МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ДЕРЖАВНИЙ ТОРГОВЕЛЬНО-ЕКОНОМІЧНИЙ УНІВЕРСИТЕТ

МІНІСТЕРСТВО ОСВІТИ та НАУКОВИХ ДОСЛІДЖЕНЬ ІРАКУ
АЛЬ РАФІДАІН УНІВЕРСИТЕТ

МІНІСТЕРСТВО ОСВІТИ І НАУКИ ПОЛЬЩІ
УНІВЕРСИТЕТ КОМІСІЇ НАРОДНОЇ ОСВІТИ В КРАКОВІ

ФЕДЕРАЦІЯ ПРОФЕСІЙНИХ СПІЛОК УКРАЇНИ
АКАДЕМІЯ ПРАЦІ, СОЦІАЛЬНИХ ВІДНОСИН І ТУРИЗМУ, УКРАЇНА

V Міжнародна науково-практична конференція “Освіта, Право та Публічне управління – новітні тенденції розвитку”

«ELPA–NDT»

9-10 Квітня 2026 р.
Україна-Ірак-Польща

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
STATE UNIVERSITY OF TRADE AND ECONOMICS

MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH, IRAQ
AL-RAFIDAIN UNIVERSITY

MINISTRY OF EDUCATION AND SCIENCE OF POLAND
UNIVERSITY OF THE NATIONAL EDUCATION COMMISSION OF KRAKOW

FEDERATION OF TRADE UNIONS OF UKRAINE
ACADEMY of LABOR, SOCIAL RELATIONS and TOURISM, UKRAINE

The V International Scientific and Practical Conference

«Education, Law and Public Administration – New Development Trends» (ELPA–NDT)

«ELPA–NDT »

April 9-10, 2026
Ukraine-Iraq-Poland

Рекомендовано вченою радою Академії праці, соціальних відносин і туризму. Протокол № 7 від 07.04.26 р.

Відібрані оргкомітетом доповіді після допрацювання, як статті будуть опубліковані в виданні, яке індексується в наукометричній базі Scopus

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ВСТУПНЕ СЛОВО

Віктор Сухомлин,
ректор Академії праці,
соціальних відносин і туризму,
Заслужений працівник соціальної сфери України

Шановні колеги, науковці, експерти, докторанти, аспіранти та студенти!

Від імені Академії праці, соціальних відносин і туризму щиро вітаю вас з відкриттям V Міжнародної науково-практичної конференції «Освіта, право та публічне управління – новітні тенденції розвитку».

Для нас є великою честю бути частиною цього наукового заходу, що об'єднує провідні освітні та наукові інституції, зокрема Університет Альрафідайн, Університет Національної комісії з освіти в Кракові та Державний торговельно-економічний університет. Така міжнародна співпраця є надзвичайно важливою у сучасних умовах глобальних викликів, адже вона сприяє обміну знаннями, досвідом і формуванню нових наукових підходів.

Тематика конференції охоплює широкий спектр актуальних питань — від конституційного та муніципального права до цифрового урядування, освітніх інновацій і розвитку публічної політики. Особливої ваги ці напрями набувають сьогодні, в умовах трансформаційних процесів, цифровізації та викликів, пов'язаних із воєнним станом в Україні.

Переконаний(а), що результати наукових дискусій, представлені під час конференції, сприятимуть:

- розвитку сучасної правової науки;
- вдосконаленню публічного управління;
- підвищенню якості освітніх процесів;
- пошуку ефективних рішень для актуальних суспільних проблем.

Хочу зауважити, що подібні наукові заходи є не лише майданчиком для представлення результатів досліджень, але й

важливим простором для формування міждисциплінарного діалогу, розвитку академічної мобільності та налагодження довготривалих партнерств між науковими установами різних країн.

Сьогодні, коли світ перебуває у стані постійних трансформацій, а Україна – у складних умовах протистояння зовнішній агресії, роль науки, освіти та публічного управління значно зростає. Саме від якості наукових досліджень, обґрунтованості управлінських рішень і рівня підготовки фахівців залежить ефективність державної політики та стійкість суспільства.

Особливої актуальності набуває розвиток муніципального та адміністративного права, удосконалення механізмів публічного управління, впровадження цифрових технологій у сфері врядування та освіти. Впевнений(а), що обговорення цих питань у колі провідних фахівців сприятиме виробленню нових підходів і практичних рішень.

Важливо також відзначити значний потенціал молодих науковців – аспірантів, докторантів, студентів, які беруть участь у конференції. Саме за вами майбутнє науки, освіти та держави, і такі заходи є чудовою можливістю для професійного становлення, обміну ідеями та натхнення для подальших досліджень.

Щиро бажаю, щоб ця конференція стала платформою для народження нових наукових ідей, започаткування спільних міжнародних проєктів і зміцнення академічної спільноти.

Сподіваюся на подальшу плідну співпрацю між нашими установами та нові зустрічі в рамках спільних наукових ініціатив.

Щиро дякую за увагу та бажаю успішної і натхненної роботи усім учасникам конференції!

Дякую за увагу!

Віктор Сухомлин

INTRODUCTORY WORD

Viktor Sukhomlyn,
Rector of the Academy of Labor,
Social Relations, and Tourism,
Honored Worker of the Social Sphere of Ukraine

Dear colleagues, scientists, experts, doctoral candidates, postgraduates and students!

On behalf of the Academy of Labor, Social Relations and Tourism, I sincerely congratulate you on the opening of the 5th International Scientific and Practical Conference “Education, Law and Public Administration – New Development Trends” (ELPA-NDT).

It is a great honor for us to be part of this scientific event, which brings together leading educational and scientific institutions, in particular, Al-Rafidain University, the University of the National Education Commission in Krakow and the State University of Trade and Economics. Such international cooperation is extremely important in today's conditions of global challenges, as it contributes to the exchange of knowledge, experience and the formation of new scientific approaches.

The topics of the conference cover a wide range of topical issues – from constitutional and municipal law to digital governance, educational innovations and the development of public policy. These areas are of particular importance today, in the context of transformational processes, digitalization, and challenges associated with martial law in Ukraine.

I am convinced that the results of scientific discussions presented during the conference will contribute to:

- the development of modern legal science;
- improving public administration;
- improving the quality of educational processes;
- finding effective solutions to current social problems.

I would like to note that such scientific events are not only a platform for presenting research results, but also an important space for forming

interdisciplinary dialogue, developing academic mobility, and establishing long-term partnerships between scientific institutions of different countries.

Today, when the world is in a state of constant transformations, and Ukraine is in difficult conditions of confronting external aggression, the role of science, education, and public administration is significantly increasing. It is precisely the quality of scientific research, the validity of management decisions, and the level of training of specialists that determines the effectiveness of state policy and the stability of society.

The development of municipal and administrative law, improvement of public administration mechanisms, introduction of digital technologies in the sphere of governance and education are of particular relevance. I am sure that the discussion of these issues among leading specialists will contribute to the development of new approaches and practical solutions.

It is also important to note the significant potential of young scientists - postgraduates, doctoral students, students participating in the conference. The future of science, education and the state is yours, and such events are an excellent opportunity for professional development, exchange of ideas and inspiration for further research.

I sincerely hope that this conference will become a platform for the birth of new scientific ideas, the launch of joint international projects and the strengthening of the academic community.

I hope for further fruitful cooperation between our institutions and new meetings within the framework of joint scientific initiatives.

Thank you very much for your attention and I wish successful and inspired work to all participants of the conference!

Thank you for your attention!

Viktor Sukhomlyn

DIGITAL TRANSFORMATION OF HIGHER EDUCATION: THE ROLE OF INNOVATIVE TECHNOLOGIES IN PROFESSIONAL TRAINING

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Abstract. The thesis examines the influence of digital technologies in changing the processes of higher education and its effect on the professional training of specialists in the future. Special emphasis is placed on the use of innovative digital tools, the formation of digital capabilities, and the establishment of a productive educational environment that will address the demands of the present-day society. The paper has supported the significance of the adoption of digital learning technologies to enhance the quality of education, and competitiveness of graduate in the labour market.
Keywords*:* digital technologies, higher education, digital transformation, professional training, digital competencies.

Introduction

The emergence of digital technologies and their rapid evolution plays an important role in changing the contemporary systems of education. Universities and colleges are gradually becoming more accepting of the introduction of digital technologies into the educational process to improve the quality of training and guarantee the acquisition of appropriate competencies by future professionals. Digitization of education necessitates modernization of teaching and learning processes and learning space to address the needs of the information society.

Research Results

The adoption of digital technologies in higher education leads to the creation of the contemporary educational setting that promotes the innovative pedagogical practices. The possibilities of flexible learning, high-quality communication, and access to learning materials without the consideration of the geographical location are offered by digital platforms, cloud services, and interactive learning tools. Digital learning management systems, online collaboration systems, and multimedia resources are relevant in this context, whereby both synchronous and asynchronous learning activities are facilitated [1]. Introduction of platforms like learning management systems, virtual learning classes, cloud-based learning tools all enable the institutions of higher learning to streamline the education activities in a manner that would ensure continuity of the learning process and further open channel of learning between the students and the educators.

The growth of digital competence in teachers and learners is an important element in digital transformation. Digital competence denotes the proper usage of information technologies, critical assessment of the digital information, and the skills to solve professional tasks by using digital tools. The competencies formed help to enhance quality of professional training and help to develop lifetime learning skills [3]. The training of information literacy, digital communication skills, and the skills to process vast amounts of digital information are becoming the central issues of higher education nowadays. Moreover, digital technologies can be used to support interdisciplinary teamwork and encourage the formation of analytical thinking and innovation in solving problems.

Moreover, online technologies make it possible to introduce new instruction techniques, including blended learning, project-based learning, and interactive online learning. Such methods facilitate active involvement of students, help to improve their independent learning, as well as develop critical thinking and problem solving. Digital tools are also used in predicting learning outcomes in a much better way and in customizing the learning process with individual needs [2, 4]. New opportunities to monitor the progress of students and define learning gaps in real-time can be offered with the help of adaptive learning technologies, data analytics, and digital assessment tools. Consequently, teachers are able to customize the learning materials and approaches to instruction to suit the various categories of students.

Besides this, digital transformation aids in the development of open and inclusive learning environments that increase access to education. Online learning, digital repositories and open educational resources play a major role in increasing the accessibility of learning resources and enhancing the democratization of knowledge. Digital technologies are also beneficial to international academic collaboration by facilitating virtual mobility, collaborative research, and involvement in international educational programs. This is why the introduction of digital technologies does not only modernize the educational process, but also enhances the ability of higher education institutions to cope with the challenges of the digital society and the global knowledge economy.

Conclusions

In this way, digital transformation of higher education can be highly beneficial in terms of enhancing the effectiveness of professional training and making sure that the essential skills needed in the contemporary digital society are developed. The inclusion of new technologies in the educational process helps to form the flexible and dynamic learning environment which can ensure the constant professional growth and raise the level of competitiveness of graduates in the international labour market.

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ЦИФРОВА КУЛЬТУРА ВИКЛАДАЧА ВИЩОЇ МАТЕМАТИКИ: НОВІ ВИКЛИКИ ТА МОЖЛИВОСТІ ТЕХНІЧНОГО УНІВЕРСИТЕТУ

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Abstract. The article explores the transformation of the professional activity of a mathematics teacher in the conditions of total digitalization of higher technical education. The author reveals the meaning of the concept of "digital culture of a teacher" as a systemic ability to integrate digital technologies into the teaching methodology, which goes beyond the simple possession of tools. Attention is paid to the changing role of the teacher - from a translator of knowledge to a moderator and "navigator" in the world of artificial intelligence and ultrafast computing. The paper analyzes the advantages of visualizing abstract concepts and mathematical modeling, and also identifies key challenges: the obsolescence of traditional assessment methods, the issue of academic integrity in the era of computer algebra systems (Wolfram Alpha, Chat GPT) and the need to adapt curricula to the demands of the modern digital economy. It is substantiated that successful transformation of the methodological system is possible only if pedagogical thinking changes and a focus on critical analysis of computational results.
Keywords: digital culture, higher mathematics, digitalization of education, technical university, artificial intelligence, mathematical modeling, digital competence.

Вступ

Стрімка цифровізація освіти перетворила цифрове освітнє середовище (ЦОС) на критично важливу інфраструктуру. Надійність ЦОС сьогодні визначається не лише безперебійною роботою серверів, а й цілісністю даних, кібербезпекою та здатністю системи адаптуватися до екстремальних навантажень.

Основним шляхом підвищення технічної надійності є перехід від монолітних систем до мікросервісної архітектури**,** а саме до децентралізації, яка дозволяє автоматично масштабувати ресурси під час пікових навантажень (наприклад, під час сесій або НМТ) за рахунок використання хмарних обчислень (Cloud Computing) та резервування, яке мінімізує ризики повної відмови системи внаслідок технічних збоїв або форс-мажорних обставин, за рахунок впровадження стратегії «гарячого» резервування даних на географічно розподілених серверах. Для стабільного функціонування середовища необхідно розробляти регламенти дій у кризових ситуаціях, причому надійність ЦОС неможлива без захисту конфіденційної інформації учасників освітнього процесу. Технологічна надійність нівелюється помилками користувачів. Сучасний етап розвитку вищої технічної освіти характеризується тотальною цифровізацією (Digital Transformation), що вимагає від викладача вищої математики не лише фундаментальних знань, а й високого рівня цифрової компетентності. Цифровізація перестає бути просто інструментом і стає невід’ємною частиною професійної культури педагога [1, с.32].

Мета доповіді

У даній роботі досліджується поняття цифрової культури викладача математики технічного університету, переваги та виклики цифровізації освіти та нові завдання, які стоять перед викладачами математики.

Феномен цифрової культури в математичній освіті

Цифровізація освіти трансформує роль викладача вищої математики з «транслятора знань» у «модератора цифрового пізнавального процесу». Цифрова культура викладача технічного ЗВО — це не лише володіння інструментами (Zoom чи Moodle), а системна здатність інтегрувати цифрові технології в методологію викладання математики. Вона включає:

- Інформаційну гігієну та безпеку при роботі з відкритими даними.
- Етичне використання ШІ у розв’язанні математичних задач.
- Навички візуалізації абстрактних концепцій.

Сучасне освітнє середовище ставить перед математиками-педагогами специфічні виклики:

- По перше, легкий доступ до систем комп'ютерної алгебри (WolframAlpha, Photomath) нівелює традиційні домашні завдання. Тож потрібен перехід від оцінювання результату до оцінювання процесу та логіки міркувань.

- По друге, необхідність фільтрувати величезні масиви цифрового контенту та обирати лише той, що сприяє глибокому розумінню предмета.
- По третє, подолання консерватизму класичної математичної школи на користь інтерактивних методів навчання.

Феномен цифрової культури в математичній освіті — це не просто поява калькуляторів чи ноутбуків на парах. Це фундаментальна зміна того, як ми сприймаємо, вивчаємо та викладаємо математику в епоху алгоритмів та штучного інтелекту [2, с.221].

Зміна ролі обчислень, візуалізація та динамічність

Слід зазначити, що якщо раніше основний акцент робився на технічній майстерності: вмінні швидко рахувати в стовпчик або інтегрувати вручну, то цифрова культура переносить фокус на математичне моделювання та постановку задачі. Цифрова культура зробила математику «видимою». Абстрактні концепції, які раніше існували лише в уяві або на статичних малюнках у підручниках, тепер можна покрутити в 3D, змінити їхні параметри та миттєво побачити результат (наприклад, можна змінювати вершини трикутника і спостерігати, як одночасно рухаються його медіани чи описане коло) або при проведенні статистичних експериментів (наприклад, підкидання віртуальної монети 10,000 разів) для розуміння закону великих чисел [3, с.15] .

Слід підкреслити, що оскільки математична освіта сьогодні тісно переплітається з програмуванням то це дає можливість розбиття великої математичної задачі на підзадачі, пошук закономірностей у масивах даних та створення чіткого плану розв’язання, який може виконати машина (наприклад, написання коду на Python для знаходження коренів рівняння). Переваги цього очевидні. Попри очевидні переваги, існують і критичні аспекти[4, с.52] .

Виклики цифрової культури

Раніше ми боролися з калькуляторами та ГДЗ, тепер — з чат-ботами, які за секунду видають розв’язання з поясненнями. Як мотивувати учня вчити формули, якщо ШІ може вивести їх миттєво? Учні все частіше запитують: «Навіщо мені це знадобиться?». Стандартні задачі про басейни та труби застаріли. Отже, на перше місце стає перехід від оцінювання результату (правильної відповіді) до оцінювання процесу та критичного мислення та адаптація програми до запитів сучасної економіки. Математика має стати інструментом для розуміння того, як працює світ навколо. Цифрова культура змінює саму форму навчання [5, с.87].

Сучасний викладач математики сьогодні — це вже не просто людина з крейдою біля дошки, а свого роду «навігатор» у світі надшвидких обчислень та штучного інтелекту. Математика не змінилася, але змінився контекст, у якому її вивчають. Викладач перестав бути єдиним джерелом знань а конкретні навички застарівають швидше, ніж завершується цикл навчання. Крім того, постійні

переходи з офлайну в онлайн вимагають від викладача бути технічним спеціалістом, режисером та модератором одночасно. А тут вже виникає проблема втрати емоційного контакту та труднощі з контролем академічної доброчесності на відстані[6, с.39] . Враховуючи, що на ринку праці потрібні не «енциклопедисти», а люди, здатні критично мислити та працювати в команді, необхідна трансформація методичної системи, яка полягає не просто в оновленні підручників чи заміні дошки на інтерактивну панель. Це має бути фундаментальна зміна підходів, де фокус переміщується з процесу «викладання» (що робить вчитель) на процес «навчання» (що здобуває учень). В процесі трансформації також стикаємося з такими викликами як звичка працювати «по-старому» дає ілюзію стабільності, неоднаковим доступом до технологій у різних регіонах і крім того варто зазначити, що важко оцінювати критичне мислення за допомогою старих 12-бальних тестів на відтворення тексту. Таким чином, Справжня трансформація методичної системи можлива лише тоді, коли змінюється педагогічне мислення. Без зміни філософії викладання будь-які гаджети залишаться лише дорогими іграшками [7, с.314217,1].

Висновки

Доведено, що цифрова культура викладача математики в технічному ЗВО є невід’ємною частиною його професійної етики. Вона поєднує в собі інформаційну гігієну, навички візуалізації складних об’єктів та здатність етично взаємодіяти зі штучним інтелектом. Цифровізація не підміняє фундаментальність математики, а виступає каталізатором її практичної реалізації.

1. Встановлено, що цифрові інструменти роблять математику «живою» та експериментальною наукою через 3D-візуалізацію та динамічне моделювання. Це дозволяє студентам технічних спеціальностей швидше опановувати абстрактні концепції, проте вимагає від викладача нових ролей: режисера цифрового контенту та модератора когнітивної діяльності.
2. З’ясовано, що доступність інструментів автоматизованого розв’язання задач (Photomath, WolframAlpha) вимагає переходу від оцінювання кінцевого результату до оцінювання логіки міркувань та процесу побудови математичної моделі. Пріоритетом стає не техніка ручних обчислень, а здатність студента поставити задачу машині та критично інтерпретувати отримані дані.
3. Визначено, що головною перешкодою на шляху цифровізації є консерватизм класичної школи та невідповідність старих критеріїв оцінювання новим форматам навчання. Справжня трансформація методичної системи технічного університету можлива лише за умови зміни філософії викладання, де гаджети перестають бути «дорогими іграшками» і стають середовищем для формування критичного мислення майбутнього інженера.

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ADAPTATION OF UKRAINIAN LEGISLATION TO EUROPEAN STANDARDS OF LOCAL SELF-GOVERNMENT

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Abstract. This paper provides a comprehensive analysis of the process of adapting Ukrainian legislation to European standards of local self-government. The main directions of reforming the system of local self-government in Ukraine are analyzed and a number of problems of legal regulation in the field of local self-government are identified. Based on the research, proposals for improving Ukrainian legislation are formulated, aimed at the full implementation of European standards of local self-government and improving the effectiveness of local democracy.

Keywords: local self-government, European standards, decentralization, legislative adaptation, European Charter of Local Self-Government, local government law/

Introduction

In the current context of Ukraine's European integration, the process of adapting national legislation to European standards of public administration, particularly in the field of local self-government, is of particular importance. Local self-government is a fundamental component of a democratic state, as it ensures the realization of citizens' right to participate in the resolution of issues of local importance and contributes to the development of local democracy.

The European legal tradition considers local self-government to be one of the foundations of a democratic system. According to the provisions of the European Charter of Local Self-Government, local self-government is defined as the right and actual ability of local self-government bodies to regulate and manage a significant part of public affairs within the law and in the interests of the local population [1].

By ratifying this international document in 1997, Ukraine undertook to ensure that its national legislation complies with the principles of the European model of local democracy. These principles include, in particular: the autonomy of local self-government bodies; the financial independence of local population; the principle of subsidiarity; and guarantees of citizen participation in local government.

Despite significant achievements in reforming the local self-government system, especially within the framework of decentralization reform, Ukrainian legislation is still needs further improvement for the full implementation of European standards.

The relevance of the study is determined by the need to harmonize national legislation with European standards; improve the efficiency of territorial communities; ensure the financial autonomy of local self-government bodies; and create an effective system of state supervision.

The purpose of the research. The purpose of this report is to conduct a comprehensive legal analysis of the process of adapting Ukrainian legislation to European standards of local self-government. The study also aims to identify the main problems of implementing international legal principles of local democracy in the national legal system and to develop theoretically grounded and practically oriented proposals for improving Ukrainian legislation.

Research results

European standards of local self-government have been developed within the framework of the Council of Europe and other international institutions dealing with issues of democratic governance. The main international legal document in this area is the European Charter of Local Self-Government, adopted on October 15, 1985. The Charter establishes the basic principles of local self-government, which must be enshrined in the national legislation of the participating states. In particular, Article 2 of the Charter states that the principle of local self-government must be recognized in national legislation and, where possible, in the constitution of the state [1].

The basic principles of the European model of local self-government include constitutional recognition of local self-government; autonomy of local authorities; financial independence of local population; electivity of local self-government bodies; judicial protection of local self-government.

Ukrainian researchers emphasize that the implementation of the principles of the Charter has become an important factor in reforming the public administration system in Ukraine. Thus, V. Melnychuk notes that the implementation of the provisions of the Charter contributes to the formation of an effective system of local democracy and the development of the institution of territorial communities [2, pp. 304-308].

At the same time, the process of implementing European standards raises a number of problems related to insufficient institutional capacity of communities, uneven socio-economic development of regions, and imperfect legislative regulation.

The process of adapting Ukrainian legislation to European standards of local self-government began after independence and intensified in the context of European integration. An important stage of reform was the decentralisation reform, which began in 2014 and involved the transfer of a significant part of powers from central authorities to local self-government bodies [3].

At the same time, an analysis of the current state of legislation reveals problems: unclear division of powers between state bodies and local self-government bodies; insufficient financial autonomy of communities; lack of an effective mechanism for state supervision of the legality of local self-government decisions; imperfect legislation on citizen participation in local government.

The effective implementation of European standards of local self-government in Ukraine requires not only the formal enshrinement of relevant principles in legislation, but also the creation of a comprehensive legal system that will ensure the real autonomy of territorial communities and the effectiveness of local government.

One of the main innovations that could significantly improve the effectiveness of local self-government is the legislative enshrinement of the principle of full competence of territorial communities. In order to implement this principle, it is proposed to amend the Law of Ukraine “On Local Self-Government in Ukraine” [4], supplementing it with the following provision:

“Territorial communities and their bodies have the right to independently decide all issues of local importance that are not referred to the competence of state authorities by the Constitution and laws of Ukraine”.

It is also necessary to enshrine in legislation the principle of presumption of local self-government powers. This model is widely used in European countries and complies with the principle of subsidiarity enshrined in European Union law.

The current system of state supervision of local self-government bodies in Ukraine is fragmented and does not ensure an adequate balance between the autonomy of communities and control over the legality of their activities.

In order to solve this problem, it is advisable to introduce an institution of administrative supervision over the legality of acts of local self-government bodies, which is in line with European practice.

In particular, it is proposed to:

1. legislate the institution of prefects who will monitor the legality of local government acts;
2. define a clear procedure for suspending local government acts in case of their non-compliance with the law;
3. introduce a mechanism for judicial review of local government acts.

It is important to note that, in accordance with European standards, state oversight is focused exclusively on verifying the legality of acts, rather than the expediency of decisions made by local self-government bodies.

The financial autonomy of local communities is one of the key elements of effective local self-government.

Despite budgetary decentralization, the current system of interbudgetary relations in Ukraine still characterized by a significant dependence of local budgets on state transfers.

In this regard, it is proposed to:

1. expand the list of local taxes and fees;
2. enshrine in the Budget Code the principle of a guaranteed share of local budgets in national tax revenues;
3. introduce a system of long-term budget planning at the level of territorial communities;
4. create municipal territorial development funds to finance infrastructure projects.

One of the current trends in the development of local self-government in European countries is the active use of e-democracy tools.

In Ukraine, certain mechanisms for electronic citizen participation are already in use, in particular electronic petitions and public consultations. However, their legal regulation remains insufficiently systematic.

In this regard, it is advisable to:

1. adopt a special law on e-democracy at the local level;
2. legislate the following tools: electronic local initiatives, electronic public hearings, electronic consultations with the public, digital platforms for citizen participation.
3. create a unified state digital platform for local democracy.

The use of such tools will contribute to increasing the transparency of local government activities and activating citizen participation in managerial decision-making.

Conclusions

The adaptation of Ukrainian legislation to European standards of local self-government is an important element of the process of European integration and

democratization of the public administration system. The ratification of the European Charter of Local Self-Government was an important step in the formation of a modern model of local self-government in Ukraine. However, the process of implementing the provisions of the Charter remains incomplete and requires further legislative and institutional development. The implementation of the changes proposed in the study will contribute to the formation of an effective system of local democracy and ensure the compliance of Ukraine's national legislation with European standards.

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ANALYSIS OF EXISTING METHODOLOGICAL APPROACHES TO BUSINESS PROCESS MANAGEMENT IN DISTRIBUTED PROJECT TEAMS OF INFORMATION AND COMMUNICATION TECHNOLOGY ENTERPRISES

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Abstract. The paper analyzes existing methodological approaches to business process management in distributed project teams of enterprises in the field of information and communication technologies.
The main methodological approaches to business process management in distributed teams are identified and the results of their comparative analysis are presented. The prospects for their development in modern conditions are substantiated and presented
Keywords: business process management, distributed project teams, enterprise, information and communication technologies.

Introduction

The modern economy is characterized by globalization, digitalization of business, and widespread use of distributed teams in the field of information and communication technologies (ICT). Such teams, working in different time zones and geographical regions, require new approaches to business process management, focused on integration, flexibility, and the use of information technology.

The purpose of the research. The purpose of this report is to analyze the main methodological approaches to business process management in the context of distributed project teams of ICT enterprises, to determine their features, advantages and limitations.

Business Process Management (BPM) is a systematic approach to optimizing the activities of an enterprise through modeling, analysis, automation and continuous improvement of business processes.

For ICT enterprises, BPM has a dual meaning, namely: as a method of managing operational activities and as a tool for coordinating distributed project teams working remotely [1].

Distributed project teams are groups of specialists who work together on a project, using digital platforms for communication and collaboration [1].

Research results

1. Methodological approaches to business process management in distributed teams

1.1. Process-oriented approach (BPMN, ISO 9001, ITIL)

Based on the formalization of business processes using standardized notations (BPMN 2.0) and procedure descriptions [2,3].

1.2. Agile (Agile / Scrum / Kanban) approach

This approach is focused on iterative project management, rapid response to changes and close interaction between team members [2,3].

1.3. Integrated approach (Hybrid BPM)

Involves a combination of traditional BPM with flexible methodologies (Agile, DevOps) [2,3].

1.4. Digital-analytical approach (Data-Driven BPM)

Applied in leading IT companies and is based on the use of Big Data, artificial intelligence (AI) and machine learning to monitor business processes [2,3].

Table 1. Comparative analysis of approaches

Approach	Flexibility	Automation	Suitability for Distributed Teams
Process-oriented	Low	High	Medium
Agile / Scrum	High	Medium	High
Integrated	High	High	High
Digital-analytical	Medium	High	High

Prospects for the development of methodological approaches [3,4].

1. Integration of Agile approaches into business process management.

The prospects of this direction are due to the need to quickly respond to changes in the external and internal environment of the enterprise. Agile approaches provide flexible planning, phased implementation of tasks and constant feedback between team members. This is especially important for distributed teams, as it allows for prompt coordination of work regardless of the location of the performers. As a result, the adaptability of business processes increases and the time for making management decisions is reduced.

2. Development of digital platforms for business process management.

This direction is important due to the need to create a single information environment for the interaction of all members of a distributed team. The use of digital platforms allows for centralized management of tasks, deadlines, resources and communications. Such solutions increase the transparency of business process implementation and reduce the risk of information loss. The prospects of this direction lie in the formation of a more manageable, coordinated and technologically integrated work system.

3. Automation of control and monitoring of process execution.

Further development of methodological approaches is associated with the implementation of automated means of controlling the course of business processes. This allows you to track the performance of tasks in real time, identify deviations and respond to problem situations in a timely manner. For distributed teams, automation of control is an important condition for maintaining discipline, consistency of actions and compliance with established regulations. In the future, this will contribute to increasing the reliability and effectiveness of management.

4. Using data analytics to support management decisions.

The prospects of this direction are determined by the growth in the volume of information that accompanies the implementation of business processes in the digital environment. Analytical tools make it possible to assess the effectiveness of processes, identify weaknesses and predict possible risks. In distributed teams, this creates the basis for more informed and timely decision-making. Thanks to this, business process management becomes more evidence-based, predictable and strategically oriented.

5. Formation of integrated methodological management models.

The need for this direction is due to the limited application of individual approaches in the complex conditions of functioning of distributed teams. Integrated models combine the advantages of process, flexible, digital and analytical management. This approach allows taking into account the specifics of the organizational structure, the nature of the tasks and the level of digital maturity of the enterprise. In the future, this

will ensure the complexity of managerial influence and higher efficiency of business process organization.

Conclusions

The analysis shows that business process management in distributed teams of ICT enterprises requires an integrated approach that combines the flexibility of Agile and the structure of BPM.

Effective interaction is possible only under the conditions of implementing unified digital management systems, automation of communications and continuous improvement of processes based on analytics.

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VETERAN POLICY IN UKRAINE AT THE LOCAL LEVEL. THE CONCEPT OF REGIONAL COORDINATORS

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Abstract. This paper analyzes the challenges of implementing veteran policy in Ukraine at the local level amid full-scale war, highlighting the gap between national strategies and the limited capacity of communities. It proposes regional coordinators as a mechanism to improve coordination between central and local authorities, strengthen data-driven decision-making, and support communities methodologically. Based on international experience, particularly the U.S. model, the concept includes phased implementation and KPI-based monitoring. The approach is expected to enhance service accessibility, policy coherence, and veteran reintegration, though risks include financial constraints and staff shortage, aiming overall to create a more coordinated and adaptive support system.

Анотація. У цій статті аналізуються проблеми впровадження політики щодо ветеранів в Україні на місцевому рівні в умовах повномасштабної війни, підкреслюючи розрив між національними стратегіями та обмеженими можливостями громад. У ній пропонується регіональних координаторів як механізм для покращення координації між центральною та місцевою владою, посилення прийняття рішень на основі даних та методологічної підтримки громад. Ґрунтуючись на міжнародному досвіді, зокрема на моделі США, концепція включає поетапне впровадження та моніторинг на основі ключових показників ефективності (KPI). Очікується, що цей підхід покращить доступність послуг, узгодженість політики та реінтеграцію ветеранів, хоча ризики включають фінансові обмеження та кадровий дефіцит, загалом спрямовані на створення більш скоординованої та адаптивної системи підтримки.

Keywords: veteran policy, regional coordination, local governance, veterans support, public administration, Ukraine, social integration, decentralization, KPI monitoring, community development

Ключові слова: політика щодо ветеранів, регіональна координація, місцеве самоврядування, підтримка ветеранів, державне управління, Україна, соціальна інтеграція, децентралізація, моніторинг ключових показників ефективності (KPI), розвиток громади

Introduction

In the context of the full-scale war, the issue of effective implementation of veteran policy in Ukraine has become particularly relevant, especially at the level of territorial communities where direct interaction with veterans and their families takes place. Despite the existence of a legal framework and state programs, there is a gap between national strategic objectives and the capacity of local communities to implement them due to limited resources, staff shortage, and weak coordination. In this context, there is a growing need to establish an effective mechanism for interaction between central authorities and local self-government.

The purpose of this article is to substantiate the feasibility of introducing the institution of regional coordinators of veteran policy as a tool to improve governance efficiency, ensure coordination among stakeholders, and provide high-quality support for veterans at the local level. [1,2,3]

The purpose of the research. The purpose of this research is to substantiate the feasibility and effectiveness of introducing regional coordinators of veteran policy in Ukraine as an institutional mechanism to strengthen coordination between central authorities and local communities, improve the implementation of veteran support programs, and enhance the overall accessibility and quality of services for veterans and their families at the local level. [4].

Research results

The research results demonstrate that the introduction of regional coordinators can significantly improve the effectiveness of veteran policy implementation in Ukraine by strengthening coordination between national and local levels, enhancing

communication among stakeholders, and ensuring more consistent application of support programs across communities. [5] The proposed model enables better resource allocation, systematic monitoring through KPI-based tools, and adaptation of policies to regional needs. At the same time, the findings highlight potential challenges, including financial limitations, кадровий дефіцит, and varying capacities of territorial communities, which require a phased and flexible implementation approach. [6]

Prospects for the development of methodological approaches

Development of unified national standards for veteran policy implementation

This involves creating clear methodological guidelines for territorial communities on designing and implementing veteran support programs, including standardized approaches to social, psychological, educational, and rehabilitation services, ensuring consistent service quality across regions.

Introduction of digital monitoring systems and KPI-based evaluation tools

The approach includes developing a unified information system (dashboard) with KPIs to monitor the effectiveness of veteran policy at regional and local levels, covering indicators such as service coverage, satisfaction rates, employment, and reintegration outcomes.

Integration of international best practices (e.g., U.S. model)

Adapting international experience, particularly the U.S. model of local veteran service offices and cooperation with non-governmental organizations (e.g., USO), can strengthen a multi-level support system with active community involvement.

Strengthening data collection, analytics, and evidence-based decision-making

This includes establishing a systematic process of data collection and analysis through regional coordinators, enabling better policy adjustments based on real needs and improving transparency and accountability.

Capacity-building and training programs for specialists

It involves training and supporting specialists working with veterans at the community level, and enhancing the professional capacity required for effective policy implementation. [7,8,9]

Conclusions

The study confirms that the current system of implementing veteran policy in Ukraine requires strengthening at the regional and local levels, particularly in terms of coordination, resource distribution, and institutional capacity. The identified gaps between national strategies and the practical capabilities of territorial communities highlight the need for systemic solutions that ensure consistency and effectiveness in delivering services to veterans and their families.

The proposed introduction of regional coordinators represents a viable mechanism to bridge these gaps by enhancing communication between central authorities and local

self-government, supporting communities methodologically, and ensuring data-driven policy implementation. The integration of international experience, combined with the development of unified standards, digital monitoring tools, and capacity-building initiatives, can significantly improve the accessibility and quality of veteran support. Overall, the implementation of this model, with a phased and adaptive approach, has the potential to create a more resilient, coordinated, and effective veteran policy system in Ukraine. [10]

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DIGITAL COMMUNICATION TECHNOLOGIES IN MODERN EDUCATION: OPPORTUNITIES AND CHALLENGES

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Abstract. The theses consider how digital communication technologies contribute to emerging higher education. Of special interest is the application of digital platforms and online communication tools as well as interactive technologies that facilitate the efficiency of educational process. The paper shows the significance of digital communication in enhancing cooperation between teachers and learners and increasing access to educational materials in the online learning space.
Keywords: digital communication, higher education, digital technologies, online learning, educational environment.

Introduction

The emergence of the information society has greatly changed the process of education in institutions of higher education. Digital technologies in communication have turned into a part of the contemporary educational setting, as they allow the appearance of new modes of interaction among teachers and learners. Digitization allows modernizing the way of teaching and improving the accessibility and quality of education.

Research Results

Digital communication technologies in higher education open up the opportunities of interaction in the educational process to a significant degree. The digital platforms of the modern world provide the opportunity to successfully share information, structure collaborative learning processes, and maintain constant contact between the participants of the educational process. Education Because of learning management systems, video conferencing systems and online collaboration tools, educators can structure both synchronous and asynchronous communication, which enhances the flexibility of learning and enables student engagement [1,3]. Digital communication tools are also factors that facilitate interactive learning environment that helps to encourage students to engage actively in the learning process. The discussion forums, virtual classrooms, and other collaborative online platforms allow students to engage in group works, exchange ideas and acquire communication and teamwork skills. These methods facilitate development of critical thinking, creativity, and problem solving skills that are vital in the digital age development of professionals.

The other significant element of online communication in the educational sector is the widening of access to education and academic collaboration. The digital

technologies enable the students and educators to gain access to the electronic libraries, online databases and open educational resources in other regions of the world. This facilitates global education and encourages information sharing and good learning processes [2]. More than that, the use of digital communication technologies allows institutions of higher education to introduce new educational formats including blended learning and online learning that integrate traditional and digital strategies in teaching.

At the same time, the active implementation of digital technologies in higher education assumes the systematic formation of digital literacy of both the teaching staff and students. Digital communication tools can only be effectively used with both technical skills as well as the capability to operate in complicated digital places, be critical to take information on the Internet, and remain responsible and ethically sound of communication within the virtual space [4]. Digital literacy thus has a very broad perspective of the set of skills, such as information management, online communication, online collaboration, cybersecurity awareness, and responsible use of digital content.

Moreover, academic integrity and responsible digital conduct are developed with the assistance of the emergence of digital literacy. Learners and teachers need to know ethical aspects of digital information, such as correct citation, respect of intellectual property and avoiding plagiarism. In turn, the culture of responsible digital participation must be encouraged in higher education institutions and facilitate the process of developing critical approaches to digital thinking among the participants of the educational process. In such a way, the further evolution of digital literacy, as well as methodological background of the digital technologies implementation, must be regarded as the strategic priority of the institutions of higher education. These measures are not only contributing to the quality of education but are also equipping the graduates to be fully functional in the fast moving digital society.

Conclusions

Therefore, digital communication technologies are significant in reshaping the contemporary higher education and can help in the establishment of a new and flexible education setting. Their proper application will improve the communication between the participants of the educational process, increase access to the educational resources, and the development of the key professional skills needed in the digital society.

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THE ROLE OF LAW IN THE DEVELOPMENT OF CIVIL SOCIETY INSTITUTIONS IN UKRAINE

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Abstract. The theses reveal the role of law as a key factor in the development of civil society institutions in Ukraine. The constitutional and legal foundations of the activities of public associations are analyzed, the mechanisms of interaction between public authorities and the public are studied, the main problems of regulatory and legal support are identified, and the prospects for improving legislation in the context of European integration and martial law are substantiated.

Анотація. У тезах розкривається роль права як ключового чинника розвитку інститутів громадянського суспільства в Україні. Проаналізовано конституційно-правові засади діяльності громадських об'єднань, досліджено механізми взаємодії органів публічної влади та громадськості, визначено основні проблеми нормативно-правового забезпечення та обґрунтовано перспективи вдосконалення законодавства в умовах євроінтеграції та воєнного стану.

Keywords: civil society, civil society institutions, legal regulation, public administration, European integration.

Ключові слова: громадянське суспільство, інститути громадянського суспільства, правове регулювання, публічне управління, євроінтеграція.

Introduction

The processes of globalization, democratization and European integration determine the current vector of Ukraine's development, setting new requirements for the interaction between the state and society. The formation of civil society is a key prerequisite for building Ukraine as a democratic, legal state [5]. Civil society institutions (CSIs) –public associations, charitable organizations, trade unions, volunteer movements –ensure the realization of human rights and freedoms, control over the activities of public authorities, and the articulation of the interests of social groups.

The issue of the role of law in the development of CSIs has gained particular relevance in the context of full-scale armed aggression against Ukraine [6]. Civil

society has demonstrated an unprecedented level of self-organization, taking on a significant part of humanitarian support functions. Law acts not merely as a set of regulatory norms but as a fundamental instrument for legitimizing civic activity.

The purpose of the research is a comprehensive analysis of the role of law as a factor in the development of civil society institutions in Ukraine, identifying problems of legislative regulation and substantiating ways to improve the legal framework.

Research Results

1. Legal Foundations for the Functioning of Civil Society Institutions in Ukraine

The legal foundations for the functioning of CSIs in Ukraine constitute an extensive system of normative legal acts based on a hierarchical principle. The constitutional level of regulation enshrines the right of citizens to freedom of association (Article 36 of the Constitution of Ukraine[1]) and establishes the limits of restrictions –the creation of associations is prohibited only by court order in cases provided for by law.

The Law of Ukraine:

The Law of Ukraine "On Public Associations" (2012) introduced the possibility for private legal entities to create associations, simplified the registration procedure, and clearly distinguished the status of public organizations and unions [2].

The Law of Ukraine "On Charitable Activities and Charitable Organizations" defined the legal forms of charitable structures and mechanisms for controlling the use of donations [3].

An important role is played by the National Strategy for Promoting the Development of Civil Society in Ukraine for 2021–2026, which defines legal guidelines: improving tax legislation for CSIs, implementing mechanisms of state procurement of social services, and developing e-democracy [4].

2. Mechanisms of Interaction between Public Authorities and the Public

The interaction between public authorities and CSIs is a key indicator of the democratic nature of the state system. The main forms of interaction established by legislation are:

Public consultations –the obligation of authorities to publish draft regulations and collect proposals.

Public expertise –allows CSIs to study the activities of authorities and prepare conclusions that are subject to mandatory review.

Public control –tools for monitoring the use of budget funds.

Participation in collegial bodies –creation of public councils under executive authorities.

The development of e-democracy (electronic petitions, the "Diia" portal, participatory budgets) has significantly expanded the circle of persons involved in

governance. The legal recognition of the status of electronic petitions turns digital activity into a legal fact.

3. Problems and Prospects for the Development of Legislation

The analysis of the regulatory framework revealed a number of systemic problems:

1. Imperfect tax legislation regarding non-profit organizations. Solution: introduction of the concept of "social enterprise" and a special legal regime for NGOs.

2. Declarative nature of public participation mechanisms –the recommendatory nature of public council decisions. Solution: establishing the responsibility of officials for non-compliance with public consultation procedures.

3. Lack of legal protection for public activists. Solution: adoption of Anti-SLAPP legislation.

4. Absence of lobbying regulation. Solution: adoption of the Law "On Lobbying" in accordance with European standards.

Prospects for improving legislation are determined by the European integration vector and the conditions of martial law. Priority areas include:

introduction of the "percentage philanthropy" mechanism (allocating part of personal income tax to support CSIs);

development of social procurement and competitive procurement of social services from CSIs;

legislative consolidation of the status of "digital volunteers" and simplification of reporting for small initiative groups.

Conclusions

1. Law acts as a fundamental basis and guarantor of the autonomy of civil society. In Ukraine, a basic level of legal conditions that meets democratic standards has been formed at the constitutional level.

2. Domestic legislation (the Laws "On Public Associations", "On Charitable Activities") has demonstrated significant progress in liberalizing public life. However, issues of financial self-sufficiency of organizations and tax incentives for patronage require resolution.

3. Mechanisms of interaction between authorities and the public need to strengthen the legal weight of public council conclusions, moving from the model of "the state over society" to the model of "the state –partner of society."

4. The conditions of martial law have demonstrated the high flexibility of the Ukrainian legal system [6]. The experience of rapid adaptation of legislation on volunteering and humanitarian aid needs to be institutionalized.

5. Prospects for the development of civil society in Ukraine are linked to the successful harmonization of legislation with European standards, the introduction of

"percentage philanthropy", protection of activists, and the development of e-democracy.

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DIGITAL COMPETENCIES AS THE BASIS OF PROFESSIONAL CULTURE OF A MODERN SPECIALIST

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Abstract. The article substantiates the role of education digitalization as a key trend in shaping the professional culture of modern specialists. Particular attention is paid to the development of digital competencies in marketing, one of the most digitalized fields. The use of modern digital tools in professional activities and the educational process is analyzed. It is demonstrated that the integration of digital technologies into learning contributes to the formation of practically oriented competencies and enhances the competitiveness of specialists.
Keywords: education digitalization, digital competencies, professional culture, marketing, digital marketing, educational technologies.

Inroduction

Education digitalization is one of the leading trends in the development of modern society, defining new approaches to shaping the professional culture of specialists. In the context of the digital economy, not only the tools of professional activity are changing, but also the requirements for staff training. Education must not only transfer knowledge but also develop the ability to act effectively in a digital environment. This

problem is particularly relevant in marketing, where digital technologies have become a fundamental tool of professional activity. Therefore, digitalization of the educational process is a necessary condition for shaping the professional culture of modern marketers.

The purpose of the research

The purpose of the study is to examine education digitalization as a factor in the development of professional culture and to substantiate the role of digital competencies in the training of marketing specialists using modern digital tools.

Research results

Education digitalization involves the systematic integration of digital technologies into the learning process, changing educational models, and transforming the roles of instructors and learners. In this context, digital competencies become not only the outcome of learning but also a tool for its implementation.

The professional culture of a modern specialist is shaped under the influence of the digital environment, which sets new standards of activity. In marketing, these processes are particularly intense, as digital communication channels, data analytics, and automation have become the basis of professional practice.

A key direction of education digitalization is the implementation of practice-oriented learning using real digital tools. In marketing training, the use of **Google Analytics** is essential for developing analytical competencies. According to DataGlobeHub, 92% of marketers use web analytics tools [1]. It is important to teach students how to use this digital tool correctly, which allows them to analyze user behavior, evaluate the effectiveness of marketing campaigns, and make data-driven decisions. The use of advertising platforms, such as **Meta Ads Manager**, in the educational process allows students to simulate real marketing campaigns. This promotes the development of strategic thinking, audience segmentation skills, and budget optimization abilities. A crucial element of education digitalization is the integration of CRM systems, such as **HubSpot** and **Salesforce**, into courses. Working with these systems develops students' skills in managing customer data, personalizing communication, and building long-term client relationships. The content component is implemented through the use of SEO tools, such as **SEMrush**, allowing students to master web optimization methods and improve visibility in search engines. This provides practical understanding of digital promotion mechanisms.

Modern marketing also actively uses automation and artificial intelligence technologies. Currently, 91% of companies apply AI tools in marketing [2]. Marketing automation platforms allow the configuration of automated email campaigns, audience segmentation, and personalized communication. Chatbots ensure prompt interaction with customers and enhance client experience.

An important aspect of professional culture is adherence to digital ethics and security. The use of personal data in marketing must comply with regulatory requirements and responsible information practices. This builds consumer trust and a positive corporate image. In the context of education digitalization, forming digital competencies among future marketers requires updating curricula. It is advisable to implement practice-oriented approaches involving real digital tools, case analysis, and project-based tasks (see Table 1).

Table 1. Comparison of Traditional and Digital Models of Marketing Specialist Training

Criterion	Traditional Education	Digital Education (with Marketing Tools)
Knowledge Sources	Textbooks, lectures	Online platforms, LMS, interactive courses
Practical Skills	Limited to case studies	Working with Google Analytics, Meta Ads Manager, CRM
Analytics	Theoretical study	Analysis of real data, KPIs, conversions
Communication	Classroom-based	Omnichannel (social media, email, chatbots)
Content	Theoretical assignments	SEO, video, storytelling, digital content
Market Relevance	Partial	High (data-driven approach)

Source: Author's development

The use of online platforms, distance learning systems, and interactive environments fosters students' independent learning skills, digital communication, and teamwork abilities. Thus, the educational process approximates real professional activity conditions.

The role of the instructor also transforms, acting as a facilitator in a digital learning environment. Marketing instructors must not only master modern digital tools but also integrate them into the learning process to create conditions for forming practical competencies.

Education digitalization contributes to forming a new model of professional culture based on flexibility, innovation, continuous learning, and effective work in a digital environment. In marketing, this is manifested in the shift toward data-driven approaches, personalized communication, and the use of artificial intelligence.

Education digitalization is a system-forming trend in the development of the professional culture of modern specialists. It integrates education, science, and practice and forms digital competencies as the foundation of professional training.

In marketing, the integration of digital tools into the educational process (Google Analytics, Meta Ads, CRM systems, SEO platforms) enables the development of practically oriented competencies and the preparation of competitive specialists.

Statistical data and comparative analysis confirm that digital technologies not only improve marketing efficiency but also significantly enhance learning outcomes. Thus, education digitalization is a key mechanism for shaping the professional culture of a new generation of specialists.

Conclusion

Education digitalization is a decisive factor in shaping the professional culture of modern specialists, transforming both the content and methods of learning. The integration of digital tools into the educational process ensures the development of practical, data-driven competencies that closely reflect real professional environments, particularly in marketing.

Strengthening digital competencies not only increases graduates' competitiveness but also fosters adaptability, critical thinking, continuous learning, and ethical responsibility in the use of technologies. Therefore, education digitalization serves as a strategic foundation for preparing highly qualified professionals capable of effective performance in an increasingly complex and digitalized economy.

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DIGITAL TECHNOLOGIES IN PROFESSIONAL EDUCATION: PEDAGOGICAL POTENTIAL AND DEVELOPMENT PROSPECTS

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Abstract. The theses also analyze the impact of digital technologies during the process of modernization of professional education and its effects on the efficiency of the educational process. The emphasis is put on the utilization of digital learning platforms, collaborative tools, and online communication technologies which can increase the level of training and advance the formation of professional skills of future specialists.
Keywords: digital technologies, professional education, digital learning environment, innovative teaching methods, digital competencies.

Introduction

The high information and communication technologies that are fast emerging have greatly changed the educational environment of contemporary higher education. The digital technologies are becoming a part of the educational process and they provide new opportunities to enhance the quality of the professional training. Colleges are actively adopting digital learning tools to stay abreast of current teaching methods, increase the availability of education resources as well as improve on the quality of communication between instructors and learners.

Research Results

The introduction of digital technologies to the professional education makes its contribution to creation of the innovative learning space that can be used to promote the modern pedagogical practice. Educators have access to digital learning platforms, cloud services, and multimedia equipment that allow them to plan their learning activities with greater effectiveness and to offer greater flexibility in their learning. The interactive educational content created with the help of digital tools makes it possible to engage in self-directed learning and train critical and creative thinking [1, 3].

The development of digital competencies in students and educators is also another significant area of digital transformation in education. Digital competence is the quality of using digital technologies, being able to interpret digital information, and using technological tools to solve professional assignments critically. The competencies are developed, which leads to the creation of a competitive professional who is able to adjust to the high-paced digital environment.The use of digital technologies also makes possible the implementation of such innovative teaching methods as blended learning, project-based learning, and collaborative online learning. These strategies foster participation of students, team building, and also lead to gathering of communication and problem solving abilities [2]. Moreover, the digital tools help teachers to track the progress of students better and customize the learning process in line with the individual education requirements.

Moreover, application of digital technologies expands the possibilities to engage in international academic collaboration and to take part in the global educational operations. Digital research environments and online educational platforms enable educators and students to cooperate with global partners and share knowledge and engage in collaborative educational and research initiatives.

Conclusions

That is why the incorporation of digital technologies into professional education contributes greatly to the quality and effectiveness of the education process. Digital tools application helps to create flexible and innovative learning conditions, promotes the emergence of digital skills, and encourages the modernization of the teaching process. Ongoing development of digital platform, cloud-based services, learning management systems, and interactive learning materials allow educators to create more

engaging and student-driven learning experiences, which improve the motivation levels of learners, as well as, helping them to understand the learning materials more profoundly. Digital technologies also establish the best frameworks to enable the introduction of new pedagogical models, including blended learning, project-based learning, collaborative online learning, and adaptive learning models. Such strategies allow adding old teaching ways to innovative technological solutions and, therefore, guarantee the increased flexibility of the educational process and a chance to offer individual learning paths. Consequently, students can train not only professional knowledge but also such valuable transversal skills as critical thinking, digital communication, creativity, and problem-solving skills.

Furthermore, the digital revolution of professional education is one of the factors contributing to the increase in access to educational materials and the enhancement of academic collaboration on the international level. Digital repositories, online educational platforms and virtual research environments enable teachers and learners to engage in international education, share academic experience and collaborate with international organizations. This goes a long way in improving global competitiveness of institutions of higher learning and enhances diffusion of new educational practices.

In turn, the further evolution of the digital technologies and their strategic use in the professional education are instrumental in the development of the modern educational systems that will be able to respond to the needs of the digital economy and knowledge-based society. Not only the quality of professional training is enhanced with the help of systematic use of the digital innovations in the educational process, but also the future specialists are equipped with the opportunities to be involved in the effective professional activity in a rapidly changing technological environment.

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DIGITAL TRANSFORMATION IN HIGHER EDUCATION: PEDAGOGICAL AND TECHNOLOGICAL DIMENSIONS

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Abstract. The theses examine the impact of digital transformation on modern higher education and the role of innovative technologies in improving the effectiveness of the educational process. Particular attention is paid to the integration of digital learning environments, the development of digital competencies, and the use of innovative pedagogical approaches in the professional training of future specialists.
Keywords: digital transformation, higher education, digital technologies, digital competencies, innovative learning.

Introduction

The current accelerated advancement of digital technologies has also contributed to the change in the system of higher learning in many parts of the world. The shift to digital learning situations demands the transformations of the old-fashioned educational activities and introduction of innovative technologies designed to enhance the quality and accessibility of education. Digital tools are becoming more widespread in the educational process of higher education institutions, which are aimed at organizing the flexible learning model and reinforcing the professional training of students.

Research Results

Digital transformation brings up new possibilities of enhancing the organization and management of the educational process. Digital platforms, learning management systems and cloud technologies can be integrated to enable higher education institutions to create flexible and interactive learning environments that enable disjunctive and asynchronous learning. These technologies offer fresh opportunities of academic contact, working on things, and digital access to learning materials without any reference to geographical limits [1-3].

It is also through the application of digital technologies that innovative pedagogical practices that include blended learning, project-based learning, and interactive online education are implemented. The tactics promote student involvement, enhance the desire to learn and aid students develop critical thinking and problem-solving. Digital

tools allow the teacher to vary teaching methods, use multimedia learning tools and design dynamically changing learning resources that add a better learning experience.

Simultaneously, the successful adoption of the digital technologies should presuppose the emergence of the digital competence of both teachers and learners. Digital competence encompasses the skills to operate the digital tools, critically analyze digital information, and use the technological solutions to solve the professional or educational activities. The formation of such competencies helps to create the modern culture of professionals and promotes the formation of the lifelong learning skills [4].

Moreover, digital technologies open the space of international academic collaboration and exchange of knowledge greatly. International collaboration between universities, researchers and cross-country students are facilitated by the use of online learning platforms, online repositories and virtual research environments. This adds to globalizing higher education and enhances the establishment of new educational practices.

Conclusions

In this way, digital transformation is one of the most important aspects that can affect the evolution of modern higher education. The introduction of digital technologies into the educational process can lead to modernization of the teaching process, the increased access to educational materials, as well as the ability to construct flexible educational environments that will suit the requirements of the digital society. The digital platform and cloud services and the relationships based on interaction contribute greatly to the communication between the actors of the educational process and help to create a new model of learning grounded on collaboration, interactivity, and accessibility. Meanwhile, the successful application of digital technologies presupposes the systematic formation of digital skills in teachers and learners. The development of digital literacy allows the members of the educational process to successfully work in digital space, to analyze information critically, and to reasonably manage the use of digital resources in the academic and professional life. On-going professional growth of teachers and incorporation of digital expertise in educational courses are thus key determinants of the successful digital revolution of higher education.

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INTEGRATION OF ARTIFICIAL INTELLIGENCE TOOLS INTO PROFESSIONAL TRAINING OF SPECIALISTS: PEDAGOGICAL POTENTIAL AND RISKS

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Abstract. The theses explore the didagogical possibilities and the possible threats of using the artificial intelligence resources in professional training of specialists in the higher education sphere. This particular interest is in the functionality of AI technologies in educational process, their contribution to the learning process efficiency, the development of digital skills, and the transformed education process. The paper, also, explains the potential ethical, methodological and organizational concerns of fulfilling the potential of artificial intelligence in education.
Keywords: artificial intelligence, higher education, professional training, digital technologies, AI in education.

Introduction

The emergence of artificial intelligence technologies has affected the social and professional activity, and education is not an exception. Artificial intelligence (AI) tools are becoming more popular in teaching, learning, and research activities in institutions of higher learning. The introduction of AI technologies to the educational process creates new opportunities of enhancing the quality of professional training and creating new pedagogical approaches that would meet the needs of the digital society.

Research Results

The introduction of the use of artificial intelligence tools into professional training also broadens the opportunities of enhancing the efficiency and individuality of the educational process in higher education. The application of AI-based technologies allows creating adaptive learning environments able to analyze the progress of learning among students, recognize personal learning requirements, and offer a recommendation on education on an individual basis. These systems facilitate the use of differentiated learning styles and enable teachers to modify the learning material and instructions based on student academic achievements and learning styles.

The artificial intelligence is also used to develop new teaching techniques and online learning. The intelligent tutoring system, automated assessment tools, and AI-based educational resources contribute to arranging interactive educational events and empower students to master complicated professional skills. These technologies have allowed automated routinized functions like grading assignments, engaging learning outcomes, and giving feedback thus enabling educators to concentrate more on pedagogical directions and mentoring [2, 4]. Simultaneously, AI application in the sphere of professional training facilitates the emergence of digital literacy and analytical thinking among the students. Through communication with the AI-based solutions, students can learn to work with the current digital technologies that are highly prevalent in the professional and industrial environments. This helps to develop technological competence, skills in problem-solving, and the working ability in the digital environment which are the requirements of the successful professional activity in the modern knowledge-based economy [1]. Nonetheless, there are also some pedagogical and ethical issues that are related to the introduction of artificial intelligence into the educational process. Among the major risks, it is possible to mention an over-dependence on automated systems, which can decrease the importance of critical thinking and independent problem-solving in case it is not implemented in the learning process not appropriately [3]. Moreover, the high education institutions would need to be careful about the problems with academic integrity, data privacy, and the use of artificial intelligence in a proper way.

Thus, the effective introduction of artificial intelligence technologies in professional training should be based on a reasonable balance between technological innovation and pedagogical accountability. Universities and colleges need to come up with methodological guidelines, ethical codes and programs on digital competence development that will ensure that artificial intelligence tools are utilized well and responsibly in the education process. In this way, educational institutions will be able to use the pedagogical capabilities of artificial intelligence to the fullest and reduce the potential risks of its usage.

Conclusions

In this way, the idea of applying the artificial intelligence tools to the professional training creates great pedagogical opportunities to enhance the quality and efficiency of the education. Meanwhile, the colleges and universities should be cautious about potential threats and come up with proper solutions regarding the responsible use of AI technologies. The moderate utilization of artificial intelligence, along with the maturation of the digital skills and ethical consciousness among educators and learners, may help to make the modernization of professional education in the digital age successful.

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FEATURES OF THE IMPLEMENTATION OF VETERAN POLICY BY PUBLIC ADMINISTRATION BODIES IN UKRAINE

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Abstract:The paper analyzes the principles, objectives, current status and prospects for the implementation of state veteran policy in Ukraine. The public authorities in veteran affairs and their competences are identified. The main attention is paid to the transformation of the management model from providing benefits to creating a system of opportunities. The role of digitalization and service offices in ensuring an effective transition from military service to civilian life is identified.

Анотація: У роботі проаналізовано принципи, завдання, сучасний стан та перспективи реалізації державної ветеранської політики в Україні. Визначено органи публічної влади у справах ветеранів та їх компетенції. Основну увагу приділено трансформації управлінської моделі від надання пільг до створення системи можливостей Визначено роль цифровізації та сервісних офісів у забезпеченні ефективного переходу від військової служби до цивільного життя.

Keywords: veteran policy, public administration, Ministry of Veterans Affairs, veteran, specialist in supporting war veterans...

Ключові слова: ветеранська політика, публічне управління, Міністерство у справах ветеранів, ветеран, фахівець із супроводу ветеранів війни...

Introduction

The relevance of the topic is due to the unprecedented number of veterans who appeared in Ukraine as a result of the full-scale aggression of the Russian Federation. Effective reintegration of this category of citizens into socio-economic life is a matter of national security and sustainable development of society. Traditional approaches to social protection, which were based exclusively on passive benefits, have exhausted

themselves and are not effective when working with veterans. Instead, there is a need to form a people-centered policy, where the public authority acts not as a controller, but as a service center that accompanies the veteran on the path of resocialization.

The purpose of the research. The purpose of the work is to analyze the principles, objectives and current state of state veteran policy in Ukraine and determine the competencies of public authorities in veteran affairs.

Research results

1. The main principles of veteran policy in Ukraine are laid down in the draft Law of Ukraine "On the Basic Principles of State Veteran Policy Regarding Veterans of the Russian-Ukrainian War, Veterans with Special Merits to the Motherland, Their Family Members, and Family Members of the Fallen (Deceased) Defenders of Ukraine" [1]. State policy in the field of social protection of war veterans and their family members, family members of deceased war veterans, family members of deceased Defenders of Ukraine is formed and implemented on the principles of social justice when establishing the scope of benefits and guarantees, comprehensiveness when forming and implementing measures to adapt war veterans to peaceful life, proper financial provision of legally provided benefits and guarantees for the specified category of citizens, openness and equal access to information about state benefits and guarantees, mechanisms for their implementation, access to the exercise of the right to receive all benefits and guarantees, transparency and accountability of the activities of state authorities, their officials in the field of social protection of war veterans and their family members, family members of deceased war veterans, family members of deceased Defenders of Ukraine [2].

The state veteran policy is based on a human-centric approach, where a veteran is considered not as a beneficiary, but as a valuable human capital.

- the principle of gratitude is implemented through the state and society's recognition of the contribution of each defender to preserving the sovereignty of Ukraine;
- the principle of justice is to ensure equal access to assistance and social guarantees regardless of place of residence or status;
- the principle of dignity is to respect the personality of a veteran and to provide conditions for his self-realization after service;
- the principle of state responsibility is to guarantee the fulfillment of obligations to veterans and their family members;
- the principle of comprehensiveness is implemented through the integration of medical, social, educational and economic services into a single support system.
- the principle of transparency and digitalization is to minimize bureaucracy through the use of electronic registers and services, such as the "E-Veteran" application.

2. Key tasks of veteran policy.

The goal of state veteran policy is a successful transition from military service to civilian life. The goal leads to the main tasks facing public authorities and society as a whole:

- social and professional adaptation, which includes retraining, employment promotion and the development of veteran entrepreneurship;
- medical and psychological rehabilitation, which requires the creation of a network of modern rehabilitation centers and the provision of psychological support;
- provision of housing through the implementation of targeted lending programs and direct provision of housing to veterans and families of fallen defenders;
- creating a culture of respect, through worthy commemoration of the fallen and patriotic education;
- development of veteran spaces, i.e. formation of hubs in communities for communication, consultation and mutual assistance.

3. Competences of public authorities

The veterans affairs management system in Ukraine has a three-level structure. The first is the strategic level – the Cabinet of Ministers of Ukraine, which determines the priority areas of state veterans' policy, approves state target programs and procedures for granting statuses, and ensures financing of veterans programs from the State Budget.

The second - central level - the Ministry of Veterans Affairs, which forms veterans' policy through the development of regulatory legal acts and service standards, coordinates the actions of other ministries (Ministry of Defense, Ministry of Health, Ministry of Social Policy) on veterans' issues, maintains the Unified State Register of War Veterans and analyzes the effectiveness of program implementation. The Ministry of Veterans Affairs also provides methodological support by developing recommendations for local governments.

The third - executive level - is local executive bodies and local governments that directly provide services through the creation of service offices, where specialists accompany veterans in the community. They are also involved in the implementation of regional programs for the introduction of additional local benefits, allowances and business support programs, and allocate resources to ensure the housing rights of veterans on the ground. One of the most important competencies of local governments is close communication with the community, in particular, the organization of commemorative events and support for local veteran organizations.

An analysis of the current state and prospects of veteran policy is reflected in Table 1.

Table 1 – Comparison of management models.

Parameter	Old approach	New approach
The role of a veteran	Beneficiary, recipient of assistance	Valuable human capital
The role of the state	Controller	Service center / Support
Mechanism	Passive benefits and paperwork	Digitalization, an ecosystem of opportunities
Goal	Payment of benefits	Successful transition to civilian life

On February 26, 2026, the Law of Ukraine No. 4563-IX "On Veteran Entrepreneurship", adopted on July 31, 2025, entered into force. This regulatory act introduces a comprehensive mechanism of state support for veterans who are engaged in or plan to start entrepreneurial activities, implementing the principles of veteran policy in Ukraine [3].

Conclusions

The implementation of veteran policy by public authorities in Ukraine is undergoing a phase of radical transformation. The main challenges remain the need to complete the legislative consolidation of new support standards, strengthen the capacity of communities to accept and adapt veterans, and ensure the sustainability of program funding in the long term.

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INSTITUTIONAL HYBRIDIZATION AS A SYSTEMIC TRANSFORMATION OF THE STRUCTURE OF PUBLIC ADMINISTRATION

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Abstract.A theoretical analysis of the phenomenon of institutional hybridization has been conducted through the author's structure of administrative activity. The author's structure of administrative activity (14 interrelated blocks) serves as the basis. It is demonstrated that institutional hybridization is not merely an instrumental combination of tools (mechanisms) of state, public, market, and network types of regulation, but constitutes a systemic transformation

of the entire architecture of public administration – from the motivational core to the reflexive level. It is shown that hybridization changes value orientations, cognitive models, ways of problematization, goal-setting, activity programming, regulatory regimes, accountability, and the nature of the professional competencies of the governance actor.
Keywords: institutional hybridization, political institution, public administration, institutional logics, structure of administrative activity, accountability, orchestration, public value.

Introduction

In contemporary public administration, the concept of institutional hybridization is becoming increasingly widespread; it describes the combination of various institutional logics – bureaucratic, managerial, democratic, and network-based – within a single set of administrative practices. Hybrid forms of organizational activity manifest themselves in public-private partnerships, regulatory «sandboxes», network coalitions, multidimensional performance evaluation systems, and so on.

At the same time, a significant portion of research views hybridization primarily as an instrumental or organizational innovation. The question often goes unaddressed: does hybridization alter the very structure of governance?

The purpose of the research. The purpose of this publication is to substantiate the proposition that institutional hybridization constitutes a systemic transformation of the structure of public administrative activity. To this end, the phenomenon of hybridization is analyzed through the structure of administrative activity, which includes 14 interrelated elements – ranging from the meaning of the activity to reflection.

The author's structure of administrative activity will consist of the following blocks: the meaning and motives of activity for the individual; the reflection of objective and subjective conditions of activity; the informational and cognitive basis of activity; problem definition; setting the goal of activity (purpose of activity); the vision of results and the program (process) of activity; tools of activity (management): patterns, principles, functions; methods (means, ways), approaches, operations, procedures, technologies, theories, and concepts of management; regulatory conditions of activity; individual qualities of the subject (subsystem of professionalism, activity-relevant qualities); orientation and correlation of activity; reflection of actions; reflection of outcome parameters; reflection of action outcomes (outcome); reflection [1-3].

Institutional hybridization is viewed as both a process and a result of the interaction of various institutional logics within a single organizational or managerial practice. Institutional logic defines a system of values, norms, rules of interpretation, and criteria for the legitimacy of activities [4-6].

Traditional models of public administration – classical bureaucracy, new public management, governance, and others – tend toward the dominance of a particular logic. Hybridization, however, implies their simultaneous presence and the need for coordination.

The methodological basis of the analysis is a structural approach to managerial activity, which allows us to view it as a holistic system of interrelated elements:

motivational, cognitive, programmatic-instrumental, normative, evaluative, and reflective.

Research results

I. Hybridization and Transformation of the Value-Goal Level of Administrative Activity.

The Meaning and Motives of Activity. In traditional models of public administration, the motivational core is relatively homogeneous: upholding the law, ensuring efficiency, or promoting participation. Under conditions of hybridization, a polycentric system of motives emerges, combining a focus on efficiency, public value, democratic legitimacy, and cross-sectoral interaction.

This signifies a shift from the functional fulfillment of a role to the constant balancing of institutional logics. The public administration actor acts as an integrator of various rationalities.

Reflection of operating conditions. The operating environment in conditions of institutional hybridization ceases to be perceived as a stable normative hierarchy. It emerges as a multi-level ecosystem of actors – public administration bodies, business, civil society, and international structures. Public administration takes on the character of orchestrating interactions, which in essence resembles the function of coordination (leadership) in public administration.

Cognitive foundation. Hybridization integrates various types of knowledge: financial indicators, social effects, qualitative assessments, indicators of long-term impact, and others. Multidimensional systems for assessing the competencies of participants in institutional hybridization are emerging, combining indicators of effectiveness and public value.

Problem definition. Problems are formulated as multidimensional constructs encompassing economic, social, political, and normative aspects. Problem-setting becomes the result of the interaction of several political actors.

Goal setting. Goal setting takes on a multifaceted character. Goals integrate short-term performance and long-term social value, creating a need to manage conflicts between them.

II. Transformation of the programmatic-instrumental and normative levels.

Programming of activities. The hybrid model involves adaptive programs, experimental modes, and the phased institutionalization of decisions. Governance becomes a process of continuous adjustment.

Activity instruments. There is a combination of managerial (regulatory), market, and network instruments. Instrumental hybridity is taking shape, manifesting itself in partnership models of activity, mixed financing mechanisms, and multi-level evaluation indicators.

Regulatory conditions. Regulatory frameworks are becoming partially flexible: alongside strict regulation, temporary regimes, experimental mechanisms, and

precautionary provisions are being applied. This indicates a combination of stability and adaptability in the norms of activity (social, political, professional).

III. Transformation of the level of implementation, evaluation, and reflection.

The actor. Hybridization requires new competencies from staff: facilitation, cross-sectoral communication, translation of institutional logics, and conflict management.

Coordination of activities. The orientation and correlation of activities take on the character of continuous alignment of the interests of various political actors.

Monitoring and evaluation. Control shifts from formal adherence to procedures to evaluating the quality of interaction processes and the impact achieved by all participants in the interaction process. Accountability becomes multi-level.

Outcome. The outcome of public administration is interpreted as a combination of effectiveness, legitimacy, and public value.

Reflection. Reflection transforms into a systematic analysis of institutional tensions and balances. Public administration becomes a reflective process of maintaining a hybrid equilibrium.

Our combination of institutional hybridization with the structure of administrative activity has deepened the methodological understanding of the hybrid type of public administrative activity. An analysis of all structural blocks allows us to assert that institutional hybridization: transforms the motivational core of activity; complicates cognitive models; changes the nature of problem-framing and goal-setting; combines various instrumental and normative regimes; changes the accountability system; and enhances the role of reflection.

Conclusions

Thus, hybridization is not merely a combination of tools, but the formation of a new type of public-administrative activity, the key characteristic of which is the integration and balancing of the institutional logics of political institutions within a single administrative practice.

It is important that institutional hybridization be structured and systematic in nature and encompass all structural elements of administrative activity. Under such conditions, it changes not only the instruments of political institutions' activity but also the semantic architecture of public administration. The central characteristic of hybrid governance becomes the balancing of institutional logics and the assurance of multilevel accountability.

Further research should focus on the empirical verification of hybrid models in specific sectors of public policy and governance.

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РОЛЬ НАВЧАЛЬНОЇ ТА ВИРОБНИЧОЇ ПРАКТИК СТУДЕНТІВ В ОСВІТНЬОМУ ПРОЦЕСІ БУДІВЕЛЬНОГО УНІВЕРСИТЕТУ

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Анотація. У тезах проаналізовано роль навчальної та виробничої практик у підготовці студентів за напрямом товарознавства та комерційної діяльності в будівництві. Обґрунтовано значення інтеграції теоретичних знань із практикою функціонування ринку будівельних матеріалів. Особливу увагу приділено формуванню професійних компетентностей у сфері товарознавства, логістики, маркетингу та роботи з клієнтами. Розглянуто досвід проходження практики студентами у торговельно-будівельних мережах, зокрема в компанії «Епіцентр К».
Ключові слова: навчальна практика, виробнича практика, товарознавство, будівельні матеріали, комерційна діяльність, маркетинг, дуальна освіта.

Значення навчальної та виробничої практик у підготовці фахівців

Підготовка фахівців у сфері товарознавства та комерційної діяльності в будівництві передбачає поєднання знань про властивості будівельних матеріалів із розумінням ринкових механізмів їх реалізації. У цьому контексті навчальна та виробнича практики є важливими складовими освітнього процесу, що забезпечують формування прикладних компетентностей.

Навчальна практика спрямована на ознайомлення студентів із номенклатурою будівельних матеріалів, їх характеристиками, стандартами якості та особливостями зберігання. Виробнича практика, у свою чергу, дозволяє інтегрувати ці знання в реальні умови комерційної діяльності.

Інтеграція знань товарознавства та ринкових механізмів

У процесі проходження практик студенти отримують можливість поєднати знання з товарознавства будівельних матеріалів із практикою їх просування та реалізації на ринку. Це включає ознайомлення з асортиментною політикою підприємств, принципами ціноутворення, логістикою постачання та організацією торговельних процесів.

Важливою складовою є те, що значна частина студентів проходить практику у великих торговельно-будівельних мережах, зокрема в компанії «Епіцентр К». Такий формат дозволяє отримати практичний досвід роботи з широким асортиментом продукції, вивчити поведінку споживачів, а також особливості функціонування сучасного ринку будівельних матеріалів.

Формування професійних компетентностей у сфері комерційної діяльності

Навчальна та виробнича практики забезпечують формування комплексу професійних компетентностей, зокрема:

- знань про властивості та якість будівельних матеріалів;
- навичок класифікації та оцінювання товарів;
- розуміння процесів формування асортименту;
- умінь організації торговельної діяльності;
- навичок роботи з клієнтами та консультування.

Особливе значення має формування компетентностей у сфері маркетингу: аналіз попиту, вивчення споживчих переваг, участь у формуванні викладки товарів, оцінка ефективності продажів. Практика в мережах типу «Епіцентр К» створює можливості для безпосереднього залучення студентів до цих процесів.

Практика як елемент дуальної освіти та взаємодії з бізнесом

Сучасні тенденції розвитку освіти передбачають активне впровадження елементів дуальної освіти, що базується на тісній співпраці між закладами вищої освіти та бізнесом. Кафедра товарознавства КНУБА має діючий договір про дуальну освіту з ТОВ «Епіцентр К». Для спеціальностей, пов’язаних із комерційною діяльністю, така взаємодія є особливо важливою.

Практика у торговельних мережах дозволяє:

- адаптувати освітній процес до потреб ринку;
- ознайомити студентів із реальними бізнес-процесами;
- підвищити рівень їхньої професійної готовності.

Водночас актуальними залишаються проблеми формального підходу до організації практики та обмеженого рівня залучення студентів до аналітичної та управлінської діяльності.

Проблеми та напрями вдосконалення практичної підготовки

Серед основних проблем організації практик можна виділити:

- недостатню інтеграцію навчальної та виробничої складових;
- обмежене залучення студентів до маркетингової діяльності;
- формальний характер окремих етапів практики;
- недостатній рівень наставництва.

Для підвищення ефективності практичної підготовки доцільно:

- розширювати співпрацю з торговельними мережами;
- залучати студентів до аналізу ринку та маркетингових досліджень;
- впроваджувати кейс-методи та проєктні завдання;
- інтегрувати цифрові інструменти аналізу продажів;
- удосконалювати систему оцінювання результатів практики.

Висновки

Отже, навчальна та виробнича практики відіграють ключову роль у підготовці фахівців у сфері товарознавства та комерційної діяльності в будівництві. Вони забезпечують інтеграцію знань про будівельні матеріали з практикою їх реалізації, сприяють формуванню професійних і маркетингових компетентностей.

Досвід проходження практики студентами, зокрема у компанії «Епіцентр К», підтверджує ефективність залучення бізнес-середовища до освітнього процесу. Такий підхід дозволяє підготувати фахівців, здатних ефективно працювати на ринку будівельних матеріалів та приймати обґрунтовані комерційні рішення.

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DISCUSSION ON THE CONDUCT OF ELECTIONS IN THE POST-WAR PERIOD IN UKRAINE

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Abstract. The discourse regarding the holding of elections in the post-war period in Ukraine continues. The dominant part of society denies their holding in the near future and emphasizes the need to restore democratic institutions. It continues in the spectrum of ensuring the security and democratic conduct of voters during the electoral process and the expression of will; preventing interference in the electoral process by the Russian aggressor; ensuring the right to express the will of voters of the Armed Forces and combatants; developing an optimal model of electoral expression of will in the post-war period.
Keywords: electoral process, combatants, forcibly displaced persons, electronic voting (e-voting), social networks, martial law.

Introduction

The post-war elections in Ukraine should record a completely different - new political landscape of the country and reflect the emergence of a new socially active veteran community, that is those active citizens of Ukraine who in addition to engaging in patriotic rhetoric, managed to take up arms and stand up for its territorial integrity and sovereignty. The exceptionally active veteran position is determined by their contribution to the preservation of the country, which borders on self-sacrifice and the peculiarities of social activity of combatants who suffered post-traumatic stress during hostilities and which is characterized by high demands on power, a sophisticated understanding of the concept of social justice and the duties of power, rapid activation and cohesion in defending corporate rights and interests, intolerance of bribery and those who illegally avoided mobilization and enriched themselves. Therefore, it is worth noting that new trends in social demands and a conditional division of political forces into two camps will emerge in society: "hawks" (those who have passed the test of war) and "doves" (those who have avoided mobilization and want peace at any cost).

The purpose of the research. The main issues of holding elections in the post-war period in Ukraine are positioned in the following spectrums: how to ensure maximum security for all voters and at the same time guarantee the democratic nature of the electoral process and how to facilitate the expression of the will of IDPs (forcibly displaced persons) who are, especially, outside the country. Quite often, proposals are made to introduce electronic and Internet voting, as is already the case to one degree or another in a number of European countries (Estonia, Great Britain, Germany, France, Spain, Norway, Switzerland, Kazakhstan, China, Japan and South Korea) [1]. These discussions became more relevant in connection with the successful

implementation of the Single Portal of Public Services “Diya”. Therefore, one of the tools for the digital transformation of the process of direct democracy in Ukraine in the post-war period should be electronic voting, which involves significant digitalization of both the processes of public administration of individual stages of the electoral process in the election of the president, as well as the parliament and local government bodies [2]. But here a big caveat is the very high level of corruption in the country and the lack of proper trust of citizens in these innovations.

Research results

The economic and socio-political reconstruction of post-war Ukraine is closely related to the restoration of democratic processes, the activation and strengthening of the influence of all elements of civil society, but at the same time, strengthening the rule of law and the protection of citizens' rights. Especially that part of it that actively contributed to the Armed Forces of Ukraine in the fight for the territorial integrity and preservation of the state independence of Ukraine. It is already worth completing the administrative reform and holding the positions of prefects, liquidating those local government bodies that have lost their influence and functions (district councils) or giving them appropriate powers. The reconstruction of the post-war country is not possible without renewing the national managerial elite at all levels of administrative administration, both in state authorities and in local self-government bodies. This is especially important to carry out in territorial communities - where local administration is now concentrated with all the fullness of power after the administrative reform. Therefore, the preparation for the electoral process in the future should, in our opinion, be carried out in the following directions:

1. Ensuring the security and democratic conduct of voters both during the electoral process and during the period of their expression of will.
2. Preventing interference in the electoral process by the Russian aggressor, including through the IPSO and influence through the support of individual political forces ("Doves") and politicians.
3. Ensuring the right to express the will of voters who, due to Russian aggression, were forced to emigrate, became refugees or forcibly displaced persons, scattered throughout all regions of Ukraine and abroad, as well as all defenders - the military of the Armed Forces of Ukraine.
4. Developing the most optimal model of electoral expression in the post-war period, which would best reflect the political spectrum of the country and the preferences of voters - the new political and ideological realities of Ukraine.

The security and democratic expression of the will of voters both during the electoral process and during the period of their expression of will could be guaranteed only under conditions of peace or a truce with the active participation of observers from the world community, especially those countries that supported Ukraine’s struggle during the period of Russian aggression. It is also important to strengthen the anti-sabotage work of domestic special services during this period, and to carry out preventive measures.

And now “more than 400 Ukrainian public organizations have signed a statement on the impossibility of holding democratic elections in Ukraine without establishing a sustainable peace” [6]. This initiative was launched in the public sector by the Civic Network OPORA, which has been monitoring the electoral processes in the country for many years. Before the elections, it is necessary to assess security in the territories of Ukraine, in particular the level of demining, restoration of electoral infrastructure, strengthening control over the financing of political parties and combating disinformation in the media and social networks.

It is very important to cut off the influence and interference in the electoral process of the Russian aggressor, including through the IPSO and influence through the support of individual political forces and politicians. Therefore, the priorities of preparation for the upcoming elections are to develop legal mechanisms for protection against Russian interference, non-transparent financing of elections, equal access to the media, ensuring the safety of voters and the entire electoral process.

But simply formally ending martial law will not automatically eliminate the risks to the elections caused by the war. It takes some time to restore the conditions for democratic elections. The Venice Commission has emphasized in a number of its documents “the need to ensure a peaceful political atmosphere for holding elections, which will not necessarily appear immediately after the end of the acute phase of the war with Russia or after the abolition of the legal regime of martial law” [4].

The electoral legislation must be adapted to the fact of the large-scale “migration of Ukrainians within the country and abroad, as well as overcoming the shortcomings

The electoral legislation should be adapted to the fact of the large-scale “migration of Ukrainians within the country and abroad, as well as to overcome the shortcomings of the legislation” [6], noted in the recommendations of the OSCE Office for Democratic Institutions and Human Rights, which is one of the requirements for Ukraine’s integration into the EU. 4.5 million adult Ukrainians remained in the occupied territories as of June 2024 - these are data from the Ministry of Reintegration of Ukraine [5]. As of the beginning of 2025, the size of the Ukrainian army is 880 thousand servicemen [3]. Each of the defenders has the right to express their will and participate in the ballot. The state should stimulate the involvement of military veterans in this process - including through their preparation for the electoral process, political education, etc. Competitive elections are impossible without the restoration of the media space of Ukraine and the full-fledged activity of political parties. But unfortunately, all the media in Ukraine are under the “guardianship of the oligarchs”, who will try to maintain their influence through this resource, “stretch” the veteran environment across “their” parties and, using the authority of combatants, again maintain their influence in the country. Therefore, the issue of avoiding such a state is a matter of political responsibility, culture and consciousness of each voter. The key priorities of the electoral changes are to complete the process of improving the Electoral Code and strengthen the regulation of election campaigning and election coverage in the media, avoiding influence on social networks of the aggressor state.

The adoption of a new law on political parties, which should stimulate the democratization of the political process in the country, is extremely important.

Post-war Ukraine must ensure a transparent transition from military to civilian administration based on the rule of law and compliance with international standards. This should be ensured, in particular, by legislatively defining clear security criteria for assessing the possibility of holding elections in certain territories, which would take into account the previous recommendations of the Venice Commission and the OSCE/ODIHR (Office for Democratic Institutions and Human Rights). It is also advisable for the Parliament to establish a six-month transition period between the lifting of martial law and the holding of the first post-war elections. This should allow for a qualitative update of the data of the State Voter Register, and for measures to ensure the electoral rights of internally displaced persons, voters abroad and people with disabilities. Political parties and the media should also be given sufficient time to resume their activities in the affected territories and in the country as a whole [4].

Conclusions

The discourse on holding elections in the post-war period in Ukraine continues. The dominant part of society denies their holding in the near future and emphasizes the need to restore democratic institutions. It continues in the spectrum of ensuring the security and democratic conduct of voters, both during the electoral process and during the period of their expression of will; preventing interference in the electoral process by the Russian aggressor; ensuring the right to express the will of voters of the Armed Forces of Ukraine and all defenders - military personnel of the Armed Forces of Ukraine; developing the most optimal model of electoral expression of will in the post-war period.

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DIGITAL TOOLS TO SUPPORT AGILE-ORIENTED LEARNING OF FUTURE IT SPECIALISTS

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Abstract. The theses substantiate the role of digital tools in supporting Agile-oriented learning for future IT specialists. Using the course “Technologies of Software Development and Testing” as an example, the paper highlights the potential of Microsoft Teams, Notion, Microsoft Planner, Microsoft Forms, Microsoft 365, GitHub, and GitHub Issues / Projects for organizing teamwork, planning, task visualization, progress monitoring, and feedback provision. The study demonstrates the feasibility of combining selected Scrum and Kanban practices in students’ professional training.
Keywords: Agile-oriented learning, digital tools, future IT specialists, Scrum, Kanban, professional training.

Introduction

The digitalization of education, the dynamic nature of the IT industry, and the growing requirements for the practical training of future IT specialists create the need to update approaches to the organization of learning. One of the promising directions is Agile-oriented learning, which is based on iterativity, adaptability, teamwork, process transparency, and continuous feedback. The effective implementation of this approach requires the use of digital tools that support planning and coordination of collaborative work, task visualization, communication, progress monitoring, and reflection on results. However, in educational practice such tools are often used

fragmentarily, without sufficient didactic justification of their role in supporting Agile-oriented learning. This actualizes the problem of identifying digital tools that are appropriate for use in the training of future IT specialists.

Thus, the purpose of our study is to substantiate the expediency of using digital tools to support Agile-oriented learning for future IT specialists and to highlight the possibilities of applying selected Scrum and Kanban practices in the process of studying profession-oriented disciplines.

Issues of Agile-oriented learning have been addressed in the works of domestic and foreign scholars, in particular O. Demydovych, A. Karapetian [1], O. Hura [2], T. F. Otero, R. Barwaldt, L. O. Topin [3], A. López-Alcarria, E. Olivares-Vicente, F. Poza-Vilches [4], as well as A. E. Artyukhov, I. Iu. Volk, T. A. Vasylieva [5], and others. Their works reveal the essence of the Agile approach in education, the possibilities of adapting Scrum and Kanban to the educational process, as well as the significance of flexible approaches for developing collaboration, adaptability, responsibility, and step-by-step achievement of learning outcomes. At the same time, the issue of selecting digital tools to support Agile-oriented learning for future IT specialists in the process of studying profession-oriented disciplines requires further clarification.

Research Results

Agile-oriented learning is a promising approach to the training of future IT specialists, as it corresponds to the specific features of their future professional activity, including teamwork, adaptability, short planning cycles, and continuous improvement of results. Under such conditions, digital tools become especially important, as they support collaborative work, task coordination, communication, progress monitoring, and the recording of intermediate results. In profession-oriented disciplines, selected Scrum and Kanban practices can be applied: Scrum supports teamwork through iterations, planning, and short discussions, while Kanban is used for task visualization and monitoring. The use of such digital tools contributes to the development of self-organization, responsibility, teamwork, and adaptability in future IT specialists.

The practical implementation of digital support for Agile-oriented learning of future IT specialists can be considered through the example of teaching the course “Technologies of Software Development and Testing.” Its distinctive feature is interdisciplinary continuity, since this educational component is preceded by the courses “Web Design and Web Programming” and “Architecture and Technologies of Mobile Application Programming”. As a result, students begin studying software testing already having prior developments in the form of web applications and mobile applications, which subsequently serve as the objects of testing.

Learning is organized on the basis of a team approach. Following a preliminary survey of students’ preferences, inclinations, level of preparation, desired activities, and academic performance, balanced learning teams are formed. This creates conditions for effective collaboration, peer learning, and active participation of each student in achieving a common result.

Given the blended mode of learning, Microsoft Teams serves as the main digital environment for communication, learning materials, tasks, and interaction between the teacher and student teams. To visualize the learning process, the teacher creates a board with backlog elements reflecting the general and professional competences as well as the learning outcomes to be achieved within the course. Discussing this board with students increases transparency, improves understanding of learning goals, and promotes a more conscious attitude toward task completion.

The course content is structured into two-week cycles regarded as learning sprints. For each sprint, the relevant competences and learning outcomes are defined. At the beginning of the course, students receive a full list of practical assignments covering software requirements testing, test planning, test case and checklist development, the application of testing methods for web and mobile applications, and the preparation of a final testing report. On this basis, each team forms its own backlog, defines sprint tasks, sets priorities, and distributes roles among team members.

The digital support of this learning organization is implemented through the integrated use of several digital tools, each performing a specific function in ensuring Agile-oriented teamwork and the coherence of the educational process. Microsoft Teams serves as the basic digital environment for communication and coordination among participants in the educational process. It is used to organize interaction between the teacher and student teams, share learning materials, provide instructions, and maintain continuous communication during classroom and extracurricular work. In the context of blended learning, this platform helps preserve the integrity of teamwork and ensures constant access to the necessary resources and updates.

Notion and Microsoft Planner are used as tools for planning, structuring, task visualization, and organizing the team backlog. These tools make it possible to distribute assignments among team members, define priorities, set deadlines, monitor task status, and visualize the progress of each team within a sprint. Their use contributes to the transparency of the learning process and supports students' understanding of the sequence, scope, and logic of their work. In addition, backlog visualization helps students correlate current tasks with the expected learning outcomes and competences to be developed within a particular stage of the course.

Microsoft Forms is used for preliminary surveys, collecting students' reflections, self-assessment, and quick feedback. At the initial stage, it helps identify students' preferences, prior experience, strengths, and desired roles in teamwork, thus supporting more balanced team formation. During and after each sprint, it can also be used to gather feedback on difficulties encountered, evaluate individual contribution, and encourage reflection on team performance and achieved results.

Microsoft 365 is used for collaborative work with documents, spreadsheets, testing documentation, and reports, enabling students to jointly create and edit test cases, checklists, plans, and other materials in real time. Shared access and edit history increase the transparency of individual contributions and facilitate teacher supervision.

This is particularly important in software testing, where teamwork involves the joint development, revision, and discussion of documentation.

GitHub is used as a digital environment for access to software products, tracking changes, storing team-work artifacts, and interacting with the code base of developed applications. Since students work with previously created web and mobile applications, GitHub links development and testing activities. In addition, GitHub Issues/Projects is used to detail tasks, record problems, assign responsibilities, and monitor task completion within team projects, bringing the educational process closer to real professional IT practice.

The combination of these digital tools ensures transparency of learning activities, continuous communication, collaborative planning, task control, documentation of intermediate results, and timely adjustment of work. Their integrated use also supports the practical implementation of selected Scrum and Kanban practices in the educational process. Scrum elements are reflected in sprint planning, task allocation, role distribution, and regular discussions of intermediate outcomes, while Kanban principles are realized through task visualization, workflow monitoring, and process transparency. Thus, digital tools perform not only a supportive but also an organizational and didactic function in Agile-oriented learning.

The teacher's access to each team's digital spaces, plans, and tasks makes it possible to provide continuous support, give prompt feedback, track progress, and maintain the manageability of the educational process without violating the autonomy of student groups. It also helps identify teamwork problems in a timely manner and balance students' independence with pedagogical guidance. As a result, the digital environment functions as a coherent ecosystem that supports collaboration, responsibility, adaptability, and the gradual achievement of learning outcomes in the training of future IT specialists.

Conclusions

This approach combines selected Scrum and Kanban practices within the structure of Agile-oriented learning. Scrum elements are manifested in the iterative organization of work, the definition of sprint tasks, role distribution, and regular discussion of intermediate results, whereas the Kanban approach is used for visualizing the current status of tasks, ensuring process transparency, and monitoring task completion. Taken together, this contributes to the development in future IT specialists not only of subject-specific skills in software testing, but also of teamwork, self-organization, responsibility, planning, and adaptability to change.

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TENSOR GOVERNANCE: НОВА ПАРАДИГМА ПУБЛІЧНОГО УПРАВЛІННЯ ТА ПРАВА

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Анотація. У статті досліджується трансформація державного управління в цифрову епоху крізь призму концепції «тензорного управління». У ній представлено DOMAREV AI MATRIX™ як 3D логіко-лінгвістичну модель, розроблену для інтеграції права, технологій та управління в єдину систему. Дослідження підкреслює обмеження традиційних лінійних моделей та демонструє, як багатоагентне впровадження штучного інтелекту може покращити регуляторний аналіз, управління ризиками та ефективність державних послуг. Запропонована структура пропонує системний підхід до вирішення гібридних загроз та регуляторної складності.
Ключові слова: Tensor Governance, DOMAREV AI MATRIX™, публічне управління, інформаційне право, штучний інтелект, цифровізація, кібербезпека.

Abstract. The article explores the transformation of public administration in the digital age through the lens of the "Tensor Governance" concept. It introduces the DOMAREV AI MATRIX™ as a 3D logical-linguistic model designed to integrate law, technology, and management into a unified system. The study highlights the limitations of traditional linear models and demonstrates how a multi-agent AI implementation can enhance regulatory analysis, risk management, and the efficiency of public services. The proposed framework offers a systematic approach to addressing hybrid threats and regulatory complexity.
Keywords: Tensor Governance, DOMAREV AI MATRIX™, public administration, information law, artificial intelligence, digitalization, cybersecurity.

Вступ

Сучасне публічне управління перебуває на етапі фундаментальної трансформації, зумовленої цифровою трансформацією, впровадженням розподілених інформаційних систем та інтеграцією штучного інтелекту в усі сфери суспільної діяльності. Традиційні ієрархічні та лінійні моделі управління демонструють обмежену ефективність у роботі з багатофакторними проблемами, такими як складність законодавства, фрагментація державних політик та зростаючі кіберзагрози.

Організації часто стикаються з проблемою, коли стандарти (ISO, NIST) існують окремо від практики, а технічні заходи — окремо від управління ризиками. Виникає потреба у створенні нових аналітичних моделей, здатних об'єднати право, технології та управлінські процеси в єдину архітектуру. Такою моделлю пропонується концепція Tensor Governance, практичною реалізацією якої є система DOMAREV AI MATRIX™.

Результати дослідження

Концепція Tensor Governance розглядає систему публічного управління як багатовимірний тензор взаємодіючих елементів, де державна політика описується як функція взаємодії права, інституцій, процесів, ресурсів, ризиків та технологій.

DOMAREV AI MATRIX™ базується на логіко-лінгвістичній 3D матричній моделі (LL3D), яка описує систему безпеки та управління в трьох вимірах:

Вісь X — Управління та ресурси: включає норми, ролі, заходи та інструменти. У контексті публічного права це суб’єкти (парламент, уряд, громадяни).

Вісь Y — Логіка безпеки/процеси: життєвий цикл від ідентифікації активів та загроз до вибору рішень, впровадження та аудиту.

Вісь Z — Домени/сфери: кібербезпека, інформаційна безпека, технічний, фізичний, юридичний та соціально-психологічний захист.

Модель дозволяє будь-яку управлінську задачу розглядати одночасно у цих трьох вимірах, забезпечуючи повноту та замкнутість системи. Важливою особливістю є використання Agent.Orchestrator — центрального керуючого механізму, який декомпозує запити за матрицею та залучає спеціалізованих ІІ-агентів для аналізу. Це дозволяє уникнути «організаційної слепоти» та забезпечити простежуваність рішень до конкретних стандартів і нормативних вимог.

Практичне застосування

Практичне застосування моделі у сфері цифрового урядування дозволяє виявляти прогалини регулювання. Наприклад, аналіз через тензорну модель може показати, що цифрова послуга технічно реалізована, але має правові колізії або невраховані кіберризики. У галузях публічного права модель може використовуватись для:

- Конституційного права: аналіз взаємодії інституцій та конфліктів компетенцій.
- Адміністративного права: оптимізація процедур та моніторинг виконання політик.
- Інформаційного права: оцінка ризиків захисту даних та моделювання кіберзагроз.

Економічна ефективність такого підходу полягає у скороченні витрат на управління та аудит на 50–70%, а також у значному зниженні ймовірності людських помилок.

Висновки

Застосування тензорних моделей, зокрема DOMAREV AI MATRIX™, знаменує перехід від фрагментованого до системного управління в епоху автономних систем. Це дозволяє інтегрувати право, технології та управління в єдину методологічну основу, підвищуючи стійкість державних систем до гібридних загроз.

Подальший розвиток напряму Tensor Governance через міжнародне академічне співробітництво (наприклад, між університетами України, Польщі та Іраку) сприятиме формуванню нової парадигми публічного управління.

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TWINNING AS A FORM OF INTERNATIONAL ACTIVITY OF LOCAL GOVERNMENTS

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Abstract. The paper examines city partnership (twinning) as a modern form of international activity of local governments. The author analyzes the legal principles, institutional mechanisms and practical aspects of implementing twinning - partnerships between territorial communities of Ukraine and other states. Particular attention is paid to the role of city partnership in developing community capacity, exchanging management experience, attracting international technical assistance and implementing European public administration standards. Separately considered problematic questions and perspectives using tools twinning in processes recovery and sustainable development territorial communities of Ukraine in modern conditions.
Keywords: Partnership of cities, local governments, international activities, territorial community.

Introduction

The relevance of the study of city partnership (twinning) as a form of international activity of local governments is determined by the complex of modern transformation processes and challenges that our state has faced. In the context of globalization and European integration aspirations of Ukraine, the importance of international cooperation at the local level is significantly increasing, within which local governments act as active subjects of international relations. In this regard, city partnership appears as an effective tool for the integration of territorial communities into the European legal and administrative space.

This issue becomes particularly important in the context of martial law and future post-war reconstruction, when international cooperation between territorial communities becomes an important factor in attracting financial resources, technical assistance, and institutional support. Partnerships contribute not only to material reconstruction, but also to the adoption of effective management models and sustainable development practices.

At the same time, city partnerships are considered an important mechanism for increasing the efficiency of public administration at the local level, which ensures the implementation of innovative approaches, the development of professional competence of officials, and the improvement of the system of public service provision. The scientific relevance of the topic is enhanced by the insufficient level of its theoretical understanding in domestic legal science, in particular regarding the definition of the legal nature of twinning partnerships , the features of their institutional support and implementation mechanisms.

Thus, the study of urban partnerships is important both for the development of the theory of municipal law and for improving the practice of local government in the face of modern challenges.

The purpose of the study is to analyze city partnership (twinning) as a form of international activity of local governments, in particular, to clarify its legal nature, institutional principles and practical mechanisms of implementation, as well as to determine the possibilities of implementing relevant European experience into domestic practice in order to increase the efficiency of the functioning of territorial communities and their international cooperation.

The legal nature of city partnership (twinning) is multi-level and is formed at the intersection of several branches of law - international, national administrative and municipal. Twinning as an international form of cooperation between local governments does not have a separate universal definition in international treaties, but is increasingly considered as a type of international territorial cooperation and a tool for the development of local governance in the international environment.

In Ukrainian legislation, the issue of international cooperation of local authorities is regulated by the Law of Ukraine "On International Territorial Cooperation of Ukraine" dated April 24, 2024 No. 3668 -IX, which entered into force on June 27, 2024. This Law establishes the concept and legal framework of international and transnational

cooperation, recognizing local self-government bodies as subjects of international territorial cooperation within their competence and on the basis of relevant agreements with local self-government bodies of other states [1].

According to the legislation, subjects of international territorial cooperation may be local self-government bodies of Ukraine and their associations, which interact with relevant bodies of other states, subject to compliance with national laws and international treaties that have the consent of the Verkhovna Rada to be binding.

In practical terms, twinning is formalized through cooperation agreements or memoranda, which, although not always legally binding, at the same time create a legal basis for interaction between municipalities regarding the exchange of experience, joint implementation of projects and cooperation in the fields of culture, education, economic development, etc. The form of such agreements can be flexible - from declarative memoranda to partnership agreements, which are concluded in accordance with existing legislation (the Law on International Territorial Cooperation) and are registered in accordance with the established procedure.

European studies show that twinning operates within a broader practice of international cooperation between municipalities, particularly in the European Union and its neighbourhood. An analysis of twinning -partnerships between administrative -territorial units in Romania and Italy demonstrates how cooperation agreements contribute to the formation of friendly ties , the exchange of management experience and the development of social, cultural and economic relations between local communities [2].

Legally, twinning does not transform a municipality into a subject of international law, like a state, but expands the range of subjects of international cooperation within the competence defined by national legislation and international obligations of the state. The legislative definition of subjects of international territorial cooperation allows local governments to conclude relevant agreements that contribute to the establishment of stable partnerships , the implementation of cross-border projects and integration into European networks of municipalities.

Thus, the legal nature of twinning lies in its status as a form of international territorial cooperation, combining contractual mechanisms, national legislative regulation and practical aspects of the implementation of municipal partnerships . This nature allows local governments to actively participate in international cooperation, using the potential of legal agreements, national norms and international practices for the development of their own communities.

In European practice, multi-level institutional support often operates, where partnerships are concluded not only by individual municipalities, but also by inter-municipal associations and networks, for example, EUROCITIES or the Council of European Municipalities and Regions (CEMR). Such associations create a platform for the broad integration of municipalities into the European community, promote standardization of approaches, and create network communication mechanisms.

The practical implementation of city twinning takes place through several interrelated mechanisms. Memoranda of Understanding, cooperation agreements or declarations of intent are typical forms. Although such documents do not always have direct legal obligations, they create a formal basis for further joint activities. The implementation of twinning often involves participation in international programmes such as Horizon Europe , URBACT, INTERREG, which provide funding, technical support and expert support for joint initiatives. Exchange of representatives of municipalities, training for civil servants, internships are important mechanisms for transferring knowledge and improving the competence of officials. European partners often organize study visits to introduce advanced management practices. Modern twinning -partnerships actively use digital tools to coordinate joint actions, exchange data and virtual working meetings, which significantly increases the efficiency of cooperation.

The implementation of European practices of city partnerships in Ukraine opens up broad prospects for increasing the efficiency of the functioning of territorial communities. Borrowing European approaches to the organization and support of partnership programs will contribute to the creation of more transparent and effective procedures for concluding agreements and implementing international initiatives. The development of intermunicipal associations in Ukraine can become a platform for pooling community resources, coordinating international initiatives, and ensuring sustainable exchange of experience. Systematic exchange with European partners through internships, trainings, and educational programs will contribute to the formation of human resources capable of implementing innovative management solutions at the local level. The use of mechanisms for cooperation with European networks opens up access to cross-border and international grant initiatives, which will contribute to the socio- -economic development of communities.

Conclusion

City partnership (twinning) has a clearly expressed legal nature as an element of international territorial cooperation, enshrined in the national legislation of Ukraine and supported by the practices of the European Union. The institutional foundations of twinning are formed through regulatory mechanisms, decisions of local councils and international agreements, and practical implementation is carried out through structured procedures, participation in grant programs and exchange of expert experience. The implementation of European experience will contribute to increasing the efficiency of local self-government, strengthening international cooperation and integration of Ukrainian communities into global networks of municipal development.

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Vol . 4 No. 2 (2017): European Journal of Law and Public Administration . PP. 93-103.
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ОСОБЛИВОСТІ ВИКЛАДАННЯ ФІЛОСОФІЇ У ТЕХНІЧНОМУ УНІВЕРСИТЕТІ (НА ПРИКЛАДІ УНІВЕРСИТЕТУ БУДІВНИЦТВА І АРХІТЕКТУРИ)

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Abstract. The theses consider the specifics of teaching philosophy in a technical university, taking into account interdisciplinary connections with architecture and urbanism. Special attention is paid to the ethical aspects of environmental design (ethics of built environment), the development of critical thinking and the implementation of problem-oriented teaching methods.
Keywords: philosophy of education, philosophy of technology, architecture, urbanism, ethics of space, critical thinking.

Виклики та специфіка викладання філософії у технічному виші.

Методика викладання філософії у технічному університеті характеризується низкою особливостей, пов'язаних зі специфікою інженерної та архітектурної освіти. Студенти таких спеціальностей, як правило, орієнтовані на практичні результати, технологічні рішення та прикладні знання, що часто зумовлює ставлення до гуманітарних дисциплін як до необов'язкових. Унаслідок цього філософія сприймається як теоретично перевантажена й недостатньо релевантна майбутній професійній діяльності. Подолання цієї проблеми потребує зміни підходів до викладання, зокрема через інтеграцію філософського знання з професійним контекстом [1; с. 67]. Філософія не повинна бути «відірваною» від фаху. Головна мета — показати, що будь-яка інженерна чи архітектурна діяльність має етичний та антропологічний вимір.

Професійна орієнтація: філософія техніки та архітектури.

Сучасні підходи до викладання філософії передбачають її переорієнтацію з історико-теоретичного викладу на аналіз актуальних проблем, пов'язаних із технікою, середовищем і суспільством. У цьому контексті важливе місце займає філософія архітектури і техніки, яка дозволяє осмислити роль технологій у трансформації соціальної реальності, а також межі та ризики технічного прогресу [4; с. 217]. Для студентів факультетів будівництва та архітектури це

особливо важливо, оскільки їхня діяльність безпосередньо впливає на формування матеріального середовища існування людини.

Етика антропогенного середовища (Ethics of Built Environment).

Окремої уваги заслуговує концепція *ethics of built environment*, яка в останні роки активно розвивається у міждисциплінарних дослідженнях. Вона акцентує увагу на моральній відповідальності архітекторів, інженерів і урбаністів за створюване середовище. Йдеться не лише про безпеку та функціональність об'єктів, але й про їхній вплив на соціальну взаємодію, психологічний комфорт, доступність та інклюзивність простору [5; с. 73]. Адже фізичний простір безпосередньо впливає на психіку та соціальні зв'язки.

Таким чином, філософія виступає як інструмент формування етичної рефлексії щодо професійної діяльності.

Урбаністика як об'єкт філософського аналізу.

У контексті урбаністики філософський аналіз дозволяє розглядати місто як складну соціотехнічну систему, де поєднуються інфраструктурні, культурні та комунікативні аспекти [2; с. 58]. Це відкриває можливості для обговорення таких проблем, як сталий розвиток, екологічна відповідальність, збереження історичної спадщини та баланс між комерційними й суспільними інтересами. Залучення студентів до аналізу реальних кейсів міського розвитку (наприклад, реконструкція громадських просторів, реновація індустріальних зон, проєкти «розумного міста») значно підвищує рівень їхньої зацікавленості та розуміння практичної цінності філософії.

Інноваційні методи, проблемно-орієнтоване навчання та цифрові інструменти.

Важливим елементом викладання є використання інноваційних педагогічних методів. Зокрема, ефективними є проблемно-орієнтоване навчання, кейс-стаді, дебати та міждисциплінарні проєкти. Наприклад, студентам може бути запропоновано проаналізувати етичні аспекти конкретного архітектурного рішення або розробити концепцію міського простору з урахуванням принципів сталого розвитку. Такі завдання сприяють розвитку критичного мислення, уміння аргументувати власну позицію та оцінювати альтернативні рішення.

Додатково доцільним є використання цифрових інструментів та візуалізацій, що відповідають специфіці технічної освіти. Залучення схем, моделей, карт міського розвитку, а також елементів GIS-технологій дозволяє поєднати абстрактні філософські концепти з конкретними просторовими рішеннями. Це сприяє кращому засвоєнню матеріалу та формуванню міждисциплінарних компетентностей.

Не менш важливою є роль філософії у формуванні так званих «м'яких навичок» (*soft skills*), зокрема здатності до комунікації, критичного аналізу,

етичного оцінювання та прийняття відповідальних рішень. У сучасних умовах, коли інженерні та архітектурні проєкти стають дедалі складнішими та соціально значущими, ці компетентності набувають ключового значення [3; с. 139].

Висновки

Отже, викладання філософії у технічному університеті повинно базуватися на принципах міждисциплінарності, практичної спрямованості та етичної рефлексії. Інтеграція філософії з архітектурою, урбаністикою та інженерною практикою дозволяє підвищити її значущість для студентів і сприяє формуванню відповідального фахівця, здатного усвідомлювати соціальні наслідки своєї діяльності. Викладання філософії в університеті будівництва і архітектури має перетворитися з «історії філософських вчень» на практичну філософію простору та творчості. Завдання — не просто звести фундамент будівлі, а закласти фундамент сенсів, у яких будуть жити люди.

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THE ROLE OF STEM EDUCATION IN FORMING IMPORTANT SKILLS OF ENTREPRENEURSHIP AND TRADE PROFESSIONALS

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Abstract. STEM education is based on practice, visualization, and solving real-world problems. For future business and commerce professionals, who are constantly tasked with making decisions based on the results of research, projects, or experiments of varying complexity during their education, they will naturally develop a range of skills over time (including independence; innovativeness, creative, and critical thinking; problem-solving skills; and effective collaboration and teamwork) that will help them adapt to technological

advances and remain competitive, especially in an industry that depends on both innovation and precision.

Introduction

In today's digital economy, entrepreneurial success no longer depends solely on intuition or experience – it depends on data, technology and innovation. As artificial intelligence, automation and real-time analytics reimagine decision-making, a new type of leader is emerging: one with skills honed to perfection through a STEM-based education. STEM education (Science, Technology, Engineering, Mathematics) is an approach that combines natural sciences, technology, engineering and mathematics into a single system [1]. STEM educational disciplines usually refer to natural sciences (biology, physics and chemistry) and exact sciences (mathematics, logic, statistics). STEM education is based on practice, visualization and solving real problems. It prepares students for the professions of the future - it makes learning interactive, often using robotics and engineering design. The role of the teacher is a moderator who helps to independently find solutions, and not just gives lectures, delving into theory. A comparison of the main features of traditional and STEM education is given in Table 1.

Table 1. Characteristics of traditional and STEM education

Signs of traditional education	Signs of STEM education
each academic discipline is taught separately	integrates academic disciplines, considers them in their interrelationships in order to combine them when solving complex tasks
mainly focused on memorization	emphasizes the constant application of theoretical knowledge in practice; the formation of skills
mainly based on lectures (especially in universities)	constantly combines lectures with practical classes and is more student-oriented
covers many academic disciplines and often provides a general overview without going into depth	focuses on science, technology, engineering, and mathematics, offering a deeper immersion. STEM does not ignore other disciplines and often uses them as a means to facilitate a more in-depth study of STEM disciplines

Research results

STEM disciplines develop critical skills that are relevant throughout life: independence; innovation, creative and critical thinking; problem-solving skills; the ability to effectively collaborate and work as a team. STEM education also develops a skill called "resilience to shocks" (GRIT). The essence of this skill can be described as "trying, failing, and then getting back up and trying again." Having the determination to solve a problem, no matter how much time and effort it takes, is a skill that makes a successful person. Employers are increasingly looking for these skills in new employees, regardless of the industry they work in.

In recent years, STEM skills have become critical for entrepreneurship because they provide entrepreneurs with the technical knowledge, problem-solving capabilities, and analytical tools necessary to innovate and maintain competitiveness. In today's technology-driven economy, entrepreneurs with a strong foundation in STEM are better positioned to create, scale, and sustain successful businesses. Table 2 analyzes the role of STEM education in building the skills of entrepreneurs and business professionals.

Table 2. The role of STEM education in developing important skills for entrepreneurship and trade professionals [2]

Skills	The role of STEM education in skills development
Problem-solving skills and critical thinking	STEM education emphasizes solving real-world problems through logical analysis and creative solutions; develops the ability to approach challenges methodically by breaking problems down into smaller, manageable pieces; helps entrepreneurs find creative and effective solutions for entrepreneurial innovation
Ability to analyze and interpret data	STEM education builds skills in statistics, data visualization, and the use of analytical tools that are valuable for understanding market trends, customer behavior, and business performance
Ability to make data-driven decisions	STEM education enables entrepreneurs to effectively analyze complex data, manage digital tools, and leverage technologies like artificial intelligence
Ability to be innovative, creative and adaptive	STEM encourages experimentation and "out-of-the-box thinking," fostering creativity. Entrepreneurs use this way of thinking to innovate products, services, or processes.
Resilience and risk management capacity	By focusing on experimentation, STEM education teaches entrepreneurs to view failure as a learning opportunity, helping them manage risks soundly
Ability to promote sustainability and ethics	Modern STEM programs often emphasize social responsibility, helping entrepreneurs create sustainable and ethical solutions
Technological literacy	A STEM education allows entrepreneurs to stay on the cutting edge of technological trends, helping them innovate more effectively. Technical skills can streamline business operations, automate tasks, or even develop prototypes
Interdisciplinarity	Many entrepreneurial projects are at the intersection of multiple disciplines. The interdisciplinary approach of STEM provides entrepreneurs with the opportunity to

	integrate different types of knowledge, which is essential for developing innovative solutions
Ability to understand cybersecurity principles	Understanding the fundamentals of cybersecurity is critical, especially given that businesses handle sensitive customer data. Businesses need to understand data protection, privacy laws, and how to protect their digital assets
Ability to understand the basics of digital marketing and e-commerce analytics	In today's digital age, SEO, social media marketing, and e-commerce analytics skills are crucial for promoting products and analyzing online sales data
Teamwork and communication skills	Working in collaborative, interdisciplinary teams is common in both STEM fields and entrepreneurship. STEM education develops these skills, helping entrepreneurs communicate and lead teams effectively
Systems thinking	It allows entrepreneurs to view their business holistically, understanding how each part interacts with the whole
Project management skills	Familiarity with project management methodologies is useful for managing various aspects of entrepreneurship, from product development to scaling operations

Conclusions

Thus, the role of STEM education in developing essential skills for business and commerce professionals is quite significant. These skills form a strong foundation for entrepreneurship, combining technical expertise with creativity, resilience and an interdisciplinary approach. The combination of skills listed in Table 2 allows future business and commerce professionals to adapt to technological progress and remain competitive, especially in an industry that depends on both innovation and precision.

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ANALYSIS OF EXISTING METHODOLOGICAL APPROACHES TO INFORMATION MANAGEMENT OF HUMAN RESOURCES OF ENTERPRISES IN THE SPHERE OF INFORMATION AND COMMUNICATION TECHNOLOGIES

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Abstract. The paper analyzes existing methodological approaches to information management of human resources of enterprises in the field of information and communication technologies. The main methodological approaches to information management of personnel are identified. It is established that effective information management of human resources of enterprises in the ICT sector is possible only on the basis of the integration of analytical, competency-based and information technology approaches. The use of modern digital solutions allows to increase employee productivity, reduce staff turnover and ensure strategic flexibility of the enterprise.
Keywords: information management, human resources, enterprise, information and communication technologies.

Introduction

In today's digital economy, effective human resource management is becoming one of the key factors in the competitiveness of information and communication technology (ICT) enterprises. The high level of market dynamism, rapid knowledge obsolescence, and the growing role of intellectual capital require the use of the latest methods and tools for information personnel management.

The purpose of the research. The purpose of this report is to analyze existing methodological approaches to information management of human resources of ICT enterprises, to identify their advantages, disadvantages and directions for further development.

Information management of human resources is a system of organizational, analytical and technological measures aimed at collecting, processing, storing and using personnel data to make effective management decisions [1].

Research results

1. Basic methodological approaches to informational personnel management

1.1. Traditional analytical approach

Involves the use of statistical and analytical methods for planning and assessing labor resources [2,3].

Advantages: ease of implementation, the ability to compare with historical data.

Disadvantages: limited accuracy of forecasts, lack of flexibility in the conditions of dynamic changes in the IT market.

1.2. Information-system approach

Based on the implementation of specialized information systems (ERP, HRM, CRM) for complex personnel management [2,3].

Advantages: high automation of processes, reduced time costs, increased transparency of management.

Disadvantages: significant implementation costs and the need to adapt users.

1.3. Competency-based approach

Aimed at managing labor resources taking into account the professional and personal competencies of employees.

Advantages: improved recruitment quality, effective personnel development [2,3].

Disadvantages: difficulty in formalizing competencies in a digital environment.

1.4. Analytical and predictive (Big Data, AI) approach

Applied in leading IT companies and involves the use of artificial intelligence, machine learning and big data analytics to predict employee behavior, assess performance, and manage employee turnover risks [2,3].

Advantages: high accuracy of forecasts, individualization of management decisions.

Disadvantages: difficulty of integration, data quality requirements.

2. Peculiarities of applying methodological approaches in the field of personnel management at information and communication technology enterprises

In the modern conditions of digital transformation of the economy, personnel management at information and communication technology enterprises acquires strategic importance, since it is human capital that is the determining factor in ensuring innovative development, competitiveness and adaptability of business entities to dynamic changes in the external environment. The specifics of the activities of ICT enterprises necessitate the use of such methodological approaches to personnel management that take into account the high level of intellectualization of labor, the project-based nature of work performance, rapid updating of professional knowledge and competencies, as well as the growing role of intangible motivation factors [2,3].

One of the basic characteristics of personnel management at information and communication technology enterprises is the dominance of the competency approach. Its essence lies in the formation, development and assessment of professional, managerial, digital and communicative competencies of employees in accordance with the strategic goals of the enterprise. For ICT companies, the identification of key competencies that ensure the ability of personnel to develop, implement, support and modernize information systems and digital products is of particular importance. Under such conditions, methodological approaches should focus on developing competency profiles, building a system for their monitoring, as well as integrating assessment

results into the processes of selection, adaptation, training and promotion of employees [3,4].

An important feature is also the use of an adaptive approach to the organization of work and management of human resources. Unlike enterprises in traditional industries, ICT companies operate mainly in the conditions of flexible management models, in particular Agile, Scrum, Kanban and their derivatives. This necessitates the need for such methodological principles of personnel management that ensure the rapid formation of teams, redistribution of functions, rapid adaptation of employees to new project tasks and constant feedback between all participants in the production process. In this context, team building methods, assessment of an employee's individual contribution to achieving a collective result, and development of cross-functional interaction skills are of particular importance [2,3].

An essential aspect is the use of an individualized approach to staff motivation. ICT enterprises are characterized by the predominance of employees focused not only on material incentives, but also on professional self-realization, participation in technologically complex and innovative projects, opportunities for career growth, flexible working hours, and maintaining a balance between professional activities and personal life. In this regard, methodological approaches to motivation should combine economic, organizational, socio-psychological, and behavioral tools of influence. In this regard, the formation of a favorable corporate environment that supports initiative, creativity, and professional autonomy of employees is of particular importance [3].

An approach focused on continuous staff development is no less important. In the field of information and communication technologies, the rapid moral obsolescence of knowledge and technologies actualizes the need for continuous professional training, retraining and advanced training of employees. Therefore, the methodological principles of personnel management should provide for the creation of intra-corporate training systems, mentoring programs, professional certification, participation in specialized trainings, educational platforms and professional communities. The effectiveness of such an approach is determined by the ability of the enterprise to ensure the coordination of individual development trajectories of employees with the long-term needs of the organization [3,4].

Special attention deserves the analytical approach to personnel management, which involves the use of quantitative and qualitative methods for assessing the state of human resources. In modern ICT enterprises, HR analytics is an important tool for supporting management decisions, as it allows monitoring labor productivity, staff turnover, recruitment efficiency, adaptation, training and staff involvement. Scientifically based application of analytical methods allows to timely identify personnel risks, predict needs in competencies and form more effective personnel policy [1,3].

Therefore, the peculiarities of application of methodological approaches in the sphere of personnel management at information and communication technology enterprises consist in the necessity of complex combination of competence, adaptive,

individualized, developmental and analytical approaches. Such integration ensures formation of effective system of human resources management capable to support innovative development of the enterprise, its organizational flexibility and stability in competitive digital environment.

Conclusions

Analysis of existing methodological approaches shows that effective information management of labor resources of ICT enterprises is possible only on the basis of integration of analytical, competency-based and information technology approaches.

The use of modern digital solutions allows to increase employee productivity, reduce staff turnover and ensure strategic flexibility of the enterprise.

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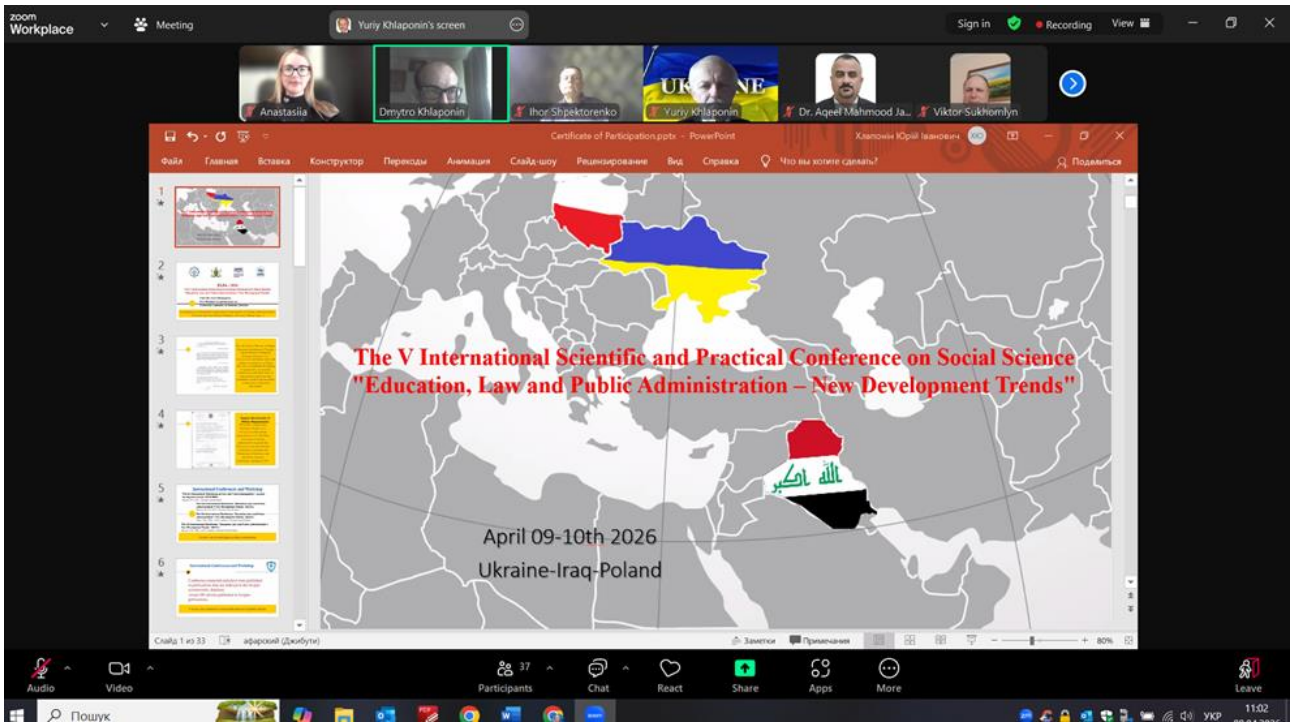

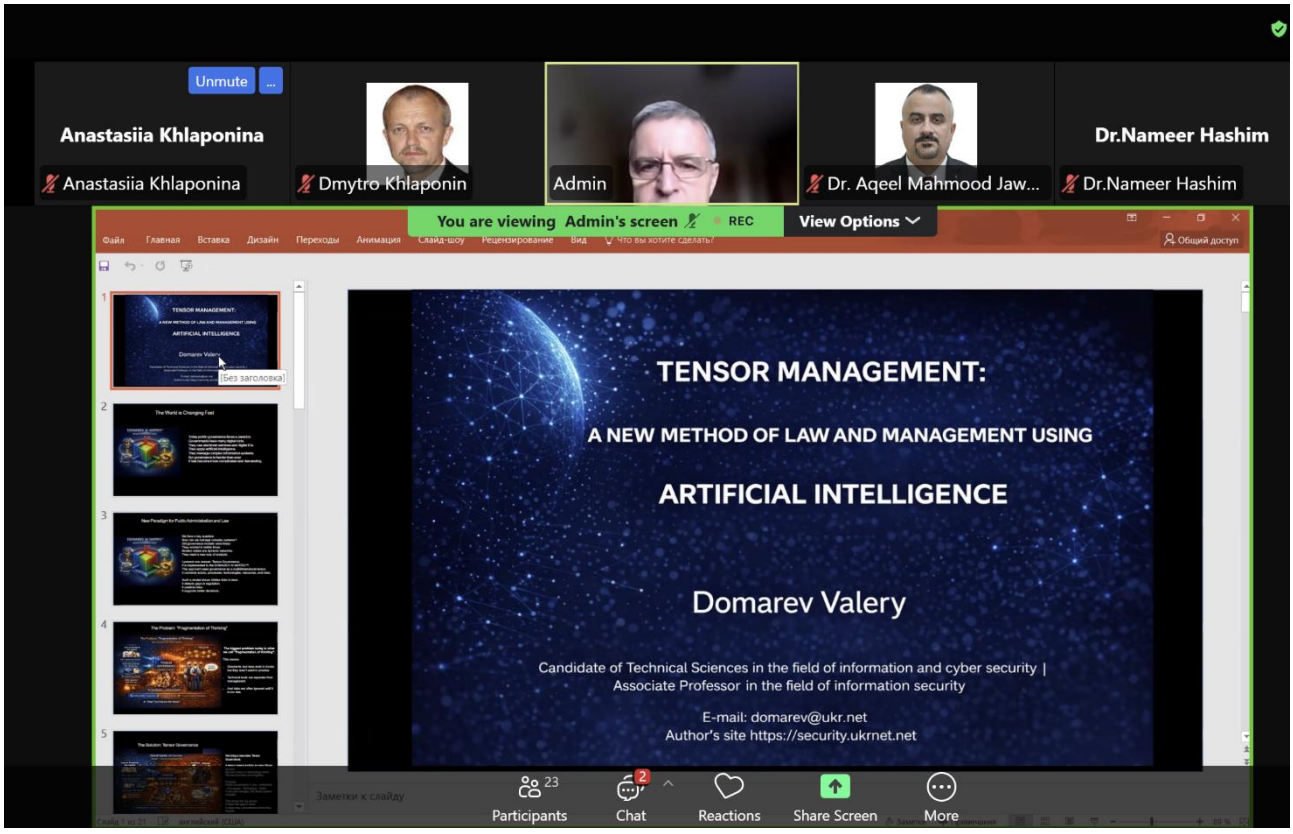

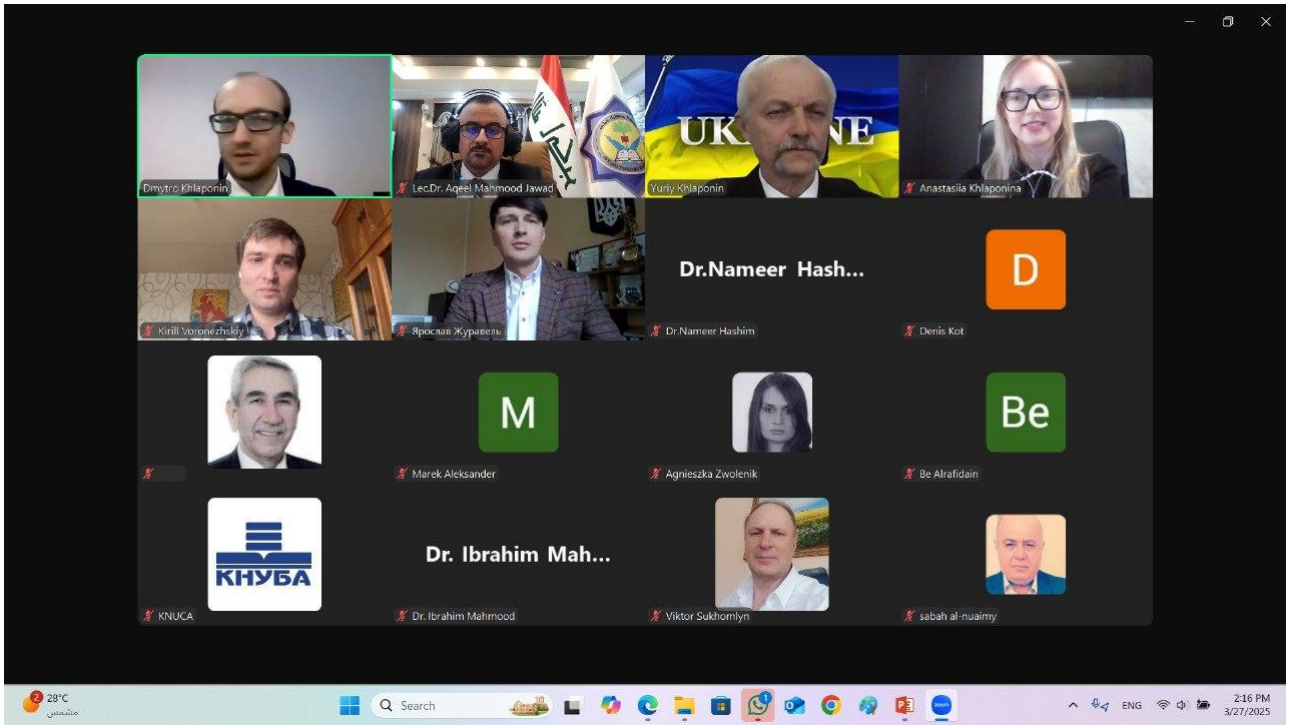
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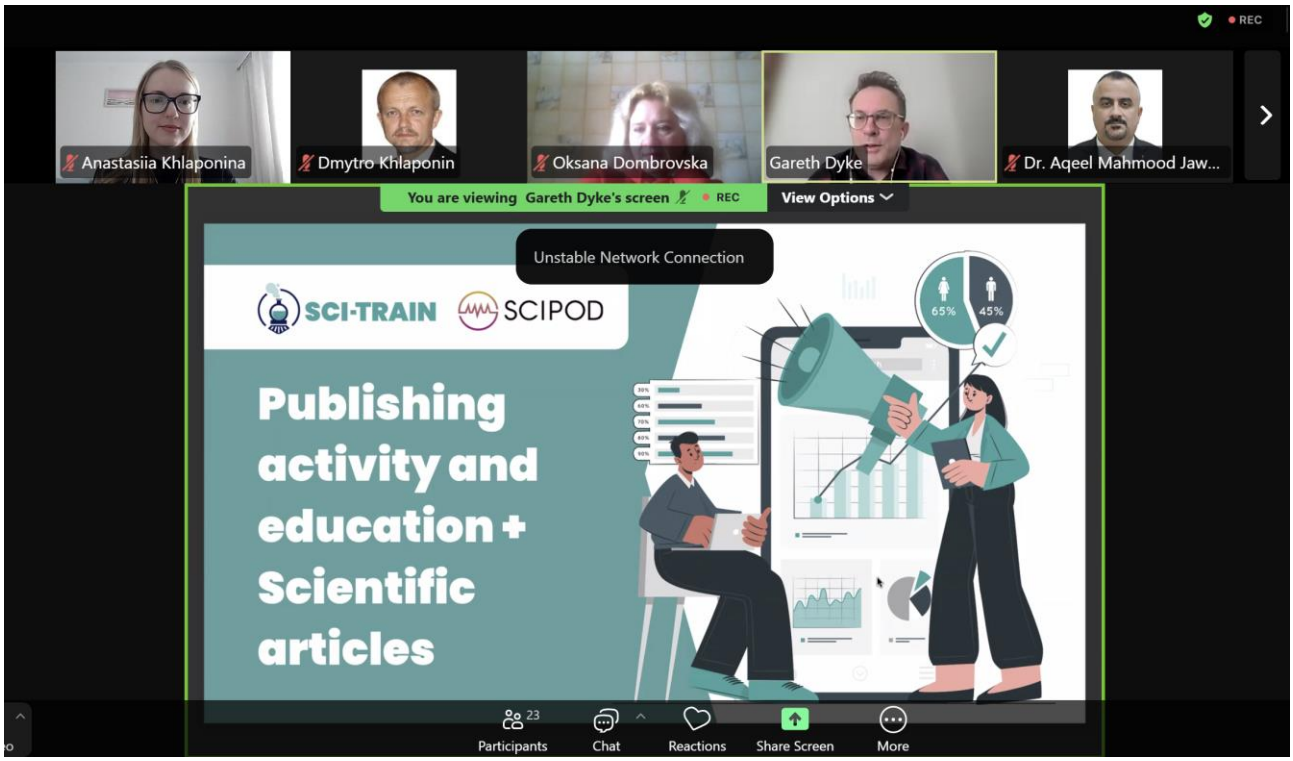
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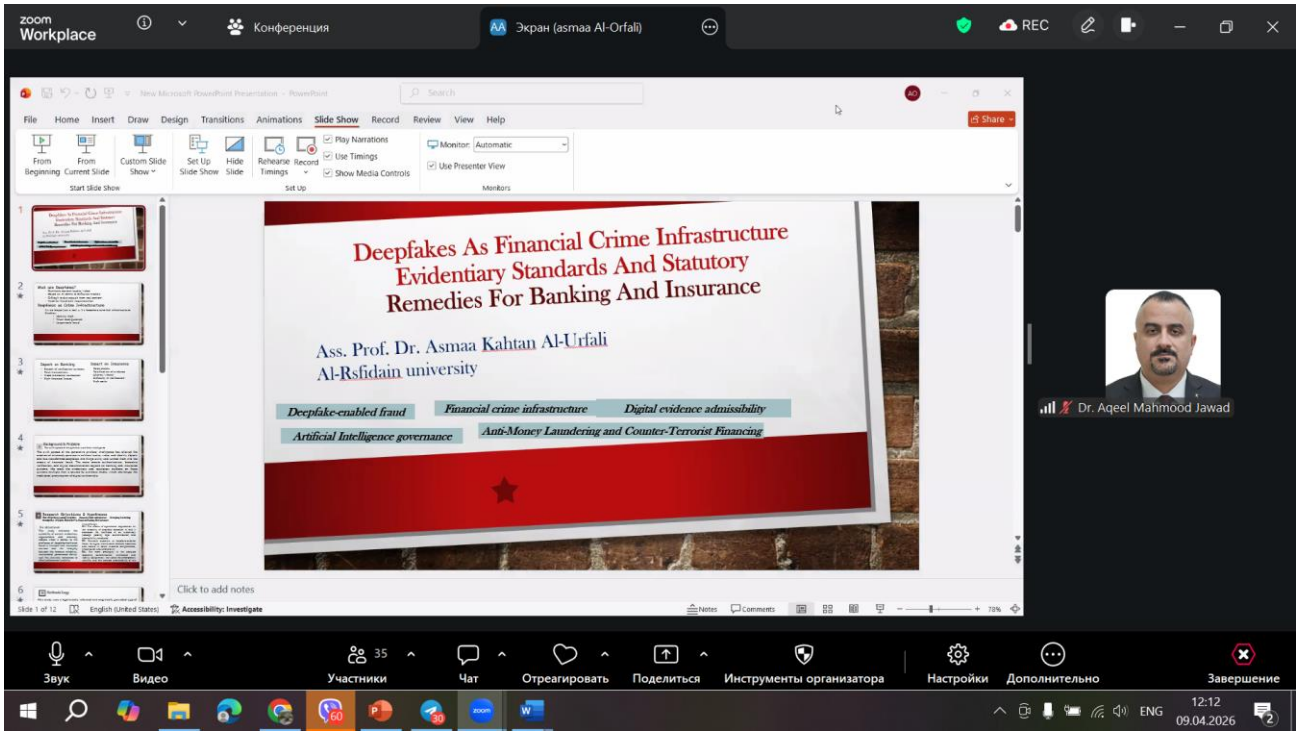
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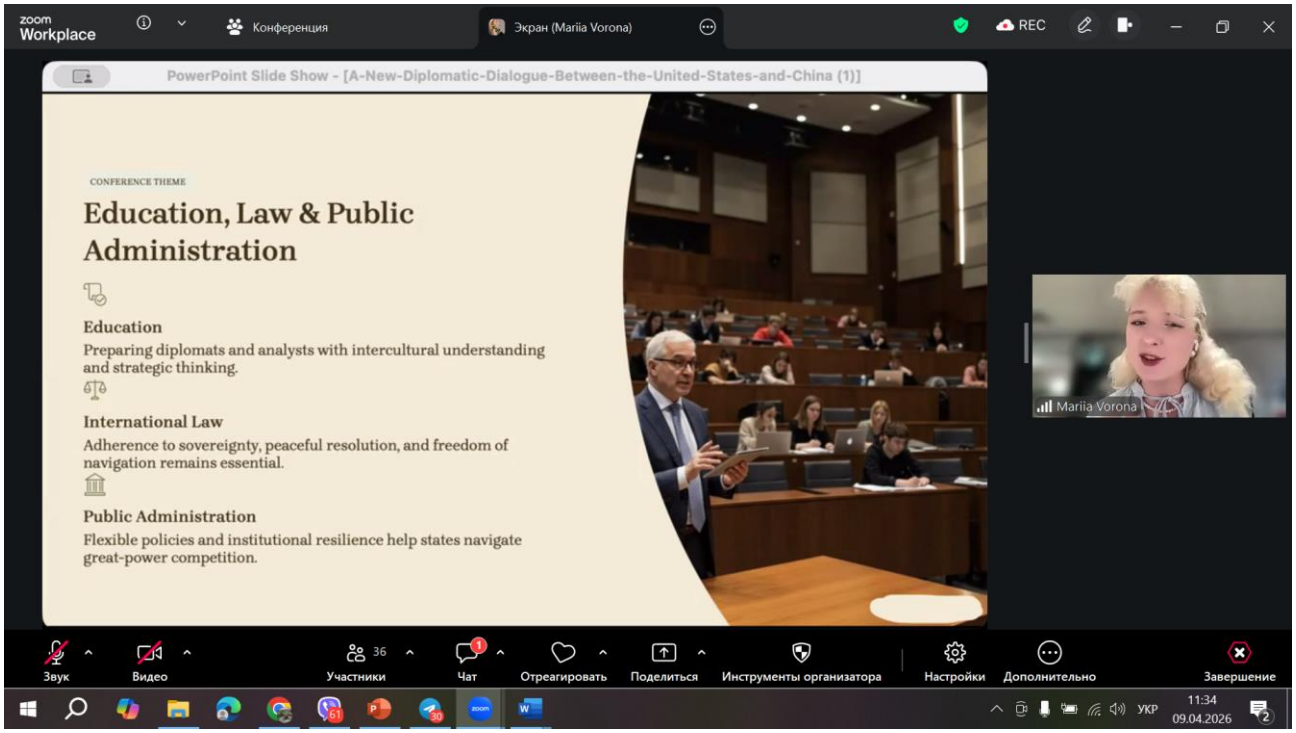
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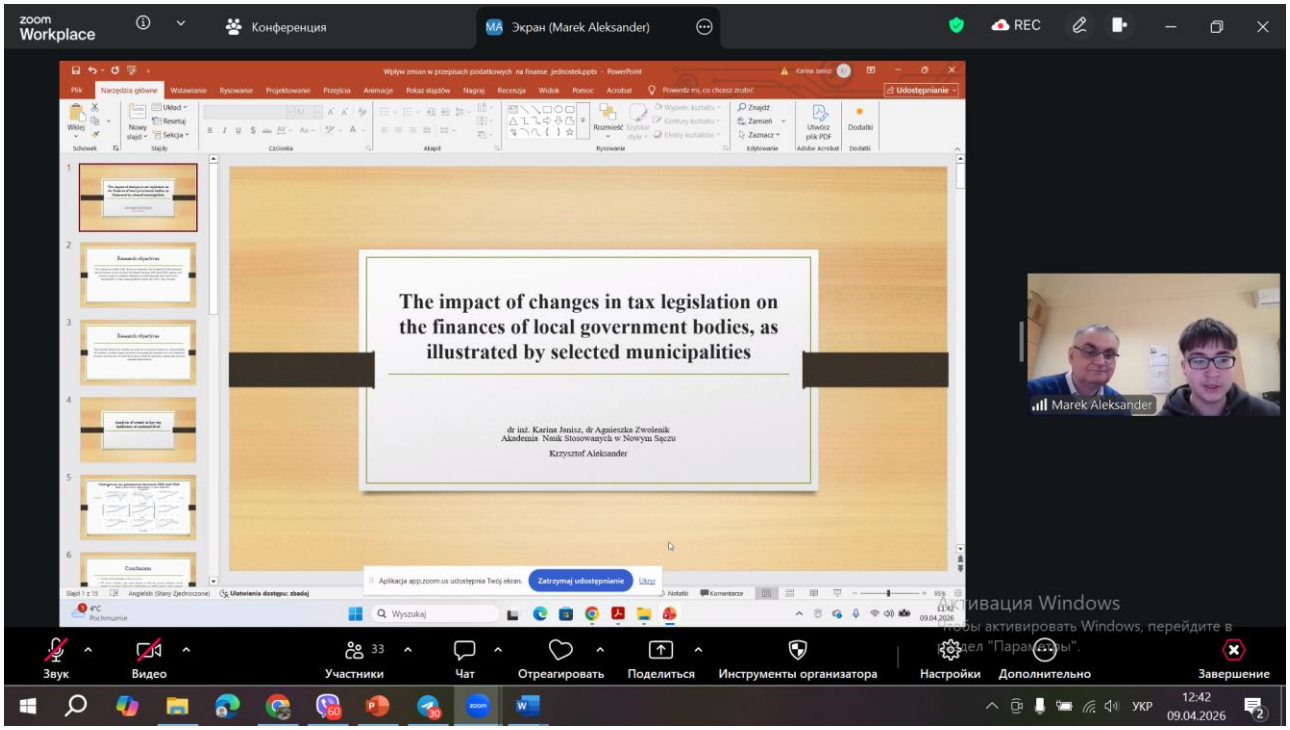
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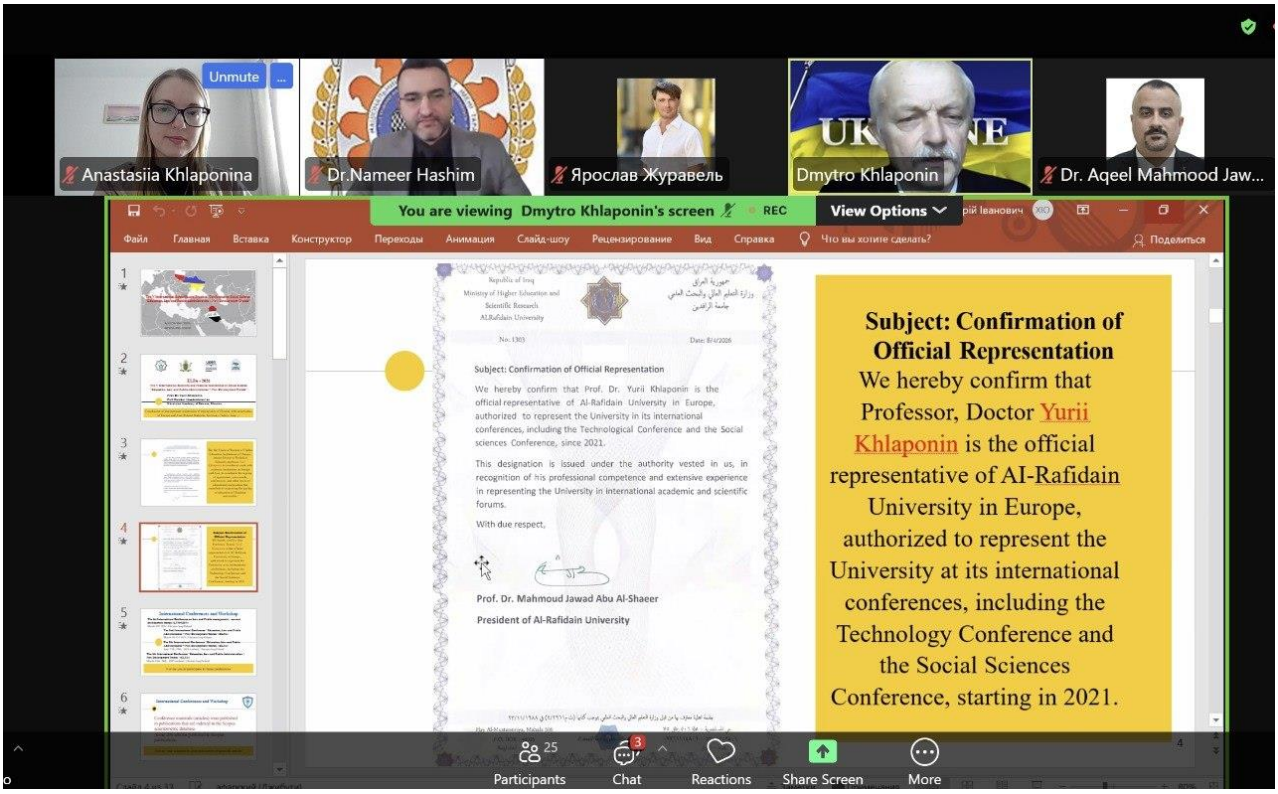

Конференція проведена за організаційної, інформаційної та технічної підтримки д.т.н., проф. Хлапоніна Ю.І., координатора міжнародної співпраці з університетами Європи та Азії)

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The V International Scientific and Practical Conference "Education, Law and Public Administration – New Development Trends"
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Підписано до друку 13.04.2026. Формат 60x90/16
Ум. друк. арк. 2,5. Обл. вид. 0,9

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