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## ФІЛОСОФІЯ ОСВІТИ

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### PROBLEMS OF DOMESTIC EDUCATION AND MECHANISMS OF ENSURING ITS COMPETITIVENESS: ANTI-CRISIS PARAMETRIC ANALYSIS

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*The quality of human capital adapted to the conditions of a socially oriented innovative economy depends on the level of education development and effective policy in this area. Competitiveness, civilizational subjectivity and national security of the state depend on the quality of education. Despite the fact that in Ukraine throughout its independence, the sphere of education was a key subject of nation- and state-building, which is entrusted with the main responsibility for innovative human development and the formation of competitive human capital, we did not manage to avoid negative trends. As a result, the socio-economic development of the state took place without proper intellectual support, which caused an imbalance between the needs of the economy and the training of the necessary specialists by educational institutions. One of the most important reasons for this situation is a simplified understanding of the strategic goals of education, the inability to predict the educational situation in the context of synergistic instability and the periodic production of imitation innovations. Currently, under the conditions of Russia's treacherous aggression against Ukraine, many things need to be reconsidered and objectively analysed real problems in the field of education and reach the level of scientifically based foundations of modernization and reconstruction of education in Ukraine.*

*The purpose of the article is an anti-crisis parametric analysis of the state of education in Ukraine, identification of the main problems and substantiation of the mechanisms for ensuring its competitiveness in the conditions of new civilizational challenges and losses as a result of the war.*

*The implementation of the goal made it possible to outline ten fundamental problems of domestic education, related to the limited and ineffective investment in the development of human capital, the decline in the quality of education, the imperfection of the network of educational institutions, low*

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integration of education and scientific research, etc. The causes of these problems have been clarified and determined. It has been proven that it is possible to bring the Ukrainian educational system to a new level in the near future on the basis of the proposed mechanisms that will ensure its transformation into a driving force of society, capable of producing anticipatory development and innovative breakthroughs in the scientific-technological, industrial-economic and social-humanitarian spheres.

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**Keywords:** quality of education, competitiveness of education, academic freedom, competence, imitative innovation, Industry 4.0, civilizational subjectivity of Ukraine.

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## ПРОБЛЕМИ ВІТЧИЗНЯНОЇ ОСВІТИ ТА МЕХАНІЗМИ ЗАБЕЗПЕЧЕННЯ ЇЇ КОНКУРЕНТОСПРОМОЖНОСТІ: АНТИКРИЗОВИЙ ПАРАМЕТРИЧНИЙ АНАЛІЗ

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Від рівня розвитку освіти, ефективної політики у цій сфері залежить якість людського капіталу, адаптованого до умов соціально орієнтованої економіки інноваційного типу. Від якості освіти залежить конкурентоздатність, цивілізаційна суб'єктність та національна безпека держави. Незважаючи на те, що в Україні впродовж її незалежності сфера освіти виступала ключовим суб'єктом націє- й державотворення, на який покладено головну відповідальність за інноваційний розвиток людини та формування конкурентоспроможного людського капіталу, нам не вдалося уникнути негативних тенденцій. Як наслідок, соціально-економічний розвиток держави відбувався без належного інтелектуального забезпечення, який обумовив дисбаланс між потребами економіки і підготовкою необхідних фахівців освітніми закладами. Однією із найважливіших причин такого стану є спрощене розуміння стратегічних цілей освіти, невміння спрогнозувати освітню ситуацію в контексті синергетичної нестабільності та періодичного продукування імітаційної інноватики. Нині, за умов віроломної агресії Росії проти України необхідно багато що переосмислити, об'єктивно проаналізувати реальні проблеми в освітній сфері та вийти на рівень науково обґрунтованих засад модернізації і відбудови освіти в Україні.

Метою статті є антикризовий параметричний аналіз стану освіти в Україні, визначення основних проблем та обґрунтування механізмів забезпечення її конкурентоспроможності в умовах нових цивілізаційних викликів і втрат в результаті війни.

Реалізація мети уможливила окреслення десяти фундаментальних проблем вітчизняної освіти, пов'язаних із обмеженістю й неефективністю інвестицій в розвиток людського капіталу, падіння якості освіти, недосконалістю мережі закладів освіти, низькою інтеграцією освіти і наукових досліджень тощо. З'ясовано і визначено причини виникнення цих проблем. Доведено, що вивести українську освітню систему у найближчій перспективі на новий рівень, можливо на основі запропонованих механізмів, які забезпечать перетворення її на рушійну силу суспільства, здатну продукувати випереджальний розвиток та інноваційний прорив в науково-технологічній, виробничо-економічній та соціально-гуманітарній сферах.

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**Ключові слова:** якість освіти, конкурентоспроможність освіти, академічна свобода, компетентність, імітаційна інноватика, Індустрія 4.0, цивілізаційна суб'єктність України.

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### Formulation of the problem.

Increasing the competitiveness of any country in the modern world involves a transition from the extensive use of human resources with a low level of basic professional training to the intensive use of a highly qualified workforce adapted to the conditions of a

socially oriented, innovative economy. Under the conditions of economic transformation and increasing the role of the latest technologies in production, education becomes the main means of forming high-quality human capital. Education that meets the needs of society and the labor market allows each

person to develop the ability to quickly adapt to modern socio-economic realities and ensure a high quality of life. In addition, education and science and the effectiveness of state policy in these areas depend on solving the problems of society consolidation, the formation of a single humanitarian, intellectual, informational and cultural space.

The direct dependence of the country's competitiveness on the quality of education and the development of science is evidenced by the fact that the top ten countries with the highest global competitiveness index (The Global Competitiveness Index) include countries with the most advanced education system (Switzerland, Singapore, the USA, Finland, Germany, Japan, Hong Kong, the Netherlands, Great Britain, Sweden). The position of Ukraine in the global competitiveness index is the 76th place among 144 countries [1: 215]. As noted in the World Economic Forum Report released in May 2022, education cannot be put on hold under any circumstances. "If one and a half years of education were missed or ineffective, this leads to a decrease in income over the entire future life of each person by 3,9%, and for the country it will cost a decrease of 2,2% of the future gross domestic product (GDP) ... Investments in education have up to 500% profitability" [2]. Therefore, education is not only an important factor of competitiveness, but also a determining factor of the civilizational subjectivity of the country [3].

**The degree of development of the problem.** The issues of the development of the national education system, the definition of its current problems, the analysis of their causes, and the search for ways to modernize education in the conditions of European integration and globalization are devoted to the work of well-known domestic scientists: I. Drach, O. Dubasenyuk, V. Kremenya, V. Lugovoi, O. Lyashenko, N. Nychkalo, S. Sysoevai, O. Topuzova, Zh. Talanova and others. These and other issues were the subject of special attention and

comprehensive analysis in the "National Report on the State and Prospects of Education Development", prepared by scientists of the National Academy of Pedagogical Sciences of Ukraine for the 30th anniversary of Ukraine's independence [4]. According to the conviction of many scientists, throughout all the years of independence, Ukraine did not and does not stand aside from world processes and reforms in the field of education. The sphere of education has always been a key subject of nation- and state-building. At the same time, the state and society considered and supported education as a leading social institution, which is entrusted with the main responsibility for the innovative development of society, man, and the formation of competitive human capital. But along with this, it is rightly noted that, despite efforts to build a new algorithm for the development of education and science, we failed to avoid and stop negative trends in these vital areas. As it turned out, domestic education is not able to respond in time to new economic needs, let alone function in an anticipatory mode, as it happens in developed countries. As a result, social-economic development of the state occurs without proper intellectual support, which causes an imbalance between the needs of the economy and the training of highly qualified specialists by educational institutions.

One of the most important reasons for this state of modern national education in our opinion, there is insufficient understanding of the seriousness of scientific analysis and recommendations of experts in the field of education, the inability to predict the educational situation according to existing indicators and predict risks in the synergistic discourse of instability.

**The aim of the study** is carrying out an anti-crisis parametric analysis of the development of education during the period of independence of Ukraine, identifying the main problems of the educational sphere, identifying the

causes of their occurrence and outlining the mechanisms for ensuring its competitiveness in the conditions of innovative development, national self-identification and in the context of civilizational changes.

**Discussion and results.** Since Ukraine gained independence, we have, unfortunately, been quite skeptical about the contribution of education and science to the development of our economy and ensuring the country's defense capability. Currently, in the conditions of Russia's armed aggression against Ukraine, more than two thousand educational institutions have been damaged by bombing and shelling, of which more than 200 have been completely destroyed. When, according to preliminary estimates, the losses from the Russian war for the educational infrastructure reached 5 billion dollars, then a lot of things should be reconsidered. And the most important thing is to objectively analyze the problems in the educational sphere after the victory, to think about the development of quality education, and to reach the level of clear and meaningful proposals. In war-torn Ukraine, this issue cannot wait, every lost month/year can turn into colossal losses for the country in the future.

The most expedient in this difficult situation is to stop "in the production of imitation innovations", objectively analyze your state, honestly identify the main problems and propose sound initiatives in the escalating conditions and urgently start a movement together with the world community, otherwise the process of decline may be irreversible. In this regard, based on the experience of the developed countries of the world, the implementation of the requirements of the Bologna process, overcoming risks during the COVID-19 pandemic and threats in the conditions of martial law, it is appropriate to highlight the following most important problems of modern Ukrainian education.

*The first problem is limited and ineffective investments in the*

development of human potential (which is 4-5% of GDP). Countries that made a bet on education and science in a timely manner have now become world leaders. For example, the promotion of human development in the countries of Southeast Asia enabled them to make a breakthrough in the field of high technology, and every dollar invested in education turned into tens of dollars of gross national income. India and China also chose this path. Countries aspiring to join the circle of developed countries invest 10-12% of GDP in education every year. But today it is necessary not only to compare with countries with a high volume of expenditures on the education sector, but also to strictly control the effectiveness of their use. Ukraine compared to countries such as Great Britain or Germany, where education expenses make up approximately the same percentage of GDP as in our country, is far behind in the quality of providing educational services. This is explained not only by the incomparable indicators of the gross national income per capita in our country and in these and other countries with a very high level of human development. What is important here is the course on the development of the latest technologies, bringing the ratio of the quality of educational services to the best world standards, bringing education, not in words, but indeed, to the forefront of state policy and raising its prestige.

*The second problem is limited access to education and its low quality. Indicators of accessibility and quality of education in Ukraine are decreasing. The share of children studying is decreasing: it is slightly more than 90%. For example, in Poland, Hungary, Slovakia, this indicator is 98%. Children from different regions, cities and villages do not have equal access to education. A rural school, especially in remote areas, often does not provide education that meets the state standard. A talented child in such a school, compared to children in other schools, does not receive equal starting conditions for*

continuing education. Educators note with great concern that the stratification of society makes quality education less accessible for the absolute majority of children. Poverty is inherited, and education, with its unequal access and division into elite and ordinary schools, becomes a mechanism for the reproduction of social inequality.

The 2018 PISA education quality research, which focused on the ability of schoolchildren to use and intelligently combine the knowledge and information they possess in order to succeed in the information society of the 21st century, confirms the concerns of the domestic educational community. The results of Ukrainian students turned out to be lower than the average among countries Organizations of economic cooperation and development (OERS) in all three areas (reading, mathematics and natural sciences). If we speak in general terms, the results of PISA proved two of the most difficult problems in domestic education: a low level of literacy, especially in mathematics, and deep inequality in access to better education, depending on the place of residence and socio-economic status [5].

Stating the low level of the material and technical base of educational institutions in schools in rural areas, the Director of the World Bank for Ukraine, Belarus and Moldova, SatuKahkonen, emphasizes the fact that the approaches to both teaching and learning in Ukraine "are long out of date, often students learn the material without understanding how to use this knowledge in everyday life" [6]. Modern school education remains overloaded with information, not ensuring its clear perception and assimilation. Unfortunately, it does not teach schoolchildren to make independent decisions, use information and communication technologies, think critically, resolve conflicts, navigate the labor market, etc. The content of education does not meet the needs of society and the modern labor market, it is not aimed at acquiring the necessary

life skills. And those changes that are taking place in the field of education only deepen the overloading of curricula and textbooks with actual material, they do not "remove" but expand duplication, which makes the educational process uninteresting. To date, almost 80% of the student's learning time is in the "listening" and "teaching" mode. Programs and curricula built "from above" often turn out to be unattainable for most students, and therefore, all their energy and enthusiasm goes into "black holes", into the sand and disappears without a trace. Even parents and teachers, when evaluating the current curricula and programs, are united in their judgments: curricula are overloaded with information, and the ratio of hours and volume of subjects studied is not balanced. The vast majority of surveyed parents (more than 75%) believe that their children cannot master the educational material on their own. The characterization of the school environment by the students themselves also indicates the presence of acute problems in the modern school. More than a third of students are not satisfied with school, 30% feel the difficulty of learning, 50% – fatigue from classes [7: 8].

The quality of training of qualified workers is no less problematic. Despite the growing demand for skilled workers, the tradition of acquiring high-quality vocational education has not yet been restored. In addition, even where training of qualified workers is carried out, it is done at a low level, on the basis of an outdated material and technical base.

The quality of education in the higher education system remains low. Despite the fact that according to the inventory of the fulfilment of the requirements of the Bologna Process in 2007, Ukraine received a score of 3,5 on a five-point scale for the quality of education (the average score of the participating countries on this indicator is 4.1 points), domestic institutions of higher education cannot compete with the best universities in the world neither in terms

of the scientific component, nor in terms of material and technical equipment, nor in terms of the level of training of its graduates. This is confirmed by, in particular, the sociological research "The Quality of Education through the Eyes of Students", conducted by the Center for Innovative Development of Higher Education of the National Academy of Sciences of Ukraine and the Center for Social and Humanitarian Studies of V. N. Karazin Kharkiv National University in March 2021 [8].

*The third problem is* deterioration of the health of school-children and students. Statistics show that only 10% of school graduates can be considered healthy. According to research by the World Health Organization, a person's condition depends on lifestyle for 51%, heredity for 17-20%, environment for 20%, and the health care system for 8-9% [9; 10]. That is, the problem of the deterioration of the state of health of pupils and student youth is not only a problem of the educational system. At the same time, it has been proven that the number of children and young people with health disorders increases precisely during the period of study, and the level of chronic diseases – with an increase in the educational load. If up to 30% of practically healthy children are registered among first-graders, no more than 6% of them remain at the end of school, and 45–50% of school graduates have serious health disorders, 40–61% have chronic diseases. From 20 to 80% of students have pathologies of 2-4 body systems at once. In the process of studying in institutions of higher education, this situation only becomes more complicated. Almost 70% of senior students have serious chronic diseases and only 7-8% of university graduates are healthy [9;10]. In the structure of the general incidence of children of school and student age, the first place belongs to diseases of respiratory organs, the second – digestion, the third – endocrine system. Therefore, the system of education and upbringing of children and youth, which should be the source

of the development of an all-round healthy nation and is designed to solve the issue of forming spiritually rich, mentally balanced and physically hardened people, does not cope with this task.

*The fourth problem is* low social status and social protection of the teacher. This determines his unsatisfactory level of motivation for work and constant professional growth, makes the success of modernization of the education system impossible. There is a catastrophic aging of the teaching staff. Collisions are observed between the unreasonably low salary of teachers and the high level of expectations and demands on them from society and parents; the lack of prestige of the profession, often its negative image, which is created and supported in the media space; the lack of widespread propaganda among the population of achievements in the field of education, its importance for solving urgent problems of society.

Increasing the prestige of educational work, the authority of the teacher, providing him with high-quality educational literature and providing opportunities to improve his qualifications should make him the main effective person in the modernization of education.

*The fifth problem is* conservatism of professional (vocational and technical) education. Despite the reduction in the network of professional (vocational and technical) education from 1,246 to 711 (or by 43%) over the past 30 years and the multiple decrease in the number of students, with their transfer from state ownership to communal ownership, the situation in this field of education remains difficult. despite the growing demand for skilled workers. Vacancies for senior masters of industrial training, teachers of vocational and technical subjects and general education disciplines have become chronic. The majority of managers and teachers of subjects of the professional and technical cycle do not have appropriate professional training. As a result, the

quality of training of graduates of professional (vocational and technical) education institutions does not fully meet the requirements of employers. According to the analysis of the World Bank "Skills for Modern Ukraine", in 2018, more than 58% of employers surveyed noted that graduates of educational institutions of various levels do not possess the necessary knowledge and competences for professional activity. Four out of ten firms in key sectors of the Ukrainian economy report a significant gap between the practical skills possessed by workers and the skills firms need to achieve business goals. The main reason for this is the conservatism of the professional (vocational and technical) education system, its fragmentation and limited resources.

*The sixth problem* – imperfection of the network of higher education institutions. No country in the world has such an extensive network of higher education institutions as Ukraine. Today, 619 domestic institutions of higher education of all levels of accreditation and forms of ownership provide training for specialists with professional pre-university and higher education in our country, of which 291 are higher education institutions of III-IV levels of accreditation. In addition, this network is not balanced with the available personnel, research, information, financial, material and technical resources [11]. In most European countries comparable to ours, the number of HEIs of all accreditation levels is much smaller. For comparison: Great Britain has 113 universities, Italy – 83, Germany – 78, France – 71, Spain – 58, Poland – 40. Many educational institutions have a "dubious" status of higher education, unable to fully ensure the modern level of professional training. Higher education in Ukraine has no direct connection with the labor market. Forming its activities in accordance with the population's demand for education (qualifications) in specific professions, modern higher education has created an

imbalance between the needs of the economy and the training of specialists.

*The seventh problem* is inhibition of the process of autonomy of higher education institutions. Despite the presence of certain elements of autonomy and self-governance, universities actually remain grassroots elements of a strictly regulated, hierarchical and centralized system. The combination of real autonomy and competition between educational institutions will objectively determine their unification, the rapid development of their material base and the regulation of the compliance of the training of specialists with the needs of the economy. Such anachronisms must disappear, such as, for example, unsubstantiated regulations linking the quantitative composition of teachers and students (which contribute to the artificial preservation of the contingent due to the inevitable decrease in the level of training), approval of expenditure estimates and staff lists of higher education institutions by the Ministry of Education and Science. The need to fill curricula with "mandatory" must become a thing of the past. but with archaic and duplicative disciplines, which will lead to a reduction in terms of education due to this. The essence and forms of organization of licensing and accreditation processes must change, as a result of which it will be possible to assess the level of an educational institution not by the number of mythical academicians and professors, the available areas of premises and seats in canteens, but by the competitiveness of graduates on the labor market and the achieved image.

*The eighth problem* is insufficient integration of higher education and scientific research, which is one of the important factors in increasing the efficiency and quality of higher education, and therefore its competitiveness on the European and international market of educational services. Outside of science, higher education can only develop virtually.

Higher education should be built on the basis of the latest achievements of modern science thanks to the fundamental development of the complex of natural sciences, physical, mathematical and humanitarian disciplines [12]. A specialist can be competitive only if his training is based on the fundamental achievements of science, mastered by his own research efforts, and is combined with practical participation in the system of modern production. Unfortunately, today fundamental and applied sciences are separated from education (structurally, financially, conceptually and administratively), there is a catastrophic lack of opportunities to create conditions that would promote the development of fundamental and natural experimental sciences. University scientists objectively do not have the opportunity to carry out scientific research, scientific research is carried out in Ukraine only in a third of higher education institutions. Only one percent of Ukrainian citizens respect the profession of a scientist.

*The ninth problem* is there is no practice of applying objective global criteria for evaluating the final product both in education and in research work. There is an inconsistency between the national system of qualifications and the system of qualifications for the European education space adopted at the Bergen Conference in 2005. There is a problem of diversification of second-cycle programs according to academic and professional criteria. The implementation of the European Credit Transfer and Accumulation System (ECTS) remains uncoordinated. In the 2006/2007 academic year, the ECTS system was formally introduced in all higher education institutions of Ukraine of III-IV accreditation levels. The supplement to the diploma of the European model (Diploma Supplement) has been approved. However, the Ukrainian ECTS implementation practice is not fully based on the competence approach developed within the framework of the Bologna Process.

*The tenth problem* is underdevelopment of the lifelong learning system. In the post-industrial world, where knowledge is the main resource of competitiveness, the educational activity of a person ceases to be a separate type of activity, and turns into an integral part of the way of life. Continuous education is a concrete mechanism for the development of an "open personality" in modern society. In 2000, at the European Summit in Lisbon, the spread of continuous education was rightly recognized as the main prerequisite for the formation of civil society. An active civic position is impossible without a successful professional career, since it lays the foundation for a person's independence, self-respect and well-being.

An effective way to introduce lifelong education should be government programs of continuous education, which will help to independently regulate the pace of acquiring education and its specific content, study at any geographical point via the Internet, receive individual consultations from teachers of leading domestic and foreign institutions of higher education and priority technical support, and most importantly – will provide effective incentives for the development of one's initiative and critical thinking. An important way to introduce lifelong learning can be the use of distance education opportunities. However, its development in Ukraine currently lags behind world and European levels, and distance education itself is mainly implemented in the form of specialized courses in separate areas (language, accounting, etc.).

In order to ensure the competitive advantages of domestic education and science and guided by the identified problems, it is necessary to implement the following initiatives and develop mechanisms for their implementation:

✓ To change the general approaches of state policy in the educational and scientific sphere. In view of the constant growth of the role of



education and science in the modern world, as well as the economic and socio-demographic trends characteristic of Ukraine, to develop and implement a comprehensive concept of the development of the educational and scientific system of society, which will make it possible to take advantage of the intellectual potential in the interests of the people and of the Ukrainian state, as well as to quickly correct shortcomings and stop negative trends.

✓ Increase state spending on education to 10% of GDP, as required by the Law of Ukraine "On Education". Ensure real, not declarative priority of education at the state level. In many developed countries, the education sector is a strategic one that requires careful attention from the whole society, not just educators. Activate the role of public opinion and involve public organizations in the formation of educational policy. This fact is one of the modern global trends that have dramatically affected the quality of education in the developed countries of the world in recent years. It is public control and public participation in achieving quality indicators for the educational sector that is an important factor in modernizing education today.

✓ Introduce a unified system of monitoring the quality of education. Quality control should focus both on the educational process, personnel, scientific and methodological support, material base, and on monitoring the knowledge of pupils (students), determining their competence and ability to meet the needs of the labor market. Join the system of international comparative studies of students' educational achievements conducted by the UN, UNESCO and OECD. The victories of pupils of several elite schools at prestigious international Olympiads do not provide an answer to the question of what the quality of domestic education really is in international coordinates.

✓ To improve the system of external independent evaluation of the quality of knowledge. Like every

significant innovation, this system in the first years of its introduction in Ukraine was not without its shortcomings. However, she demonstrated and obvious pluses, among which there is a noticeable increase in free and equal access to opportunities for continuing education. The main task here is to fill the external independent assessment with such content that will allow assessing the acquired level of knowledge, skills knowledge to operate, and personal competences, not just a good memory of the graduate. It is the competence approach that should be the basis of educational programs and evaluation of learning outcomes at all levels.

✓ Carry out a comprehensive analysis of the system of provision of paid services by educational institutions, bring it into compliance with the norms of current legislation, ensuring control over the quality of paid services and their transparency. Strengthen the material and technical base of educational institutions, develop long-term state programs for the development of information and communication technologies in education and science. Optimize training programs by freeing them from trivial loads. The educational process, which deprives children of health, cannot be considered normal.

✓ To increase the prestige of educational work, to develop effective mechanisms for attracting gifted young people to the educational sector, to create an effective system of forecasting and meeting society's needs in pedagogical and scientific-pedagogical workers. Increase the effectiveness of teacher training institutions, eliminating their fragmentation, strengthening interaction with universities up to their inclusion in higher education institutions. To create appropriate conditions for the implementation of educational activities, to provide the teacher with academic freedom in designing the content of education, choosing the forms and methods of education in accordance with the

educational needs of those seeking education.

✓ Carry out a radical modernization of the content of education in the context of the new post-non-classical model. To do this, clearly define the scope of fundamental knowledge in various areas of human and world studies, freeing them from an excessive informational component. Develop a mechanism for systematically updating the content of education in accordance with the development of science and the acquisition of new knowledge by mankind, ensuring through the system of individual subjects a holistic vision of the surrounding world and the organic inclusion of one's own activity in it. To analyze the existing system of publishing textbooks and teaching aids for pupils and students with the aim of improving their quality and effective use of budget funds.

✓ Carry out reforms in the field of management of educational institutions, which would involve a transition from a nomenclature-functional one, which serves the mechanisms of support of educational institutions at the level of formal requirements and criteria (the level of the material and technical base of the educational process, personnel support for educational activities, the average level of success of school students, the number of winners of Olympiads and competitions of various levels, etc.), to targeted management, which helps to ensure the achievement of the set goal in accordance with specific orders for a certain level of education, upbringing and development of the child. It is especially important that the goal of pedagogical activity is not general, expressing a social order or formulated at the level of the educational system, but specific, such that it can be defined step by step, achieved within a limited period of time, diagnosed.

✓ To optimize the network of institutions of higher education by means of their consolidation, consolidation and concentration of

resources on the improvement of university ranking, the development of other mechanisms for assessing the competitiveness of educational quality, the creation of universities world level [11; 13]. Ensure compliance of the content of education with the current and strategic goals of the country; to update educational programs on the basis of strengthening their inter-disciplinarity and anticipation, meeting the needs of consumers of educational services; to create an industry of innovative digital technologies and learning tools; significantly expand the network of centres for the collective use of university scientific equipment.

✓ To develop specific ways of building an integrated educational and scientific system that would meet the requirements of the time and be characterized, at the same time, by a high degree of integration and competitiveness in the global scientific and educational market. Education without science has no future, and science without education has no foundation. To do this, it is necessary to strengthen the scientific content of the educational content by developing research-based learning, increasing its connection with the needs of practice and focusing on the creation and implementation of innovations in the "education-science-business" system; to develop a network of "Industry 4.0" Centres in various regions at universities, scientific institutions, industrial parks, which would allow to accompany innovations to the stage of real integration into production chains;

✓ Develop and ensure the implementation of the national concept and program for the development of the lifelong education system, which would provide for the training of personnel for such training, scientific and methodological support of the educational process and its quality control, relevant educational programs, etc. Lifelong learning should be defined as a full-fledged educational field with due attention to quality control and

verification and ensuring the recognition of its various forms. In order to implement this, it is necessary to develop and adopt a special Law of Ukraine "On Lifelong Education" and to introduce a corresponding provision in the framework Law of Ukraine "On Education" that qualifications obtained through non-formal and informal education can be confirmed and recognized in the system formal education [14].

All these initiatives are aimed at improving Ukrainian education, they are based on the realization that it will not be easy to implement them in difficult times for Ukraine. However, the international cooperation of our educators and scientists has good opportunities to contribute to their implementation in the post-war period. Since the beginning of the war, many educational and scientific societies have declared their support for Ukraine. Our foreign colleagues sincerely seek participation in the restoration and further development of the educational and scientific sphere, which gives us optimism. The proposed steps, built on the foundation of a reasonable combination of the best foreign experience with national traditions, are able to bring the Ukrainian educational system to a qualitatively different level in the near future.

**Conclusion.** In the information age, education, science and high technologies are the key to the successful and prosperous development of the country, its competitiveness, an irreplaceable

means of national self-assertion and civilizational subjectivity.

Despite the fact that in Ukraine during the years of its recent independence, education was declared the main subject of nation- and state-building, a condition for innovative human development and the formation of competitive human capital, we did not manage to avoid negative trends in this vital sphere. As a result, the socio-economic development of the state took place without proper intellectual support, which caused an imbalance between the needs of the economy and the training of specialists by educational institutions.

Ukraine's transition to a qualitatively new level of scientific, technological and socio-economic development, to a modern innovative knowledge economy, is impossible without advanced education and science, namely: increasing the quality and availability of education to the level of European standards, increasing the attractiveness of domestic education for foreign consumers and investors; strengthening Ukraine's position on the European and world markets of educational services, deepening international relations and creating a qualitatively new innovative environment; transformation of education into a driving force of society, capable of ensuring its anticipatory development and innovative breakthrough in the scientific-technological, industrial-economic and social-humanitarian spheres.

#### LITERATURE

1. Штулер І. Ю. Позиції України у світових рейтингах конкурентоспроможності та економічної свободи протягом 2005-2015 років. *Міжнародні економічні відносини та світове господарство*. 2015. Вип. 5. С. 214–217.
2. Catalysing Education 4.0 Investing in the Future of Learning for a Human-Centric Recovery. Insightreport, may 2022. E-resource. Accessmode: [https://www3.weforum.org/docs/WEF\\_Catalysing Education 4.0\\_2022.pdf](https://www3.weforum.org/docs/WEF_Catalysing_Education_4.0_2022.pdf) (Last accessed: 17.08.2022).
3. Саух П. Ю., Саух І. В. Освіта й наука як фактор цивілізаційної суб'єктності країни: український контекст. *Modern directions of scientific research development. Proceedings of the 12th International scientific and practical conference*. Во Science Publisher. Chicago, 2022, 474-480; [Електронний ресурс]. Режим доступу: <https://sci-conf.com.ua/xii>

mezhdunarodnaya-nauchno-prakticheskaya-konferentsiya-modern-directions-of-scientific-research-development-18-20-maya-2022-goda-chikago-ssha-arhiv/ (Дата звернення: 29.08.2022).

4. Національна доповідь про стан і перспективи розвитку освіти в Україні: монографія / Нац. акад. пед. наук України; за заг.ред. В. Г. Кременя. Київ: КОНВІ ПРІНТ, 2021. 384 с.

5. Голубов О. Дослідження якості освіти PISA 2018: Результати для України маловтішні, але ще не вирок. [Електронний ресурс]. Режим доступу:<http://dw.com/uk/дослідження-якості-освіти-pisa-2018-результати-для-україни-маловтішні-але-ще-не-вирок/a-51512840> (Дата звернення: 29.08.2022).

6. Кажконен С. Що не так з українською шкільною освітою? [Електронний ресурс]. Режим доступу:[https://gazeta.ua/articles/life\\_ukrainska-shkola-potvora-yaka-zastryalamizh-dvoma-epochami-pismenni-sya/1028047](https://gazeta.ua/articles/life_ukrainska-shkola-potvora-yaka-zastryalamizh-dvoma-epochami-pismenni-sya/1028047) (Дата звернення: 29.08.2022).

7. Парламентські слухання "Запровадження 12-річної загальної середньої освіти в Україні: проблеми та шляхи їх подолання" / За заг. ред. Є. В. Краснякова. Київ: Парламентське вид-во, 2010. 168 с.

8. Саух П. Ю., Набок М. В., Кізілов О. І., Кузіна І. І. Якість вищої освіти в Україні очима студентів. *Вісник Національної академії педагогічних наук України*, 2021, 3(2), С. 1–8.

9. Моніторинг якості освіти: становлення та розвиток в Україні: Рекомендації з освітньої політики // Під заг. ред. О. І. Локшиної. Київ: "К.І.С.", 2004. 128 с.

10. Стан здоров'я школярів в Україні [Електронний ресурс]. Режим доступу:<http://www.mif-ua.com/friticle/32962>(Дата звернення: 29.08.2022).

11. Кремень В., Луговий В., Саух П., Таланова Ж. Мережа державних закладів вищої освіти України: аналітичний огляд конкурентоспроможності. *Вісник Національної академії педагогічних наук України*, 2022, 4 (1). [Електронний ресурс]. Режим доступу: [file:///C:/Users/user/Downloads/252-Текст%20статті-522-1-10-20220428%20\(2\).pdf](file:///C:/Users/user/Downloads/252-Текст%20статті-522-1-10-20220428%20(2).pdf) (Дата звернення: 29.08.2022).

12. Кремень В. Г., Луговий В. І., Саух П. Ю. Освіта і наука – основа інноваційного людського розвитку. Пропозиції НАПН України до Стратегії людського розвитку. *Вісник Національної академії педагогічних наук України*, 2020, 2. [Електронний ресурс]. Режим доступу: <https://doi.org/10.37472/2707-305X-2020-2-2-14-3> (Дата звернення: 29.08.2022).

13. Саух П. Ю. Стратегічне бачення нової моделі вищої освіти: рух до створення університетів світового класу. *Вісник Національної академії педагогічних наук України*, 2020, 2(2). [Електронний ресурс]. Режим доступу: <https://doi.org/10.37472/2707-305X-2020-2-2-13-7> (Дата звернення: 29.08.2022).

14. Власюк О. С. Аналітична записка "Проблеми і перспективи поширення інноваційних форм освіти в Україні". *Національний інститут стратегічних досліджень*. 2017. 14 с.

#### **REFERENCES (TRANSLATED & TRANSLITERATED)**

1. Shtuler, I. Yu. (2015). *Pozu`ciyi Ukrayiny` u svitovy`x rejty`ngax konkurentospromozhnosti ta ekonomichnoyi svobody` protyagom 2005-2015 rokiy* [Positions of Ukraine in the world rankings of competitiveness and economic freedom during 2005-2015]. *Mizhnarodni ekonomichni vidnosy`ny` ta svitove gospodarstvo*, 5, 214–217 (in Ukrainian).

2. Catalysing Education 4.0 Investing in the Future of Learning for a Human-Centric Recovery. Insightreport, may 2022. E-resource. Access mode: [https://www3.weforum.org/docs/WEF\\_Catalysing Education 4.0\\_2022.pdf](https://www3.weforum.org/docs/WEF_Catalysing_Education_4.0_2022.pdf) (Last accessed: 17.08.2022) (in English).

3. Saux, P. Yu., Saux, I. V. (2022). *Osvita j nauka yak faktor cy`vilizacijnoyi sub'yektnosti krayiny` : ukrayins`ky`j kontekst* [Education and science as a factor of the country's civilizational subjectivity: the Ukrainian context]. *Moderndi rections of scientific research development. Proceedings of the 12th International scientific and practical conference*.

*Bo Science Publisher. Chicago, 474-480. E-resource. Access mode: <https://sci-conf.com.ua/xii-mezhdunarodnaya-nauchno-prakticheskaya-konferentsiya-modern-directions-of-scientific-research-development-18-20-maya-2022-goda-chikago-ssha-arhiv/> (Last accessed: 29.08.2022) (in Ukrainian).*

4. Nacional`na dopovid` pro stan i perspekty`vy` rozvy`tku osvity` v Ukrayini: monografiya. (2021). [National report on the state and prospects of education development in Ukraine]: monograph. / Nacz. akad. ped. nauk Ukrayiny`; za zag. red. V. G. Kremenya. Kyiv: KONVI PRINT (in Ukrainian).

5. Golubov, O. (2018). Doslidzhennya yakosti osvity` PISA 2018: Rezul`taty` dlya Ukrayiny` malovtishni, ale shhe ne vy`rok [PISA 2018 study of the quality of education: The results for Ukraine are disappointing, but not yet a verdict]. E-resource. Access mode: <http://dw.com/uk/дослідження-якості-освіти-pisa-2018-результати-для-україни-маловтішні-але-ще-не-вирок/а-51512840> (Last accessed: 29.08.2022) (in Ukrainian).

6. Kaxkonen, S. Shho ne tak z ukrayins`koyu shkil`noyu osvitoyu? [What is wrong with Ukrainian school education?]. E-resource. Access mode: [https://gazeta.ua/articles/life\\_ukrainska-shkola-potvora-yaka-zastryala-mizh-dvoma-epohami-pismenni-cya/1028047](https://gazeta.ua/articles/life_ukrainska-shkola-potvora-yaka-zastryala-mizh-dvoma-epohami-pismenni-cya/1028047). (Last accessed: 29.08.2022) (in Ukrainian).

7. Parlaments`ki sluxannya "Zaprovadzhennya 12-richnoyi zagal`noyi seredn`oyi osvity` v Ukrayini: problemy` ta shlyaxy` yi podolannya" [Parliamentary hearings "Introduction of 12-year general secondary education in Ukraine: problems and ways to overcome them"] (2010)/ Za zag. red. Ye. V. Krasnyakova. Kyiv: Parlaments`ke vy`d-vo (in Ukrainian).

8. Saux, P. Yu., Nabok, M. V., Kizilov, O. I., Kuzina, I. I. (2021). Yakist` vy`shhoi osvity` v Ukrayini ochy`ma studentiv. [The quality of higher education in Ukraine through the eyes of students]. *Visny`k Nacional`noyi akademiyi pedagogichny`x nauk Ukrayiny`*. 3(2), 1–8 (in Ukrainian).

9. Monitory`ng yakosti osvity`: stanovlennya ta rozvy`tok v Ukrayini: Rekomendaciyi z osvitn`oyi polity`ky [Monitoring the quality of education: formation and development in Ukraine: Recommendations on educational policy] (2004). Pid zag. red. O. I. Lokshy`noyi. Kyiv: "K.I.S.". (in Ukrainian).

10. Stan zdorov`ya shkolyariv v Ukrayini [Stats of health of schoolchildren in Ukraine]. E-resource. Access mode: <http://www.mif-ua.com/frticle/32962>. (Last accessed: 29.08.2022) (in Ukrainian).

11. Kremen`, V., Lugovy`j, V., Saux, P., Talanova, Zh. (2022). Merezha derzhavny`x zakladiv vy`shhoi osvity` Ukrayiny`: anality`chny`j oglyad konkurentospromozhnosti [The network of public institutions of higher education of Ukraine: an analytical review of competitiveness]. *Visny`k Nacional`noyi akademiyi pedagogichny`x nauk Ukrayiny`*, 4(1). E-resource. Access mode: [file:///C:/Users/user/Downloads/252-Текст%20сатри-522-1-10-20220428%20\(2\).pdf](file:///C:/Users/user/Downloads/252-Текст%20сатри-522-1-10-20220428%20(2).pdf). (Last accessed: 29.08.2022) (in Ukrainian).

12. Kremen`, V. G., Lugovy`j, V. I., Saux, P. Yu. (2020). Osvita i nauka – osnova innovacijnogo lyuds`kogo rozvy`tku. Propozy`ciyi NAPN Ukrayiny` do Strategiyi lyuds`kogo rozvy`tku. [Education and science are the basis of innovative human development. Proposals of the National Academy of Sciences of Ukraine for the Strategy of Human Development]. *Visny`k Nacional`noyi akademiyi pedagogichny`x nauk Ukrayiny`*, 2. E-resource. Access mode: <https://doi.org/10.37472/2707-305X-2020-2-2-14-3> (Last accessed: 29.08.2022) (in Ukrainian).

13. Saux, P. Yu. (2020). Strategichne bachennya novoyi modeli vy`shhoi osvity`: rux do stvorennya universy`tetiv svitovogo klasu [A strategic vision of a new model of higher education: the movement to create world-class universities]. *Visny`k Nacional`noyi akademiyi pedagogichny`x nauk Ukrayiny`*, 2(2). [E-resource. Access mode: <https://doi.org/10.37472/2707-305X-2020-2-2-13-7>. (Last accessed: 29.08.2022) (in Ukrainian).

14. Vlasyuk, O. S. (2017). Analytical note "Problems and prospects of spreading innovative form of education in Ukraine". Nationalnyj instytut strategichnyx doslidzhen (in Ukrainian).

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