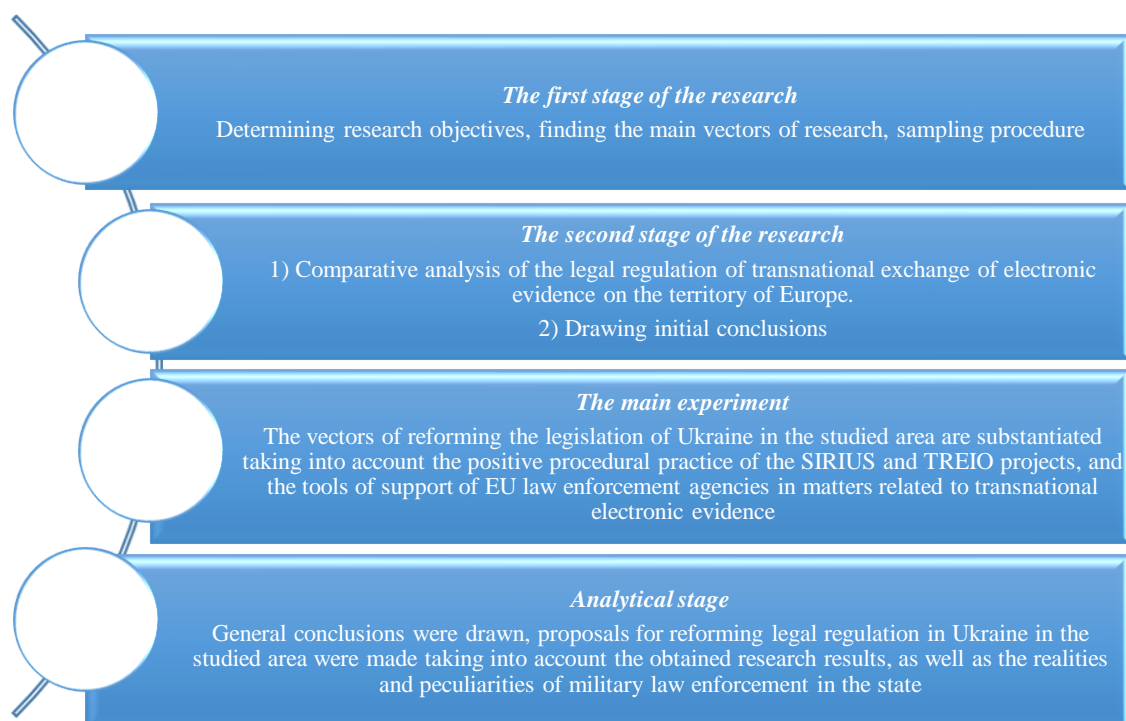
This research is framed as a descriptive study that seeks to exhaustively explore the current state and prospects for implementing procedures for the transnational exchange of electronic evidence. A mixed approach was used that integrated the statistical method, comparative legal analysis, synergistic approach, the historical legal method and the logical method.

In the statistical method, requests for cooperation in the specified area of Ukraine towards other

states were analyzed, paying special attention to communication with Great Britain, Germany and Italy. The comparative legal analysis focused on identifying the procedural components of the electronic exchange of evidence in international cooperation, comparing legal regulation in the European Union and Ukraine. The synergistic approach identified the sequence of rationalization of the procedure for electronic exchange of evidence in the context of globalization and digitalization.

Furthermore, the historical legal method was used to analyze the genesis of transforming the legal basis of the transnational exchange of electronic evidence. The logical method was applied when studying the transformation of approaches to transnational exchange of electronic evidence in the context of current realities.

The sample was formed in a reasoned manner, processing a large amount of data from 25 sources, which are referenced in detail in the text of the article. Figure 1 presents the step-by-step structure of the study, providing a visual guide for the reader's understanding.



**Figure 1.** Research design

Source: (developed by the author)

## Results

### *Comparative analysis of the legal regulation of transnational exchange of electronic evidence on the territory of Europe*

In EU countries, electronic evidence appears in approximately 85% of criminal investigations, in 65% of which electronic service providers are located in different jurisdictions (Official Journal of the European Union, 2018). According to the statistics, 55% of the total number of investigations in the EU contain a request for transnational access to electronic evidence.

During criminal investigations related to cyberspace in EU countries, it became necessary for law enforcement agencies to have modern tools for the use of electronic evidence (Official Journal of the European Union, 2017). European investigative orders (EIOs) are the main mechanism for obtaining transnational electronic evidence (Official Journal of the European Union, 2022).

EU judicial cooperation tools of the Mutual Legal Assistance (MLA) (Council of Europe, s.f) help EU countries to cooperate in cross-border criminal cases and exchange digital evidence. The Digital Electronic Evidence Exchange System (eEDES) was developed by the European Commission to support EU countries in managing EIOs and MLA procedures.

The main problem with EIO/MLA requests is that their implementation can be time-delayed at many stages of the process, resulting in reduced efficiency. The task of the EU was to introduce initiatives to simplify and accelerate the access of law enforcement agencies to transnational electronic evidence. This is reflected in the 2021 Additional Protocol to the Budapest Convention (Council of Europe, 2021). On July 28, 2023, the European Parliament and the Council adopted the relevant Regulation (European Union Magazine, 2023) and Directive (Official Journal of the European Union, 2023). The documents cover the categories of subscriber data, traffic, and content.

The competent EU judicial authority has the right to oblige electronic service providers (OSPs) to store and provide electronic evidence during criminal proceedings (European Union Magazine, 2023). The basis is for OSPs to obtain a European Presentation Order Certificate (EPOC) or a European Production Order Certificate (EPOC-PR).

The new rules guarantee reliable protection of fundamental rights, including guarantees of the right to personal data protection. OSPs must ensure direct transmission of the requested data in accordance with the EPOC at the end of the 10-day period. In emergency cases — within 8 hours. OSPs must retain requested data under the EPOC-PR for a maximum of 60 days. The required extension is 30 days. A decentralized IT system should be in place to ensure secure written communication between competent authorities. The access points of the decentralized IT system must be based on the e-CODEX system. The provider of electronic services can provide a reasoned refusal to perform EPOC or EPOC-PR. The Regulation (European Union Magazine, 2023) should be applied in all transnational cases.

Service providers in this case are electronic communication service providers and specific information society service providers that facilitate interaction between users. The service provider must appoint an institution, a legal representative in another state that is part of the EU (Official Journal of the European Union, 2023). In the case of unmotivated non-fulfilment of the relevant requirements, the member states provide for the possibility of imposing monetary fines. The amount is up to 2% of the total global annual turnover of the service provider for the previous financial year.

At the international level, relevant reforms implemented by the United Nations Office on Drugs and Crime (UNODC) and Interpol have been developed. In 2018, UNODC developed a Practical Guide to International Request for Electronic Evidence for Law Enforcement in collaboration with its partners (UNODC, 2018). The current SHERLOC UNODC portal allows for the exchange of necessary electronic resources. Interpol's e-MLA initiative aims to overcome the lack of international and secure networks for the exchange of necessary requests.

According to the 2022 SIRIUS report, 45% of EU law enforcement officers had never received training on cross-border e-evidence requests (European Union Agency, 2022). A total of 26% of EU law enforcement officers have access restrictions on their main work computer to some online services, such as social networking platforms. The relevant restrictions exist in 18 EU member states. More than 30% of officers commented that OSPs usually provide only partial answers or take too long to answer. Moreover, 18% of respondents indicated short storage periods of digital data as the main

problem (European Union Agency, 2022). In 2022, the project developed recommendations for improving the procedure for filing international requests for access to electronic evidence in criminal investigations.

An essential support tool for obtaining cross-border evidence in the EU is the Training on European Investigation Order (TREIO, 2023). The basis of this project is the implementation of

EXEC, EVIDENCE2e-CODEX, and e-Evidence. One of the tasks is the creation of a secure infrastructure, which is necessary for the exchange of EIO forms and evidence between law enforcement agencies.

The essence and content of the elements of the TREIO project (TREIO, 2023) are shown in Table 1.

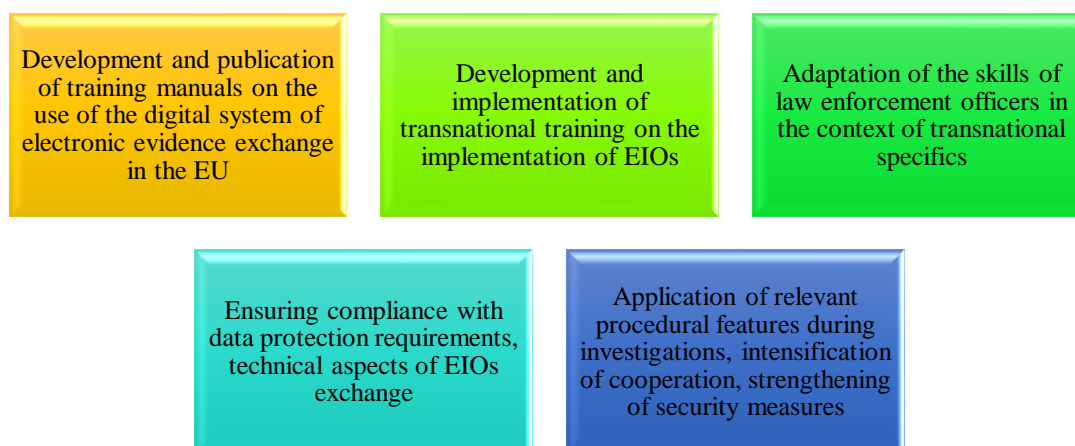
**Table 1.**

*The essence and content of the elements of the TREIO project*

EXEC	e-Evidence	EVIDENCE2e-CODEX
It is developed on the basis of the independent and secure transnational e-delivery infrastructure e-CODEX. The EXEC is responsible for the fully electronic exchange of EIOs between Member States.	It is an appropriate instrument of digital exchange applied at the national level together with national instruments. Law enforcement agencies use EIO/MLA forms digitally, send them as a message. It is possible to attach necessary documents to each message.	is a standard evidence exchange package application, a web-based application for creating and/or preparing evidence packages and facilitating their exchange through the e-CODEX Infrastructure Implementation Reference Portal.

In the context of the differentiation of the electronic evidence exchange process, the

leading tasks of TREIO acquire special importance (Figure 2).



**Figure 2.** *The main tasks of TREIO*

*Souce(grouped by the author)*

### ***The vectors of reforming the legislation of Ukraine***

The level of international cooperation of investigative and judicial bodies of Ukraine with EU member states is increasing in connection with the development of the latest technologies, the increasing public danger of crimes. The mechanism for the international legal assistance is implemented at the stage of pre-trial investigation by the General Prosecutor's Office of Ukraine (Order No. 223, 2015), at the stage of court proceedings by the Ministry of Justice of

Ukraine (Order No. 2599/5, 2019). Requests, including those for the provision of electronic evidence in criminal cases, are processed.

The scope of legal assistance, the order of communication, requirements regarding the form and content of the request, specifics of the execution of requests are determined by the Criminal Procedure Code of Ukraine (Code of Ukraine No. 4651-VI, 2023), provisions of the international treaty of Ukraine (Law of Ukraine No. 1906-IV, 2022). In the absence of an international agreement between Ukraine and the

relevant state, international legal assistance is requested on the basis of the reciprocity principle. In urgent cases, requests to Ukraine are sent from the competent body of a foreign state through Interpol, Eurojust.

In case of a decision to send a request, the request is sent to the authorized (central) body of the requested party directly or through diplomatic channels within ten days. It is also possible to send requests directly in case of having the relevant authorities. In the event of a request from another country, it shall be executed within one month from the date of its receipt by the direct executor.

It is worth noting that in 2021, 208 petitions for the granting of a special permit for the provision

of international legal assistance were submitted to the courts of first instance (DIIA, 2022). Only 65 petitions were received in 2022 during the hostilities on the territory of Ukraine. The indicated trend shows a decreased activity of law enforcement agencies in terms of increased international cooperation in criminal proceedings.

Table 2 shows the number of criminal proceedings, for example, under Articles 200, 361-363 of the Criminal Code of Ukraine (Code of Ukraine No. 2341-III, 2023), which were under review by the courts of first instance in 2021 and 2022 (DIIA, 2022) and recorded according to the reports of the General Prosecutor's Office (DIIA, 2023).

**Table 2.**

*Statistics on the number of criminal offences criminalized under Articles 200, 361-363 of the Criminal Code of Ukraine*

Articles of the Criminal Code of Ukraine	Types of criminal offences	The number of proceedings pending in court in 2021	The number of proceedings pending in court in 2022	Criminal offences recorded for 2021 (report of the General Prosecutor's Office)	Criminal offences recorded for 2022 (report of the General Prosecutor's Office)
200	Illegal actions with transfer documents, payment cards and other means of access to bank accounts, equipment for their production	32	16	1569	928
361-363	Criminal offences in the field of use of electronic computing machines (computers), systems, computer networks and telecommunication networks	391	437	3310	3 415

Source: (Code of Ukraine No. 2341-III, 2023)

The given example of the number of relevant proceedings and registered offences for 2021 and 2022 shows the further need to obtain transnational electronic evidence.

There are a number of problems in the field of exchange of transnational electronic evidence in Ukraine. The quality assessment of electronic evidence obtained within the scope of international legal assistance remains problematic. The peculiarities of the type of electronic evidence and the method of obtaining

it in another jurisdiction are mostly overlooked. The legislation of other countries is not fully taken into account for the effective use of organizational rules. The terms of storage of electronic evidence are not clearly defined.

Ukraine seeks to expand international cooperation in this area. For example, the General Prosecutor's Office of Ukraine cooperates with the Interpol's initiative on the secure electronic transmission of mutual legal assistance (e-MLA). At the same time, the



revision of legal regulation in the area under research will be the subject of comprehensive work by legislators and the public during the period of post-war recovery of the state.

## Discussion

The conducted research showed that obtaining transnational electronic evidence is a global necessity. This confirms the analysis of the positive experience of the EU countries regarding the use of various tools for obtaining such evidence. The study of Ukrainian practice also confirms the need for cross-border electronic evidence. At the same time, the study of Ukraine's legislative framework in the researched area indicates the presence of some obstacles to the exchange of cross-border digital evidence.

### *Obstacles in the exchange of cross-border digital evidence have been identified*

One of these obstacles can be defined as insufficiently effective cooperation between competent national authorities and lack of proper coordination. In turn, an uncoordinated change in the traditional system of cross-border legal cooperation may lead to the proliferation of uncoordinated initiatives. The result may be further jurisdictional conflict and legal uncertainty (Abraha, 2021). According to the researcher, a possible solution is cross-border cooperation and coordination. The cooperation can be bilateral, multilateral, regional or global.

It can be concluded that the adopted EU legislative initiatives regarding the procedure for providing cross-border electronic evidence will require adaptation of funding and technical development. The newly created transnational evidence collection system has a different philosophy, procedure, law enforcement and protective structure (Tosza, 2020). There may be difficulties with approbation in the initial period, as the components of the procedure are calibrated with the practice of the relevant courts and authorities (Onțanu, 2023). According to the researcher, it is extremely important to increase the number of access points to the e-CODEX system.

In general, it will be necessary to find a balance between flexibility and the possibility of development of legal and technical national systems (Magno, 2023). The further development of agreed rules of international cooperation in criminal cases in the field of obtaining transnational evidence should contain

components that will be applicable outside the EU (Rojaszczak, 2022). In support of researchers, the study proved that the introduction of permanent and more convenient rules of cooperation with other democratic countries in this area will be of crucial importance for the success of the transformations.

It can be stated that the e-service provider, which is the executing body, will be the only one who can object to the fulfilment of EPOC or EPOC-PR requirements. The direct involvement and responsibility of electronic service providers in evaluating data requests from law enforcement agencies is problematic and deserves close attention (Gascón, 2023). There must be an awareness that internet mediators are turning into judges or human rights defenders when they may not be adequate to the task.

### *Ways to optimize the exchange of electronic evidence*

It can be concluded that the development of the e-CODEX system contributes to the optimization of the capabilities of electronic justice systems. Increasing accessibility and overcoming barriers in offline transnational legal proceedings should be assessed from the end-user perspective (Velicogna, Steigenga, Taal & Schmidt, 2020).

According to the researchers, further initiatives should be aimed at increasing theoretical and practical contributions. It is necessary to ensure careful monitoring of changes, early detection of problems, and the possibility of rapid intervention.

It is established that, apart from available modern ICT tools, the process of electronic evidence exchange between countries can only work in a transnational working environment. Equal and effective conditions must be guaranteed. This is only possible with significant investment in training initiatives to familiarize practitioners with existing legal options and improve their skills and abilities (Amato & Velicogna, 2022). There is a particular need to create the necessary awareness of the actors involved through the proper dissemination of information and knowledge via such projects as TREIO (Biasiotti, 2023). Besides, we note that it is extremely important to create special cross-border training for magistrates and court employees to facilitate the exchange of transnational electronic evidence.

It is proven that Ukraine, needs the development of the effective use of electronic evidence that is

under the jurisdiction of foreign states in the context of a full-scale invasion and active hostilities on the territory of the state. It is important to adopt a special law On Electronic Evidence, which defines the concept of electronic evidence, types, methods of collection, evaluation, and use (Akhtyrskaya & Kostyuchenko, 2022). The researchers believe it is necessary to establish procedural deadlines for filing a request for the electronic evidence storage.

## Conclusions

The international community recognizes the problems and gaps in the digital evidence exchange. It directs its efforts to bring this procedure into line with the current realities. The new EU rules on the provision and storage of cross-border electronic evidence have been developed in response to the variability of the existing procedure. The need to develop the international aspect of electronic evidence is determined by the specifics of criminal activity in the age of digital technologies. The application of the same EU rules regarding the access of law enforcement agencies to the information of OSPs should improve legal certainty when receiving and storing transnational electronic evidence.

The SIRIUS project supported by Eurojust and Europol is worth noting. The project's tools assist law enforcement agencies by creating a repository of applicable procedures for obtaining transnational digital evidence from OSPs. The project also guides cooperation processes between competent authorities, contact information and investigative tools.

EXEC, EVIDENCE2e-CODEX and e-Evidence projects provide assistance in obtaining transnational evidence in the investigation of crimes. They include the development of useful, legally binding tools for sharing digital evidence related to EIO/MLA procedures. The TREIO project focuses on the implementation of these projects. TREIO is a necessary tool for methodical support of law enforcement agencies in obtaining transnational evidence in the EU. In addition, important tasks of TREIO are: the development and publication of specialized training manuals, implementation of cross-border training, appropriate adaptation of law enforcement officers' skills, ensuring compliance with security requirements, etc.

There is a need to improve the legislation on the procedure for obtaining transnational electronic evidence in the course of Ukraine's integration into the EU legal space. The conducted research

will be the basis for further research and reform of the national legislation of the state in the post-war period.

## Bibliographic references

- Abraha, H. H. (2021). Law enforcement access to electronic evidence across borders: mapping policy approaches and emerging reform initiatives. *International Journal of Law and Information Technology*, 29(2), 118–153.  
<https://doi.org/10.1093/ijlit/eaab001>
- Akhtyrskaya, N., & Kostyuchenko, O. (2022). Procedural and organizational aspects of electronic evidence collection during international cooperation. *Scientific Bulletin of the Uzhhorod National University*, 2(72), 192–198. <https://doi.org/10.24144/2307-3322.2022.72.64>
- Amato, R., & Velicogna, M. (2022). Cross-border document service procedures in the EU from the perspective of Italian practitioners—The lessons learnt and the process of digitalisation of the procedure through e-CODEX. *Laws*, 11(81). <https://doi.org/10.3390/laws11060081>
- Biasiotti, M.A. (2023). Training on EIO: TREIO Project. In: Biasiotti, M.A., & Turchi, F. (Eds.), *European Investigation Order. Where the Law Meets the Technology* (pp. 199–206). Cham: Springer. [https://doi.org/10.1007/978-3-031-31686-9\\_13](https://doi.org/10.1007/978-3-031-31686-9_13)
- Casino, F., Pina, C., López-Aguilar, P., Batista, E., Solanas, A., & Patsakis, C. (2022). SoK: Cross-border criminal investigations and digital evidence. *Journal of Cybersecurity*, 8(1). <https://doi.org/10.1093/cybsec/tyac014>
- Code of Ukraine No. 2341-III. Criminal Code of Ukraine. *Verkhovna Rada of Ukraine*, 2023. Recovered from <https://zakon.rada.gov.ua/laws/show/2341-14/ed20230811#Text>
- Code of Ukraine No. 4651-VI. Criminal Procedure Code of Ukraine. *Verkhovna Rada of Ukraine*, 2023. Recovered from <https://zakon.rada.gov.ua/laws/show/4651-17/ed20230824#Text>
- Council of Europe. (2021). *Cybercrime Convention Committee (T-CY)*. Recovered from <https://acortar.link/m3DLyP>
- Council of Europe. (s.f.). *MLA - Council of Europe standards. Council of Europe committee of ministers*. Recovered from <https://acortar.link/61UjzU>
- DIIA. (2022). *Judicial statistics (annual reports on the administration of justice by local and*

- appellate courts) for 2022. Recovered from <https://acortar.link/OK5tlr>
- DIIA. (2023). *Information on registered criminal offenses and the results of their pretrial investigation*. Recovered from <https://acortar.link/3FitaA>
- European Union Agency. (2022). *SIRIUS EU Digital Evidence Situation Report*. Recovered from <https://acortar.link/UcbL0e>
- European Union Magazine. (2023). *Document 32023R1543. On European production orders and European preservation orders for electronic evidence in criminal proceedings and for the execution of custodial sentences following criminal proceedings*. Recovered from <https://acortar.link/xiBAaY>
- Gascón Marcén, A. (2023). The push for international regulation of cross-border access to electronic evidence and human rights. *Cuadernos de Derecho Transnacional*, 15(1), 385-402. <https://doi.org/10.20318/cdt.2023.7545>
- Law of Ukraine No. 1906-IV. Law of Ukraine on international treaties of Ukraine. *Verkhovna Rada of Ukraine*, 2022. Recovered from <https://zakon.rada.gov.ua/laws/show/1906-15#Text>
- Magno, T. (2023). The challenging path towards the establishment of the EU legal framework regulating cross-border access to digital evidence. In: Biasiotti, M.A., & Turchi, F. (Ed.), *European Investigation Order. Where the Law Meets the Technology* (pp. 23-33). Cham: Springer. [https://doi.org/10.1007/978-3-031-31686-9\\_4](https://doi.org/10.1007/978-3-031-31686-9_4)
- Marandici, O., Milicenco, S., Jordan, C., & Oganesean, A. (2022). Transnational gathering of electronic evidences: challenges and perspectives in the European union. *The Journal of the National Institute of Justice*, 3(62), 54-60. Recovered from [http://dx.doi.org/10.52277/1857-2405.2022.3\(62\).08](http://dx.doi.org/10.52277/1857-2405.2022.3(62).08)
- Official Journal of the European Union (2023). *Document 32023L1544. Laying down harmonised rules on the designation of designated establishments and the appointment of legal representatives for the purpose of gathering electronic evidence in criminal proceedings*. Directive (EU) 2023/1544 of the European Parliament and of the Council of 12 July 2023. Recovered from <https://acortar.link/ubCMDg>
- Official Journal of the European Union. (2017). *Document 52017IP0366. European Parliament resolution of 3 October 2017 on combating cybercrime*. Recovered from <https://acortar.link/w9LOYp>
- Official Journal of the European Union. (2018). *Document 52018SC0118, working document of the commission services impact assessment*. Recovered from <https://acortar.link/z8D0LG>
- Official Journal of the European Union. (2022). *Document 32014L0041. Regarding the European Investigation Order in criminal matters*. Recovered from <https://acortar.link/VHKhAn>
- Onțanu, E. A. (2023). The digitalisation of European union procedures: A new impetus following a time of prolonged crisis. *Law, Technology and Humans*, 5(1), 93-110. <https://doi.org/10.5204/lthj.2706>
- Order No. 223. Order About the organization of the work of the prosecutor's office of Ukraine in the field of international cooperation. *General Prosecutor's Office of Ukraine*, 18/09/2015. Recovered from <https://zakon.rada.gov.ua/laws/show/v02239-00-15#Text>
- Order No. 2599/5. On the approval of the Instruction on the procedure for international cooperation in matters of mutual legal assistance, extradition of offenders (extradition), transfer (acceptance) of convicted persons, execution of sentences and other issues of international judicial cooperation in criminal proceedings during court proceedings. *Ukraine Ministry of Justice*, 19/08/2019. Recovered from <https://zakon.rada.gov.ua/laws/show/z0956-19#Text>
- Pidbereznykh, I., Koval, O., Solomin, Y., Kryvoshein, V., & Plazova, T. (2022). Ukrainian policy in the field of information security. *Amazonia Investiga*, 11(60), 206-213. <https://doi.org/10.34069/AI/2022.60.12.22>
- Rojczczak, M. (2022). E-Evidence cooperation in criminal matters from an EU perspective. *The Modern Law Review*, 85(4), 997-1028. <https://doi.org/10.1111/1468-2230.12749>
- Tosza, S. (2020). All evidence is equal, but electronic evidence is more equal than any other: The relationship between the European investigation order and the European production order. *New Journal of European Criminal Law*, 11(2), 161-183. <https://doi.org/10.1177/2032284420919802>
- TREIO. (2020). *Let's talk about TREIO*. Recovered from <https://treio.eu/a/news-wp5>
- Tudorica, M., & Bonnici, J. M. (2023). Legal framework for digital evidence following the implementation of the EIO directive: Status Quo, challenges and experiences in member states. In: Biasiotti, M.A., & Turchi, F. (Ed.), *European Investigation Order. Where the*

- Law Meets the Technology* (pp. 127-155). Cham: Springer. [https://doi.org/10.1007/978-3-031-31686-9\\_9](https://doi.org/10.1007/978-3-031-31686-9_9)
- UNODC. (2018). *The practical guide for requesting electronic evidence across borders. united nations office on drugs and crime.* Recovered from <https://acortar.link/BYMyRt>
- Velicogna, M., Steigenga, E., Taal, S., & Schmidt, A. (2020). Connecting EU jurisdictions: Exploring how to open justice across member states through ICT. *Social Science Computer Review*, 38(3), 274–294. <https://doi.org/10.1177/0894439318786949>
- Vyshnevskaya, O., Litvak, O., Melnyk, I., Oliinyk, T., & Litvak, S. (2021). Impact of globalization on the world environment. *Ukrainian Journal of Ecology*, 11(1), 77-83. <https://acortar.link/E9Eamy>



Revista Amazonia Investiga  
[www.amazoniainvestiga.info](http://www.amazoniainvestiga.info)