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Structural crisis in contemporary higher education: a systemic approach to institutional resilience and transformation

This study aims to identify current problems and trends in the development of university education, with an emphasis on sectoral educational institutions through a systematic approach to the analysis of the educational process. The methodological framework combines systemic and comparative analysis for a comprehensive study of maritime higher education as an integral component of the overall training system. A content analysis of scientific publications was conducted along with a statistical analysis of official data from four leading maritime universities in Ukraine for 2020-2024, including recruitment dynamics and admission structure by specialization. The scientific novelty lies in the comprehensive analysis of specific challenges facing maritime education, including unique problems such as restrictions on maritime practice due to port blockades, the need to adapt to international standards in the face of limited resources, and the changing perception of maritime professions in the face of wartime risks. The practical significance lies in the development of specific recommendations for overcoming crisis phenomena, including the creation of sustainable distance learning systems, the development of international partnerships and the implementation of innovative approaches to learning in conditions of limited opportunities. The study findings emphasize the strategic importance of maritime education for national security and the need to develop a comprehensive development strategy.

***Keywords*:** *educational issues, educational programs, digital transformation, student mental health, quality assessment, maritime universities, declining enrollment rates*

Introduction. The modern university finds itself at a critical juncture, confronting an unprecedented confluence of challenges that fundamentally question its traditional role, mission, and organizational structure. The rapid pace of technological development, demographic shifts, economic pressures, and geopolitical instability have created an environment of persistent uncertainty that permeates all aspects of higher education institution functioning worldwide. This multifaceted crisis extends beyond temporary disruptions and encompasses fundamental questions about university identity, purpose, and sustainability in an increasingly interconnected yet fragmented global landscape.

The traditional conception of the university as a sanctuary for knowledge preservation and transmission is being challenged by demands for market-oriented education, technological disruptions, and the commodification of learning. Universities simultaneously face pressure to maintain their historical role as centers of cultural preservation and intellectual development while adapting to imperatives of global competitiveness, employment-oriented curricula, and digital transformation. This tension creates a profound identity crisis manifesting in various forms: the struggle between academic

excellence and commercial viability, the balance between local cultural relevance and international standardization, the challenge of preserving humanistic values while embracing technological innovation [1].

Globalization has emerged as the most transformative force reshaping higher education, bringing both unprecedented opportunities for international collaboration and significant threats to institutional autonomy and cultural diversity. The dominance of English-language publications, standardized international rankings, and Western educational models creates pressures toward homogenization that may undermine the unique contributions of diverse educational traditions. Universities face the paradoxical challenge of achieving global recognition while preserving their distinctive cultural and intellectual identities.

The demographic crisis affecting many regions has created additional pressure on university sustainability, as declining birth rates and migration trends reduce the traditional pool of prospective students. This demographic shift coincides with economic challenges constraining public funding for higher education, forcing universities to seek alternative revenue sources and often leading to intensified commercialization of educational services. The resulting financial pressures create tensions between educational quality and economic sustainability, frequently compromising the university's ability to fulfill its broader social and cultural missions.

The rapid advancement of digital technologies has fundamentally transformed the landscape of knowledge access and dissemination, challenging traditional pedagogical approaches and raising questions about the added value of formal higher education. The proliferation of online learning platforms, massive open online courses (MOOCs), and alternative credentialing systems has democratized access to information while simultaneously undermining the university's monopoly on knowledge transmission. This technological disruption requires universities to reconceptualize their role from information providers to facilitators of critical thinking, research, and intellectual community.

Student mental health challenges have reached critical levels, reflecting broader societal pressures and the psychological impact of living in an era of constant change and uncertainty. The traditional academic environment, designed for a different generation and social context, frequently fails to meet the complex psychological needs of contemporary students who face unprecedented levels of anxiety, depression, and social isolation [2]. These challenges are intensified by the impact of global crises, including pandemics, climate change, and geopolitical conflicts, which create additional layers of stress and uncertainty.

Assessment and accountability mechanisms imposed on universities increasingly emphasize quantitative metrics that may not capture the full spectrum of educational value and social impact. This focus on measurable outcomes often leads to a reductionist approach to education that privileges easily quantifiable achievements over the development of critical thinking, cultural understanding, and civic engagement. The resulting bureaucratization of academic work diverts resources and attention from core educational and research activities, creating additional stress for faculty and administrators.

The erosion of public trust in expertise and scientific authority represents another significant challenge for universities, which have historically served as guardians of knowledge and arbiters of truth. In an era of information overload and deliberate disinformation, universities must navigate the complex task of maintaining their authority while simultaneously acknowledging the limitations of knowledge and the importance of intellectual humility.

This comprehensive analysis examines these interconnected challenges through a systemic approach that recognizes the complex interactions among various factors affecting contemporary higher education. By exploring the multifaceted nature of the current crisis, this study aims to provide insights into the fundamental transformations necessary for universities to maintain their relevance and effectiveness in an uncertain global environment. The research focuses particularly on how higher education establishments can preserve their core functions of knowledge creation, cultural transmission, and social development while adapting to the demands of an increasingly complex and rapidly changing world.

The urgency of addressing these challenges extends beyond the immediate concerns of higher education systems and encompasses broader questions of social cohesion, cultural continuity, and democratic governance [3]. Universities play a crucial role in preparing future leaders, preserving cultural heritage, and generating knowledge necessary for addressing global challenges. Their capacity to fulfill these functions while navigating current uncertainties will significantly influence the trajectory of human civilization in the coming decades.

Analysis of Recent Research and Problem Statement. The contemporary Ukrainian university operates under conditions of profound financial crisis, representing one of the most serious threats to preserving its status as a full-fledged participant in the global educational space. Chronic underfunding by the state creates systemic distortions across all spheres of university activity, from material and technical provision to personnel policy.

State funding for higher education in Ukraine in recent years has constituted less than one percent of gross domestic product, a critically low indicator even by developing country standards. This situation compels universities to seek alternative revenue sources; however, opportunities for financing diversification remain limited due to economic instability in the country and the absence of developed public-private partnership mechanisms in the educational sphere.

Resource insufficiency particularly acutely affects the renewal of universities' material and technical base. Obsolete laboratory equipment, absence of modern research instruments, and limited access to digital resources create a chasm between Ukrainian universities and their foreign counterparts. This problem not only diminishes educational process quality but also renders Ukrainian science less competitive at the international level.

The personnel crisis, caused by low salary levels for faculty and researchers, leads to mass migration of talented scholars abroad. The impossibility of ensuring dignified working conditions and career development prospects makes Ukrainian universities unattractive to both young specialists and experienced scholars. This creates a vicious cycle wherein declining quality of personnel potential leads to further deterioration of university reputation and reduction of its capacity to attract additional resources.

Limited financial resources also affect universities' ability to maintain international cooperation and academic mobility. Absence of funds for participation in international projects, conferences, and exchange programs gradually isolates the Ukrainian university from global scholarly networks. This is particularly critical in an era when university success largely depends on its integration into the international academic community.

Budgetary constraints force universities to reduce expenditures on research activity, negatively affecting their capacity to generate new knowledge and innovations. Insufficient funding for fundamental research undermines the long-term competitiveness of Ukrainian universities and their role in the national innovation system. Simultaneously, opportunities diminish for developing applied research that could become a source of additional income through industrial collaboration [4].

Financial difficulties also limit universities' possibilities to invest in digital infrastructure development and implementation of innovative educational technologies. In a time of rapid online education development and blended learning formats, Ukrainian universities risk falling behind global trends due to inability to ensure the necessary level of technological equipment.

The deepening financial crisis under martial law conditions creates additional challenges for the university system. Growing expenditures on security provision, the necessity of evacuation and restoration of damaged infrastructure, as well as declining student numbers due to mobilization and emigration further complicate universities' financial situation. This situation demands rethinking of traditional approaches to higher education financing and searching for new models of sustainable university development under resource-constrained conditions [5].

Outdated curricula and the need for updating.

The misalignment of Ukrainian university curricula with contemporary labor market demands and global educational standards constitutes a serious obstacle to integrating the national higher education system into the global educational space. Many existing educational programs were developed decades ago and have since undergone only cosmetic changes, failing to account for fundamental transformations in science, technology, and social life.

The inertia of the university system manifests in the preservation of traditional approaches to knowledge structuring that often fail to correspond to the interdisciplinary nature of contemporary problems. The rigid departmental structure of universities and conservatism of the academic community create resistance to implementing innovative educational programs that combine different fields of knowledge. This is particularly critical in an era when the most promising directions of scientific and technological development are found at the intersection of traditional disciplines.

The lag of educational program content behind the contemporary level of scientific development results in graduates of Ukrainian universities often finding themselves unprepared for work in rapidly changing technological environments. This manifests especially acutely in information technology, biotechnology, environmental sciences, and other dynamically developing spheres where the knowledge renewal cycle constitutes only several years.

Insufficient attention to developing so-called soft skills or twenty-first century competencies leaves graduates uncompetitive in the modern labor market. Critical thinking, creativity, collaboration capacity, communication skills, and digital literacy often remain beyond the attention of traditional curricula, which focus predominantly on transmitting factual knowledge.

The absence of flexible mechanisms for curriculum renewal renders Ukrainian universities incapable of responding rapidly to changes in science and technology [6]. Bureaucratic procedures for approving new courses and programs can last years, which under conditions of exponential development in certain knowledge domains makes such programs obsolete even before their official implementation.

Insufficient engagement of employers and industry representatives in curriculum development and renewal processes leads to a disconnect between university education and real economic needs. The absence of systematic dialogue between the academic community and business environment impedes creation of educational programs that genuinely correspond to contemporary labor market requirements.

Limited opportunities for introducing innovative learning formats, such as project-based learning, research-based learning, or dual education, confine Ukrainian universities within the traditional lecture-seminar system framework. This system, while having its advantages, is not always effective for forming practical skills and competencies necessary in the modern world.

The problem of outdated curricula is further complicated by the insufficiency of qualified faculty who possess contemporary knowledge and teaching methodologies. Low levels of academic mobility and limited opportunities for professional development result in a significant portion of the teaching staff lacking adequate familiarity with the latest trends in their fields.

International rankings and quality assessment systems increasingly consider the currency and relevance of curricula, placing Ukrainian universities at a disadvantage compared to their foreign competitors. The lag in curriculum renewal negatively affects the international reputation of Ukrainian higher education and reduces the attractiveness of Ukrainian universities to foreign students and partners.

Student Mental Health Problems.

The contemporary Ukrainian university confronts an unprecedented mental health crisis among student youth, which has assumed particularly acute forms under the influence of military operations, socioeconomic instability, and fundamental changes in the educational process. This crisis extends far beyond traditional academic problems and affects fundamental aspects of psychological wellbeing for an entire generation.

The impact of war on students' mental state manifests in multiple forms of traumatization, from direct combat experience to chronic stress from constant threat and uncertainty. Students who were forced to leave their homes, lost loved ones, or witnessed the destruction of familiar life demonstrate symptoms of post-traumatic stress disorder, depression, and anxiety states. Even those not directly affected by military actions experience secondary traumatization through constant informational pressure and an atmosphere of general tension [7].

The unstable global political situation intensifies feelings of uncertainty about the future among student youth. Global crises, economic fluctuations, environmental threats, and social conflicts create an atmosphere of chronic anxiety that is particularly acutely perceived by young people at the stage of forming life plans and career strategies. This leads to growing levels of nervousness, apathy, and pessimistic moods among students.

The mass transition to online education, while becoming a necessary solution under pandemic and martial law conditions, created new challenges for student mental health. Social isolation characteristic of distance learning has disrupted traditional forms of academic interaction and student community. The absence of direct contact with instructors and classmates, limited opportunities for informal communication and collective activity create feelings of alienation and loneliness.

Digital fatigue caused by prolonged time before computer and smartphone screens has become a serious problem for students' physical and mental health. Sleep pattern disruption, decreased physical activity, problems with attention concentration and learning motivation are typical consequences of intensive digital technology use in the educational process. The blurring of boundaries between personal space and learning environment complicates maintenance of a healthy balance between study and rest.

Economic instability and rising cost of living create additional stress factors for students and their families. The necessity of combining study with work to meet basic needs, absence of financial support and employment prospects after university graduation intensify anxiety and uncertainty about the future. This is particularly relevant for students from low-income families who often must abandon higher education due to financial difficulties.

Insufficient psychological support in the university environment renders students vulnerable to developing serious mental disorders [8]. Most Ukrainian universities lack sufficiently developed psychological assistance services, and existing resources often fail to correspond to the scale and complexity of problems students face. Stigmatization of mental disorders in society also prevents students from seeking professional help.

Academic pressure combined with personal crises leads to growing cases of academic burnout among students. Perfectionism, competition for scholarships and postgraduate positions, fear of failure and parental disappointment create a toxic environment that undermines not only academic achievement but also the general wellbeing of young people.

The influence of social media and the digital environment on formation of students' self-esteem and worldview creates additional risks for mental health. Constant self-comparison with others, cyberbullying, information overload, and digital technology dependence become increasingly common problems among university youth.

Student mental health problems have far-reaching consequences not only for individual wellbeing but also for educational process quality and future societal development. Growing levels of mental disorders among student youth threaten the loss of an entire generation of talented and educated citizens capable of contributing to national and global community development.

The Growing Commercialization of Education and Its Consequences.

The progressive commercialization of Ukrainian higher education fundamentally transforms the nature of the university as an institution, converting it from a center of knowledge accumulation and transmission into an enterprise oriented toward profit generation. This process, while having certain positive aspects in terms of enhanced efficiency and competitiveness, simultaneously creates serious threats to the fundamental values of the academic community.

The transformation of the student into a client of educational services leads to distortion of relationships between instructor and learner. Market logic, which presupposes satisfaction of consumer needs, often contradicts the educational mission of the university, which consists not only in providing knowledge but also in forming critical thinking and intellectual personality development. This may lead to lowering of academic standards for the sake of preserving student enrollment and ensuring university financial stability.

Profit orientation prompts universities to prioritize popular and commercially attractive specializations at the expense of fundamental sciences and humanities disciplines that possess long-term societal significance but do not always ensure rapid return on investment. This leads to imbalance in personnel training and may negatively affect the cultural and intellectual development of society.

The commercialization of research activity, while potentially facilitating innovative development and technology transfer, simultaneously creates risks for research independence. Pressure from commercial partners may influence research topic selection, methodology, and even result interpretation. This is particularly problematic for research in healthcare, ecology, and social sciences, where commercial interests may contradict the public good.

Rising education costs resulting from commercialization create additional barriers to quality higher education access for representatives of less affluent population segments. This intensifies social inequality and transforms higher education into a privilege of wealthy classes, contradicting democratic society principles and potentially resulting in talented personnel loss due to socioeconomic circumstances.

The corporatization of university management, which often accompanies commercialization processes, leads to diminished role of the academic community in strategic decision-making. The dominance of managerial approaches over academic ones may lead to decisions that, while economically expedient, contradict the educational and scientific mission of the university.

The marketization of the educational process prompts universities toward aggressive promotion of their services, which may lead to exaggeration of educational program quality and graduate employment prospects. Such practices not only mislead prospective students and their parents but also undermine trust in the university system generally. [9]

Competition among universities for students and funding, while potentially stimulating quality improvement in educational services, may simultaneously lead to unhealthy rivalry and duplication of efforts instead of cooperation and coordination in developing the national higher education system.

Commercial logic often contradicts long-term university education goals such as civic consciousness formation, cultural transmission, and critical comprehension of societal processes. Focus on short-term commercial results may lead to neglect of these important university functions.

University dependence on commercial revenues renders them vulnerable to economic fluctuations and market condition changes. Financial crises may lead to sharp reductions in educational and research program funding, negatively affecting education quality and university operational stability.

The internationalization of educational services as one commercialization aspect may lead to loss of national educational program specificity and orientation toward international standards that do not always correspond to national economy and culture needs. This creates risks of cultural unification and loss of unique Ukrainian higher education traditions.

A particularly dangerous commercialization aspect is the proliferation of short-term online courses positioned as full alternatives to university education. These courses, oriented toward rapid practical skills acquisition, often neglect fundamental theoretical foundations and disciplinary historical roots. Students who select such programs obtain fragmented knowledge without understanding deep connections among different scientific fields and their evolution. This leads to superficial thinking formation and incapacity for systematic analysis of complex problems.

The mass proliferation of pseudo-educational programs utilizing attractive marketing and promising rapid results creates an illusion of quality education accessibility with minimal effort. Such programs often exploit people's desire for quick success and social recognition, offering certificates and diplomas

of dubious value. This undermines trust in the genuine educational system and creates unrealistic expectations regarding the educational process.

A critical problem becomes the shift of student audience trust from academic authorities to popular bloggers and social media influencers. Platforms such as TikTok, YouTube, and Instagram become sources of "educational" content often characterized by oversimplification, sensationalism, and absence of scientific rigor [10]. Youth increasingly trust short videos and posts more than systematic instructor lectures, leading to clip thinking formation and incapacity for deep analysis.

The phenomenon of knowledge "Googleization," when information access is confused with education, creates a false notion that years of study can be replaced by several hours of internet searching. This leads to critical thinking skills degradation and inability to distinguish reliable information from manipulative content. Students lose understanding of methodological preparation importance and the scientific approach to cognition.

Commercialization also promotes the spread of instant gratification culture in education, when complex concepts are attempted to be presented as easily digestible "life hacks" and "success secrets." Such substitution of deep learning with superficial tricks forms unrealistic expectations in students and intolerance toward the prolonged intellectual efforts necessary for genuine disciplinary mastery.

Globalization and the Challenge of Preserving Cultural Diversity.

Globalization processes create a paradoxical situation for the contemporary Ukrainian university, which must balance between the necessity of integrating into the international educational space and preserving its own cultural identity. This challenge assumes particular acuity under conditions when unification of educational standards and practices may lead to loss of unique national traditions and approaches to teaching and research activity.

The dominance of English-language educational resources and scholarly publications creates powerful pressure on local teaching languages and scientific discourse. Ukrainian universities face a dilemma: on one hand, Ukrainian language use in the educational process constitutes an important factor in preserving national identity and cultural heritage; on the other hand, the prevalence of English-language content in international scientific sources renders bilingualism or even complete transition to English practically necessary for ensuring graduate competitiveness. [11]

Educational program standardization according to international requirements often presupposes adaptation to dominant Western education models, which may lead to neglect of traditional Ukrainian pedagogical approaches and methodologies. This particularly concerns humanities disciplines, where national specificity of historical experience, literary tradition, and philosophical thought possesses fundamental significance for student cultural identity formation.

International academic mobility, while opening new opportunities for students and faculty, simultaneously creates risks of brain drain and cultural assimilation of the most talented academic community representatives. Graduates who obtain education or work experience at foreign universities often remain in their countries of study, leading to intellectual potential loss and carriers of national cultural tradition.

Global university rankings, which have become an important quality assessment instrument, often employ criteria developed based on Western educational models and values. This compels Ukrainian universities to adapt their activities to foreign standards, which may lead to loss of those unique characteristics that traditionally distinguished Ukrainian higher education.

Educational process digitalization and online platform proliferation, while expanding knowledge access, simultaneously facilitate cultural homogenization. The dominance of large technological corporations in educational technology spheres leads to approach unification in teaching and assessment, which may fail to account for national educational tradition specificity and cultural particularities.

Education commercialization on a global scale leads to educational programs being formed predominantly under the influence of developed country market needs rather than national priorities and

cultural values. This may lead to training specialists who, while competitive in the global labor market, are alienated from their own cultural heritage and national interests.

Research globalization, while facilitating knowledge and innovation exchange, may lead to marginalization of local research topics and traditional knowledge. Ukrainian scholars are compelled to orient toward international trends and funding priorities, which may lead to neglect of research on problems relevant to Ukrainian society and culture. [12]

The influence of global media and social networks on student youth worldview formation creates additional challenges for preserving national cultural identity. The dominance of Western cultural models and values in the global information space may lead to national self-identification crisis among youth.

International university cooperation, while necessary for science and education development, often presupposes asymmetric relationships where Ukrainian universities function more as suppliers of human resources and consumers of ready-made educational products rather than as equal partners in creating new knowledge and educational innovations.

The challenge of preserving cultural diversity under globalization conditions requires Ukrainian universities to develop strategies that would enable integration into the international educational community while preserving their own cultural uniqueness and contribution to global knowledge. This presupposes not passive adaptation to global trends but active participation in forming a multipolar educational space where different cultural traditions complement one another.

An additional factor intensifying the threat of cultural diversity loss is the process of forced higher education institution consolidation caused by declining student numbers and financial difficulties. Demographic crisis and migration processes lead to reduced prospective student contingents, compelling the state and administrative structures to resort to mechanical university mergers as a method of educational system optimization. However, such an approach often ignores the unique history, traditions, and pedagogical schools that developed over decades in individual educational institutions.

The success criterion for consolidated universities increasingly reduces to quantitative indicators such as total student numbers, faculties, and educational programs rather than education quality and academic tradition preservation [13]. Administrative logic guided by the principle that "bigger means better" leads to creation of educational giants where one university may have forty faculties compared to a specialized institution with only five but possessing deep traditions and high-quality specialist training in its fields.

Such mechanical consolidation often destroys unique pedagogical schools and scientific directions that formed over many years. Specialized universities that had reputations as centers of advanced knowledge in specific fields lose their identity within large multidisciplinary entities. This leads to academic excellence dilution and loss of those competitive advantages that made these educational organizations unique.

The consolidation process often accompanies educational program standardization and administrative procedure unification, which may lead to loss of innovative pedagogical approaches and methodologies developed in individual educational institutions. Many years of experience working with specific knowledge fields and specific professional community needs risk being lost in the formal integration process.

The educational institution culture and atmosphere formed over years through faculty, student, and alumni interaction proves particularly vulnerable to consolidation processes. Scientific school traditions, student initiatives, informal connections between scholar generations—all this may be lost as a result of mechanical merger of different organizational cultures.

Problems of Education Quality Assessment and Accountability.

The contemporary education quality assessment system in Ukrainian universities is characterized by profound contradictions between formal indicators and real educational achievements. This problem assumes particular acuity in the context of growing accountability requirements for universities before

the state, society, and international partners, when quantitative metrics often substitute for qualitative characteristics of the educational process.

The dominance of bureaucratic approaches to education quality assessment leads to creation of complex reporting systems that absorb significant university resources but do not always adequately reflect the actual state of affairs. Faculty and administrators are forced to spend increasingly more time preparing reports, completing forms, and participating in formal assessment procedures instead of concentrating on direct educational and research activity.

Mechanical application of international assessment standards to Ukrainian universities often fails to account for national educational system specificity, historical traditions, and cultural context. Criteria developed for Western universities may be inadequate for evaluating Ukrainian higher education institutions, leading to distorted perceptions of their real achievements and potential. [14]

The problem also lies in excessive attention to easily measurable indicators such as publication numbers, citation indices, and rankings at the expense of more difficult-to-assess aspects of university activity. Teaching quality, impact on student personality formation, contribution to local community development, and cultural tradition preservation are difficult to quantify, yet they often determine the true value of university education.

The university ranking system, which has gained widespread adoption, creates false incentives for educational institution development. The desire to improve ranking positions may lead to effort concentration on indicators that directly affect ranking positions at the expense of activity aspects important to students and society but not reflected in rankings.

Imperfect feedback mechanisms from students and employers complicate objective educational process quality assessment. Traditional surveys often fail to provide sufficiently deep understanding of student educational experience, and employer opinions about graduate preparation quality are rarely systematically considered in university evaluation.

The accountability problem is also complicated by the multiplicity of stakeholders to whom universities must report. Government bodies, students, parents, employers, international partners, and the public often have different and sometimes contradictory expectations regarding university activities. This leads to the necessity of balancing different requirements and may result in losing focus on the university's core mission.

Insufficient funding for quality assessment procedures leads to their formalization and reduced effectiveness. External experts often lack sufficient time and resources for deep analysis of university activities, leading to superficial conclusions and recommendations.

Assessment culture in Ukrainian universities is often characterized by fear of negative consequences from honest self-analysis [15]. This leads to problem concealment and indicator inflation instead of open discussion of challenges and searching for solutions. Such an atmosphere impedes real education quality improvement.

The absence of long-term perspective in assessment systems leads to concentration on short-term results at the expense of strategic development. Universities are compelled to demonstrate rapid indicator improvements, which may lead to decisions that are counterproductive in the long term.

Technological limitations and insufficient digital infrastructure complicate implementation of modern education quality assessment methods. The absence of data analytics systems and automated monitoring instruments renders assessment processes labor-intensive and less precise.

The qualification problem of experts involved in education quality assessment also requires attention. Insufficient assessor preparation, their unfamiliarity with specific knowledge field specifics or contemporary education trends may lead to inadequate conclusions and recommendations that do not contribute to real educational process quality enhancement.

Particularly acute is the problem of excessive administrative burden on faculty, who are forced to spend a significant portion of working time completing numerous reports, tables, and forms instead of class preparation and research work. Faculty are transformed into clerks who devote more time to paperwork than direct communication with students and educational program development. This leads

to a paradoxical situation where efforts directed at education quality control actually reduce this quality by diverting faculty from their core functions.

The bureaucratic apparatus demands from faculty detailed documentation of every activity aspect: from lesson plans to reports on individual student learning plan fulfilment [15]. Such a level of detail is often excessive and fails to reflect real educational process quality, but absorbs resources that could be directed toward teaching methodology improvement and innovative educational approach development.

The Ministry of Education, pursuing the goal of higher education restructuring and modernization, often loses sight of the main objective—ensuring high-quality specialist training. Instead of assessing the real level of student knowledge and competencies, attention focuses on formal university activity indicators: numbers of defended dissertations, volumes of scholarly publications, material and technical base size, and faculty numbers.

Such goal substitution leads to distorted understanding of university education effectiveness, when an institution with powerful infrastructure and large faculty numbers may be considered successful even with low graduate preparation quality. Simultaneously, small specialized universities ensuring high professional training levels may receive negative assessments due to modest material base indicators.

The pursuit of quantitative indicators prompts universities toward artificial statistical data inflation and reporting manipulation. This creates an illusion of education quality improvement while real problems remain unresolved. Energy and resources that should be directed toward faculty qualification enhancement, educational program renewal, and learning condition improvement are expended on report preparation and formal indicator maintenance.

The Necessity of Innovative Teaching Methods.

The contemporary Ukrainian university urgently requires fundamental transformation of pedagogical approaches, as traditional teaching methods increasingly fail to correspond to the needs of the digital generation and demands of a dynamically changing labor market. The crisis of the traditional lecture-seminar system manifests in declining student motivation, their passivity during classes, and inability to apply acquired knowledge in practical situations.

The dominance of frontal teaching methods, when the instructor serves as the sole information source and students passively receive it, contradicts contemporary conceptions of effective learning. Such an approach does not facilitate critical thinking development, creativity, and independent problem-solving skills, which constitute key twenty-first century competencies. Students become accustomed to the role of ready-made information consumers instead of learning to independently analyze, synthesize, and create new knowledge.

The absence of interactive learning methods results in students not obtaining sufficient experience in teamwork, public speaking, discussions, and argumentation of their own positions. These skills are critically important for successful professional activity in the modern world, where capacity for effective communication and collaboration often determines career success more than purely academic knowledge. [16]

Insufficient technology use in the learning process renders Ukrainian universities uncompetitive compared to foreign educational institutions. Virtual reality, artificial intelligence, adaptive learning systems, and other contemporary technologies could significantly enhance learning effectiveness, but their implementation is constrained by both financial limitations and faculty conservatism.

The problem also lies in many instructors not possessing contemporary pedagogical methodologies and digital competencies necessary for implementing innovative learning approaches. The absence of systematic faculty professional development programs in pedagogical innovations leads to preservation of outdated teaching methods even in cases where modernization opportunities exist.

Curriculum and program rigidity impedes implementation of flexible learning methods such as project-based learning, flipped classroom, or integrated interdisciplinary courses. Bureaucratic procedures for approving curriculum changes render the innovation process excessively slow and complex, demotivating instructors from experimenting with new approaches.

Underestimation of education's practical component importance leads to a disconnect between theoretical knowledge and real labor market needs. Students often complete university with substantial theoretical knowledge baggage but without practical application skills. The absence of close employer collaboration and limited internship opportunities complicate integration of the practical component into the educational process.

The traditional assessment system, based predominantly on memorization and information reproduction, does not stimulate creative thinking development and innovative approaches to problem-solving. Students orient toward formal task completion and grade attainment instead of deep material understanding and professional competency formation.

The absence of personalized learning approaches ignores individual student characteristics, abilities, and needs. Unified curricula and teaching methods fail to account for learning style diversity and material absorption pace variation, leading to ineffective utilization of each student's potential.

Insufficient attention to soft skills and emotional intelligence development leaves graduates unprepared for contemporary work environment challenges. Adaptability, leadership, conflict management, and stress resilience capacities become increasingly important, but traditional teaching methods rarely facilitate their formation.

The absence of experimentation and innovation culture in pedagogical practice constrains university education development. Instructors often lack incentives for seeking new working methods, and administration does not always support educational process modernization initiatives. This leads to stagnation and gradual falling behind global educational trends.

Simultaneously, it is important to emphasize that educational innovations must not lead to complete departure from fundamental principles of scientific cognition and understanding of knowledge historical roots. Despite educational process digitalization necessity, students must understand scientific discipline origins, scientific thought evolution, and methodological foundations of cognition. Superficial fascination with newest technologies may lead to loss of connection with fundamental principles upon which scientific knowledge is based [17].

Insufficient Adaptation of Maritime Universities to Contemporary Challenges.

Ukrainian maritime higher education providers find themselves in a particularly difficult situation, as the specificity of their activities renders them extraordinarily vulnerable to all the above-described challenges of contemporary university education. The conservative nature of maritime education, which historically was based on strict traditions and time-tested practices, proves inadequate under conditions of rapid technological changes and maritime industry globalization.

Financial difficulties of maritime universities are intensified by specific expenditures on maintaining training vessels, specialized equipment, and simulator complexes. High costs for student maritime practice, the necessity of regular navigation equipment and safety system renewal create additional burden on these institutions' budgets. Simultaneously, decreased state support for the maritime sector leads to critical underfunding that threatens the very existence of quality maritime education in Ukraine.

Psychological problems of maritime specialty students are complicated by future profession specificity, which presupposes prolonged isolation, absence of constant family contact, and high stress levels [18]. The military situation in the Black and Azov Seas creates additional risks and uncertainty regarding practical training opportunities and graduate employment prospects.

Quality assessment systems in maritime universities often fail to account for maritime training specificity, focusing on general academic indicators instead of professional competencies necessary for work at sea. International standards for maritime specialist training require special assessment approaches that do not always align with national education quality control systems.

Implementation of innovative teaching methods in maritime universities encounters additional obstacles due to the necessity of preserving the practical learning component. Virtual technologies, while capable of complementing traditional training, cannot completely replace real shipboard work

experience. This creates a challenge in seeking optimal balance between innovative methods and irreplaceable practical skills.

The overall picture indicates that Ukrainian universities find themselves in a survival situation where all resources are directed toward maintaining basic functioning instead of development and modernization. This creates long-term risks for higher education quality and Ukrainian educational system competitiveness at the international level.

The complexity of maritime university adaptation is also intensified by the geopolitical situation, which limits opportunities for international cooperation with certain countries and complicates access to contemporary maritime technologies and equipment. This renders the maritime education modernization process even more complex and expensive.

The Purpose and Tasks of the Study. Practical experience demonstrates that the systemic representation of education as an approach to organizing and understanding the educational process includes not only students and instructors but also diverse educational resources, methods and technologies, as well as the social, economic, and political environment in which learning occurs. This approach considers the interaction of all system components and aims to achieve the most effective fulfillment of educational objectives. Two paradigms, two approaches have formed in the education sphere: traditional and competency-based. The competency-based approach is gaining popularity in education as it emphasizes the development of practical skills and abilities directly applicable in the workplace.

The study aims to identify contemporary challenges and developmental trends in universities considering sectoral educational institution specificity in the context of systemic representation of the educational process [19]. A competent contemporary specialist differs from a qualified one in the capacity to realize knowledge, skills, and abilities in professional activity. This approach represents a departure from traditional education methods that prioritize memorization over practical application and learning outcomes.

The contemporary economy is increasingly becoming digital, and consequently more young people are choosing technical specializations. Demand for IT specialists remains high, but as digital knowledge spreads, IT expertise will shift from a specialty to basic literacy skills. Interdisciplinary education becomes more important as technology intersects with various fields. However, technical skills are insufficient for digital economy development. Soft skills, communication abilities, capacity to work in teams, and adaptability to others are extraordinarily important. Unfortunately, traditional educational systems do not devote sufficient attention to these skills.

Special attention in the research is devoted to the problem of declining maritime university student numbers as an example of sectoral specificity. Any professional's success largely depends on faculty mastery and qualification. Education is not only what occurs in the classroom; it also encompasses the broader aspect of interaction between students and lecturers, curricula, and even examinations. The instructor's role is changing from specialist-demonstrator to organizer-educator. Simultaneously, increasing attention is devoted to student self-education and self-learning. Practical activities for students serve as the most adequate means of transforming acquired knowledge into practical skills.

Particularly alarming is the trend toward replacing traditional information sources with digital platforms without forming critical media literacy in students. Google, Wikipedia, and other online resources should serve as tools assisting the educational process rather than replacing libraries, archives, and systematic information searching. The illusion that all necessary information is accessible through search engines is dangerous, as a significant portion of scholarly knowledge, especially historical sources, specialized research, and unique materials, are not digitized and require traditional search methods.

A generation of students is forming who believe that if Google does not find certain information, it does not exist at all. Such simplified understanding of knowledge accessibility leads to research horizon narrowing and loss of primary source working skills. Students lose the ability to work with catalogs, archival materials, printed publications, and other traditional information carriers, which limits their research capabilities.

Digital technologies should complement rather than replace fundamental academic work skills [20]. The ability to analyze primary sources, conduct systematic bibliographic searches, work with archival materials, and critically assess information reliability remain irreplaceable competencies for genuine scholars. Loss of these skills leads to research superficiality and scientific work quality decline.

Educational innovations should aim at synthesizing traditional and contemporary methods rather than complete replacement of the former by the latter. Effective future education must combine digital technology advantages with deep understanding of science's methodological foundations, historical perspective of knowledge development, and skills for working with diverse information source types.

To illustrate the mentioned problems, analysis of student admission capacity to maritime universities was conducted for the period 2020-2024 (Fig. 1). The study examined admission activity and student contingents at four leading maritime institutions: the National University "Odessa Maritime Academy" (NUOMA), Odessa National Maritime University (ONMU), Kherson State Maritime Academy (KSMA), and National Transport University (NTU). Statistical data demonstrate an alarming trend: if in 2020 the number of prospective students constituted approximately 21,000 persons, already in 2021 this indicator decreased to 19,500, in 2022 to 19,200. A slight increase in 2023 to 20,600 persons did not compensate for the overall negative trend, and in 2024 a sharp drop to 18,000 prospective students was observed. This dynamic reflects not only demographic crisis but also declining attractiveness of maritime specializations among youth, necessitating further detailed analysis of student contingents at individual maritime educational facilities for the analogous period.

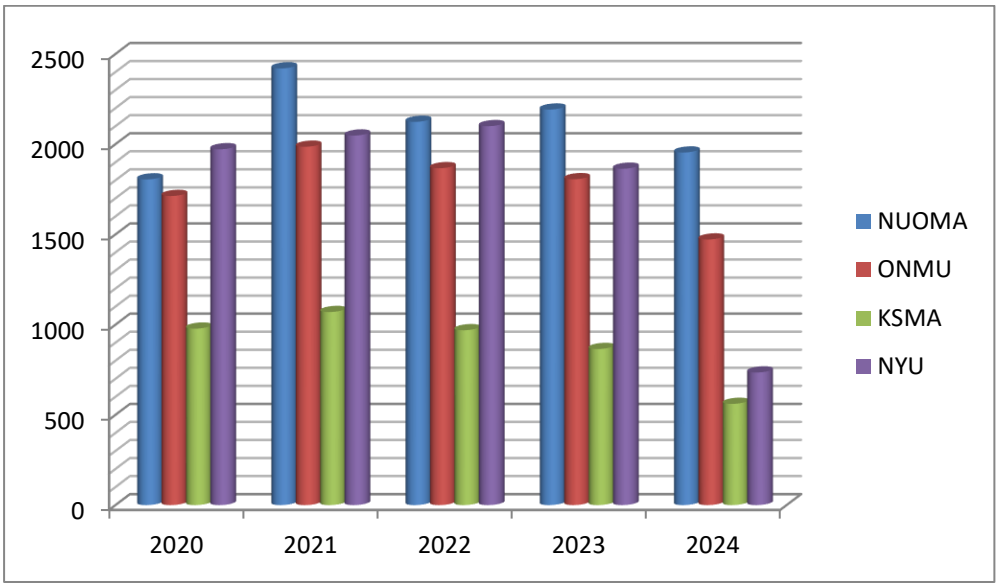

Fig. 1. **Dynamics of prospective student numbers in Ukrainian maritime higher education (2020–2024)**

Contemporary demographic trends in Ukraine demonstrate alarming signs of intellectual and physically developed young population outflow to other countries. This process, alongside a complex of socioeconomic problems, indicates a profound demographic crisis threatening state national security. The ongoing war leads to mass emigration of families with children seeking safety and stability abroad. Particularly critical is the situation when children who completed secondary school in temporary residence countries more frequently choose foreign universities for continuing education rather than returning to Ukraine for study.

Educational process organization in Ukrainian higher education faces numerous challenges. Completion of the 2021/2022 academic year occurred under difficult conditions, and although the educational process was successfully ensured, this required enormous effort. The academic year concluded in accelerated mode, especially for universities that were relocated or damaged, causing

additional burden on students, faculty, and administration. Motivation to teach and learn was significantly affected by the constant state of uncertainty, unstable psychoemotional background, and frequent air raid signals, and in some cases shelling, encountered by educational process participants.

The situation in Ukraine's maritime education system causes particular concern. Analysis of student contingents in four leading maritime higher education for the period 2020-2024 demonstrates critical reduction. Maritime education constitutes a strategically important sector in Ukraine's higher education system, as it forms personnel potential for one of the key national economy sectors. Maritime higher education ensure training of highly qualified specialists across a broad spectrum of specializations: deep-sea captains, ship engineers, radio electronics specialists, port operators, logistics specialists, and maritime transport management professionals. These specialists form the foundation of functioning not only merchant shipping but also fisheries, maritime construction, coast guard, and naval forces.

Ukrainian maritime training centers possess international recognition and accreditation according to International Maritime Organization (IMO) requirements and the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW). This enables Ukrainian seafarers to work on vessels under various world state flags, rendering maritime education an export-oriented sector and source of foreign currency inflows to the country.

Analysis of Ukrainian maritime university student contingents demonstrates heterogeneous dynamics throughout 2020-2024. The National University "Odessa Maritime Academy" (NUOMA) maintains leading positions by student numbers, although gradual contingent decline is observed from 7,900 persons in 2020 to 6,700 in 2024, constituting a 15.2% reduction.

Odessa National Maritime University (ONMU) demonstrates more stable indicators with minor fluctuations. After declining from 5,500 students in 2020 to 5,000 in 2022, recovery to 5,800 persons in 2023 is observed with subsequent decrease to 5,200 in 2024. Overall contingent reduction constituted 5.5%.

Kherson State Maritime Academy (KSMA) is characterized by the smallest student numbers among studied institutions. Contingent fluctuates within the range of 2,400-3,700 persons with a declining tendency in recent years. A particularly noticeable drop occurred in 2024 to 2,400 students, related to military operations in the regional territory.

National Transport University (NTU) shows the greatest indicator volatility. After declining from 4,300 students in 2020 to 3,700 in 2021, growth to 5,000 persons in 2023 was observed with subsequent reduction to 4,100 in 2024.

Overall trends indicate reduction of aggregate maritime university contingent from 21,100 students in 2020 to 18,400 in 2024, constituting a 12.8% decrease (Fig. 2). The most critical period falls on 2022-2024, correlating with full-scale war commencement and its consequences for Ukraine's higher education system. Structural changes in student distribution among educational establishments remain relatively stable; however, all universities experience negative impact of external factors on contingent formation.

This dynamic reflects not only demographic crisis but also declining attractiveness of maritime specializations among youth, geopolitical risks associated with military operations, and general destabilization of the higher education system under war conditions.

Aggregate analysis of total student numbers across the maritime education sector for the studied period confirms the situation's critical nature. The initial contingent of 21,000 students in 2020 demonstrated stable sectoral potential. However, already in 2021 the first significant reduction to 19,500 persons is observed, constituting a 7.1% decrease (Fig. 3). This decline can be explained both as consequences of the COVID-19 pandemic and initial manifestations of demographic crisis.

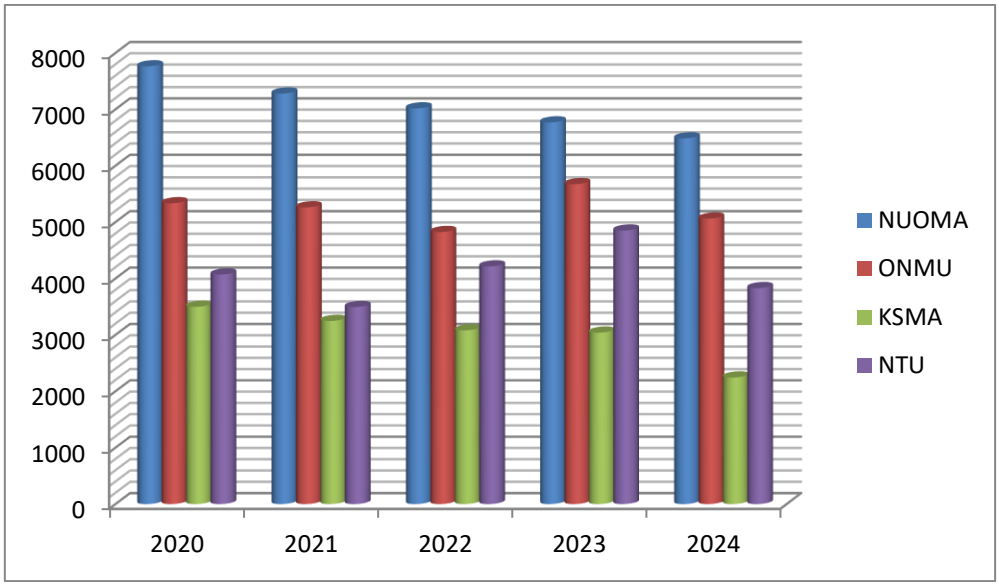

Fig. 2. **Dynamics of the student contingent in Ukrainian maritime higher education (2020–2024)**

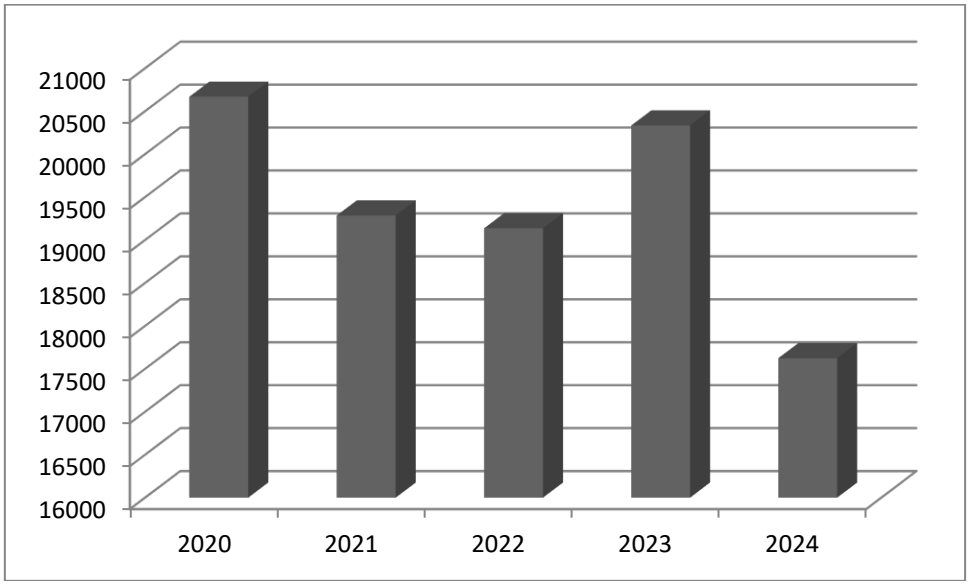

Fig. 3. **Dynamics of the total number of students in Ukrainian maritime education (2020–2024)**

In 2022, student numbers decreased to 19,200, which is not the lowest level for the studied period, unlike 2024 when a sharp drop to 18,000 persons occurred—the lowest indicator. The most critical decline in 2024 is associated with consequences of full-scale war, infrastructure destruction, mobilization, and population migration.

In 2023, some contingent recovery occurred to 20,500 students, likely indicating educational system adaptation to wartime conditions, including distance learning. However, this growth proved temporary and did not compensate for the overall negative trend.

Comprehensive analysis of possible causes for such negative dynamics allows identification of several key factors. Among the most influential should be noted structural changes in Ukraine's population age pyramid caused by prolonged depopulation and mass emigration, leading to critical reduction in prospective student numbers in the 17-22 age category. Second, families' economic difficulties reduce education financing possibilities, especially under martial law conditions when survival becomes the priority.

A significant factor is the geopolitical situation change in the Black Sea region. Crimea's annexation in 2014 and loss of control over part of the Black Sea water area reduced maritime profession attractiveness due to Ukrainian seafarer employment limitations. Ukrainian port blockade during the war additionally emphasized the maritime sector's riskiness as a professional activity sphere.

Psychological factors also play an important role. Youth increasingly choose the IT sphere, medicine, or other fields considered more promising and safer. Maritime professions, traditionally associated with distant voyage romance, are now perceived through the prism of military risks and economic instability.

Maritime educational institution infrastructure problems, including material and technical base damage, partial faculty transfer to military service, and general education funding reduction, create additional obstacles for quality specialist training.

Overall contingent reduction of 14.3% over four years creates a threat to Ukraine's strategic security in the maritime sphere. Such decline rates may lead to qualified personnel deficits in critically important national economy sectors, which is particularly dangerous under conditions of necessary post-war maritime infrastructure reconstruction.

The research was conducted based on a comprehensive methodological foundation combining systemic and comparative analysis for thorough examination of Ukrainian maritime education state in the context of contemporary educational challenges. The systemic approach enabled consideration of maritime education as an integral system functioning under conditions of internal and external factor interaction, including demographic trends, economic conditions, geopolitical situation, and technological innovations.

Materials and Methods of Research. Systemic analysis was applied to research the structure and functioning of maritime higher education as components of the overall personnel training system for the national economy. This method enabled identification of interrelationships among different educational process components and their influence on student contingent formation. Comparative analysis was employed to juxtapose individual maritime educational institution development dynamics, identify common trends and specific characteristics of each studied university. This approach ensured the possibility of identifying the most critical problems and successful practices for adapting to changing conditions.

Content analysis of publications was conducted to systematize scholarly perspectives on contemporary higher education problems, including analysis of materials from international educational organizations, domestic and foreign researchers regarding university education transformation under digitalization and global challenge conditions. Statistical data analysis provided quantitative assessment of maritime education trends, including percentage change calculation, trend determination, and forecasting of possible sectoral development scenarios.

The conducted analysis of scholarly literature and practical experience of higher education institution functioning enabled systematization of main challenges confronting contemporary university education in Ukraine. For the purpose of structuring identified problems and outlining possible resolution pathways, a summary table was compiled reflecting key educational system dysfunctions and potential mechanisms for overcoming them (Table 1).

The problems presented in Table 1 demonstrate the systemic nature of crisis phenomena in Ukraine's higher education sphere, which have assumed particular acuity under conditions of full-scale Russian aggression. Particularly alarming is the trend toward overall student contingent reduction, indicating not only demographic challenges but also structural deformations in the personnel training system for the national economy. This phenomenon assumes critical significance in the context of future country reconstruction needs when demand for qualified specialists will significantly increase.

These trends manifest most clearly in the maritime education sphere, where student contingent reduction may have long-term negative consequences for maritime sector development and Ukraine's economy overall. Analysis of student number dynamics in leading maritime higher education for the period 2020-2024 enables specification of these processes' scale and identification of specific features of maritime university adaptation to contemporary challenges.

Table 1. **Main Problems of Contemporary University Education and Their Possible Solutions**

Problem	Description	Possible Solution
Financial crisis	Chronic university underfunding, less than 1% of GDP, limited financing diversification opportunities	Searching for new financing models, public-private partnerships, endowment funds
Wartime education challenges	Student evacuation, distance learning during air raids, infrastructure destruction	Creation of mobile educational centers, development of resilient distance learning systems
Energy problems	Electricity outages affecting the educational process	Installation of autonomous energy sources, development of offline resources
Obsolete material and technical base and digital divide	Absence of modern equipment, laboratories, digital resources and technologies for online learning	Comprehensive modernization: equipment renewal + digital infrastructure development
Personnel crisis	Low salaries, mass scholar emigration, absence of prospects	Salary increases, emigrant return programs, creation of career growth conditions
Demographic crisis	Prospective student number reduction due to low birth rates and emigration	Attracting foreign students, lifelong learning programs, personnel retraining
Limited international cooperation	Absence of funding for participation in international projects, conferences	Attracting international grants, developing online partnerships with foreign universities
Research activity reduction	Insufficient funding for fundamental and applied research	Creating university-business consortia, crowdfunding scientific projects
Student mental health deterioration	War impact, stress, isolation, digital fatigue, traumatic experience	Expansion of psychological support services, mental health support programs, mutual aid groups
Outdated curricula	Misalignment with contemporary labor market demands and global standards	Continuous market needs monitoring, employer engagement in program development
Insufficient attention to soft skills	Absence of soft skills development, critical thinking, communication	Integration of soft skills development into all disciplines, project-based learning
Education commercialization	Profit priority over education quality, lowering of academic standards	Development of education quality standards, independent monitoring, accreditation
Language challenges in education	Necessity of balance between Ukrainian language and English-language resources	Development of quality Ukrainian-language resources, bilingual learning programs
Imperfect quality assessment system	Bureaucratization, orientation toward formal indicators instead of real quality	Implementation of comprehensive assessment system with student and employer participation
Absence of innovative teaching methods	Dominance of traditional lecture-seminar system, low interactivity	Faculty professional development, implementation of active learning methods

Problem	Description	Possible Solution
Special challenges of maritime universities	High costs for specialized equipment, maritime practice limitations due to port blockade	Specialized state support programs, international internships, simulation technologies

The empirical research base consisted of official statistical data from four leading Ukrainian maritime higher education for the period 2020-2024: the National University "Odessa Maritime Academy," Odessa National Maritime University, Kherson State Maritime Academy, and National Transport University. Data included annual student contingent numbers, admission structure by specializations, and regional prospective student distribution.

Conclusions. The conducted research confirms that Ukraine's contemporary higher education system is experiencing a profound structural crisis that manifests particularly acutely in sectoral educational institutions, specifically maritime universities. Analysis of maritime higher education institution student contingent dynamics for the period 2020-2024 revealed critical reduction of 14.3%, reflecting not only demographic challenges but also systemic problems of educational system adaptation to contemporary realities.

The research confirmed that the maritime education crisis has multifactorial character and is caused by interaction of demographic, economic, geopolitical, and psychological factors. Structural changes in the population age pyramid caused by prolonged depopulation and mass emigration led to critical reduction in prospective student numbers. Families' economic difficulties under martial law conditions limit education financing possibilities, while the geopolitical situation in the Black Sea region reduces maritime profession attractiveness due to risks and employment limitations.

Particularly alarming is the trend of youth educational priority shifting toward the IT sphere and other fields considered more promising and safer. Maritime professions, traditionally associated with distant voyage romance and stable earnings, are now perceived through the prism of military risks and economic instability.

Analysis results indicate the necessity of fundamental rethinking of approaches to maritime education development in Ukraine. Mechanical educational institution consolidation, considered as a system optimization method, risks leading to loss of unique pedagogical traditions and specialized competencies formed over decades. The success criterion based on quantitative indicators fails to reflect real education quality and may lead to academic excellence destruction.

The research revealed the critical problem of excessive administrative burden on faculty, when energy and time that should be directed toward direct educational activity are expended on bureaucratic procedures. Such a situation not only reduces educational process quality but also demotivates talented instructors, intensifying the sectoral personnel crisis.

A particularly important conclusion is the necessity of a balanced approach to educational innovation implementation. Despite the importance of digitalization and educational process modernization, it is critically important to preserve fundamental principles of scientific cognition and knowledge historical roots. Superficial fascination with newest technologies without understanding science's methodological foundations may lead to formation of a specialist generation with fragmentary knowledge and limited research capabilities.

Research results emphasize the strategic importance of maritime education for national security and Ukraine's economic development. Overall contingent reduction of 14.3% over four years creates a real threat of qualified personnel deficits in critically important national economy sectors, which is particularly dangerous under conditions of necessary post-war maritime infrastructure reconstruction.

To overcome identified problems, development of a comprehensive maritime education development strategy is necessary, which should include: enhancing maritime profession prestige through information campaigns and career prospect demonstration; creating effective cooperation mechanisms with international maritime companies to ensure graduate employment guarantees; modernizing maritime university material and technical bases according to contemporary international standards;

developing innovative educational programs combining traditional maritime knowledge with modern technologies.

Prospects for further research lie in detailed analysis of international experience in overcoming crisis phenomena in maritime education, studying possibilities for adapting successful foreign practices to Ukrainian realities, and developing concrete mechanisms for enhancing maritime specialist training system effectiveness under resource-constrained conditions and geopolitical challenges.

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Структурна криза сучасної вищої освіти: системний підхід до інституційної стійкості та трансформації

Анотація. *Це дослідження має на меті визначити сучасні проблеми та тенденції розвитку університетської освіти, з акцентом на галузевих навчальних закладах через системний підхід до аналізу освітнього процесу. Методологічна основа поєднує системний та порівняльний аналіз для комплексного вивчення морської вищої освіти як невід'ємного компонента загальної системи підготовки кадрів. Було проведено контент-аналіз наукових публікацій разом зі статистичним аналізом офіційних даних чотирьох провідних морських університетів України за 2020-2024 роки, включаючи динаміку набору та структуру прийому за спеціалізаціями. Наукова новизна полягає у всебічному аналізі конкретних викликів, що стоять перед морською освітою, включаючи унікальні проблеми, такі як обмеження морської практики через блокаду портів, необхідність адаптації до міжнародних стандартів в умовах обмежених ресурсів та зміна сприйняття морських професій в умовах ризиків воєнного часу. Практичне значення полягає в розробці конкретних рекомендацій щодо подолання кризових явищ, включаючи створення стійких систем дистанційного навчання, розвиток міжнародних партнерств та впровадження інноваційних підходів до навчання в умовах обмежених можливостей. Висновки дослідження підкреслюють стратегічну важливість морської освіти для національної безпеки та необхідність розробки комплексної стратегії розвитку.*

Ключові слова: *проблеми освіти, освітні програми, цифрова трансформація, психічне здоров'я студентів, оцінювання якості, морські університети, зниження рівня вступу.*

Дата першого надходження статті до видання 15.10.2025

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