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## **EDUCATION FOR SUSTAINABLE DEVELOPMENT FOR FUTURE TEACHERS OF PHYSICAL CULTURE AND SPECIALISTS OF PHYSICAL EDUCATION AND SPORTS**

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***Abstract.** The article deals with the peculiarities of the sustainable development goals realization in Ukraine as one of the elements of European integration and the educational reform. A modern vision of ways to realize the goals of sustainable development through the system of formal and non-formal education is presented. The opportunity and the prospect of future physical culture teachers and specialists in physical education and sports attracting to the realization of sustainable development goals are revealed. The content of the course “Education for sustainable development: the steps of the EU and Ukraine” based on the experience of the EU countries is offered. It will contribute to the development of the competencies necessary for further professional activities in accordance with such sustainable development goals, as: the preservation of the environment, the preservation of health, the manifestation of tolerance to people with special needs, initiative, and involvement of a person in decision making.*

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### **Introduction.**

Ukraine’s Steps to European Integration through Education. Negotiations between Ukraine and the European Union on cooperation took place for a long time. Finally, in 2014, an extremely important event in the history of our country took place – the “Association Agreement between Ukraine and the EU” was signed and ratified. Compliance with the requirements of this Agreement brings Ukraine closer to membership in the European Union. The provisions of the Agreement relate to various areas of activity, in particular issues of interest to us – education (chapter 23) and sport and physical culture (chapter 25) (Association Agreement between Ukraine..., 2015).

In the following 2015, the President of our country issued a decree on the Strategy for Sustainable Development “Ukraine 2020” (Decree of the President of Ukraine, 2015).

Thanks to this, Ukraine has finally become one more step closer to implementing a new strategy for sustainable development. Indeed, the Concept of Sustainable Development, which was proposed by the international community in 1987 (Development and international economic cooperation..., 1987), was supported by our country back in 1992 when the Rio Declaration on Environment and Development was signed. But no comprehensive legal document on the state level on sustainable development since then was adopted in Ukraine. According to the data of the National Institute for Strategic Studies, legal regulation in the field of sustainable development was carried out not on the basis of the application of the Laws of Ukraine, but on the basis of normative documents such as Presidential Decrees, Decrees and Ordinances of the Cabinet of Ministers of Ukraine, Orders and Letters of Central Executive Bodies (Sustainable Development Strategy: Opportunities and Problems of Implementation in Ukraine, 2013).

The goal of the Strategy for Sustainable Development “Ukraine – 2020” is the introduction of European standards of living in Ukraine. For this purpose, a number of reforms are envisaged, among them Educational Reform.

In 1992, the international community recognized education as the main driving force for sustainable development of society, and subsequently a number of education documents for sustainable development were created (V. Boholiubov, 2010). They state that education for sustainable development should last from birth and throughout life; and should be implemented in all formal and informal educational institutions within all relevant academic disciplines and regardless of professional orientation. Consequently, education for sustainable development must be comprehensive. It will contribute to the knowledge and skills of sustainable development and will enhance the person’s ability to lead a healthy lifestyle in harmony with nature (UNECE strategy for Education for Sustainable Development, 2005).

The issue of education in the interests of sustainable development is contained in the Ukrainian Law On Education (2017, revision 2019), which states that education is a state priority, which ensures the sustainable development of society and the state.

In 2017, the Government of Ukraine presented the National Report “Sustainable Development Goals: Ukraine”, which talked about an adapted national system of sustainable development goals (86 development tasks and 172 indicators for monitoring their implementation). Immediately, the goals of sustainable development strategy are reflected in the principles of state educational policy and principles of educational activity (Article 6 of the Ukrainian Law On Education, 2017, revision 2019). Here are some of them: rule of law; quality assurance of education; ensuring equal access to education; development of an inclusive educational environment; scientific character and diversity of education; the integrity and continuity of the education system; facilitating lifelong learning; integration with the labour market; humanism; democracy; intolerance of corruption and bribery; state-public and state-private partnership; the formation of respect for human rights

and freedoms, the formation of a healthy lifestyle culture, ecological culture and a careful attitude towards the environment; inextricable connection with world and national history; integration into the international educational and scientific space, etc. (Ukrainian Law On Education, 2017, revision 2019).

The direction of Ukraine's education on the provisions of the Strategy of Sustainable Development should contribute to the formation of an appropriate outlook and thinking. According to the provisions of the law "On Full General Secondary Education" (Article 12 of the Ukrainian Law On Education, 2017, revision 2019), the graduate must possess a number of key competencies.

In addition to domestic experience and domestic scientific research, international commitments and foreign experience are also recognized as the basis of state policy in the field of education. The concept of the New Ukrainian School (2016) states that the new educational standards will be based on the "Recommendations of the European Parliament and the Council of Europe on the development of key competences for lifelong education". According to this, 10 key competencies are provided to be held by a graduate of a general secondary education institution, such as: communication in the state and foreign languages, mathematical competence and basic competencies in science and technology, information and digital competence, lifelong learning, initiative and entrepreneurship, social and civil competence, awareness and self-expression in the field of culture, environmental literacy and healthy life. It is also noted that key competencies are cross-cutting skills, acquired through the study of various subjects, each of which contributes to each of the competencies (New Ukrainian School. Conceptual Principles..., 2016).

To form such competencies in the students, each teacher must own them. This is evidenced by Article 17 of the Ukrainian Law On Education, which states that "the purpose of higher education is to obtain a high level of scientific and/or creative artistic, professional and general competencies necessary for activities in a certain specialty or in a particular field of knowledge" (Ukrainian Law On Education, 2017, revision 2019). In addition, according to the results of the Eighth Ministerial Conference "Environment for Europe" (Batumi, Georgia, June 8-10, 2016) "Fundamentals of the Future Implementation of the UNECE Strategy for Education for Sustainable Development", among the priority areas of action is the promotion of education in the interests of sustainable development for pedagogical education and training of all teachers.

In 2011, in Geneva, the Committee on Education for Sustainable Development identified the main competencies of teachers in the education system for sustainable development (April 7-8, 2011, sixth meeting), and the characteristics of education for sustainable development were defined: a holistic approach focused on integration thinking and practice; anticipating changes, implementing transformations to change learning methods. Thus, since the new Ukrainian Law On Education (2017) is based on the provisions of a strategy for sustainable development of society, the issues of education for sustainable development are extremely relevant.

## **1. Views on Education for Sustainable Development in Ukraine**

The works of the scholars on education for sustainable development in Ukraine has appeared for a long time. But most of them are of a theoretical nature. According to G. Niepiehina (2009), the goals of sustainable development in Ukraine still remain little known to the majority of the population. And the idea of sustainable development is perceived as something abstract. Most scholars in their works prove the importance and necessity of education for sustainable development of society from different positions. L. Melnyk (2005) et al. considers environmental education as a component of sustainable development.

P. Saukh (2009) expresses the opinion that the transition to a sustainable development of society requires the formation of a new model of education, which would be in line with the civilization strategy of the future development of mankind. We need not just a “relay of knowledge and social experience from generation to generation”, but the training of a person to work in conditions of uncertainty, the ability to find a way out of crisis situations due to advanced knowledge and systematic actions. “The main condition for realizing such a strategy is understanding of the world as a universal-system essence, and self-preservation of mankind is possible only through self-change of man”.

H. Filipchuk (2010) states that education for sustainable development is an initial and main element of the transformation of society, it forms the appropriate thinking for understanding the principles of sustainable development, promotes awareness of the need for social and environmental progress for different industries, it is necessary for all people throughout life, requires consideration of national and regional peculiarities and should bring humanity closer to activity in one plane – overcoming the ecological crisis.

Conceptual approaches to the formation of education for sustainable development is described by V. Boholiubov (2010). He expresses the view that the main goal of education for sustainable development is to promote the environmental consciousness, timely acquisition of knowledge, skills and abilities, to prevent and solve socio-economic and environmental problems and to improve the quality of life of generations. The main task of education for sustainable development, in the opinion of this author, is to establish a new morality – the morality of a society of sustainable development.

Yu. Skyba, O. Lazebna & M. Skyba (2011) reveal the content and structure of environmental education in the context of sustainable development, methodological functions of sustainable development education.

L. Zahvoiska (2011) highlights the tendencies of the formation of the ESR. She also formulates the tasks of its further development.

H. Baliuk (2012) examines the problems of legal regulation of the implementation of the concept of sustainable development into the education of Ukraine. He makes suggestions on improving the current legislation in this area, and also highlights the position on incorporating ecology and sustainable development into curricula at all levels of the educational process, with the strengthening of the role of social and humanitarian aspects of environmental education and environmental promotion, etc.

O. Didkov (2012), considering the issue of education for sustainable development, raises questions about the formation of a conscious attitude of the individual towards his or her own health and supports the view that education for sustainable development should promote the dissemination of knowledge about the environment and its state and provide criteria, standards, recommendations for decision making on environmental issues.

N. Filianina (2013) argues in her work that education for sustainable development cannot be reduced to only one educational branch; it needs an integrated approach and must combine natural sciences and the humanities.

T. Sylva (2013) compares key competencies of sustainable development and social work professionals. It highlights the experience of implementing sustainable development ideas in the educational process of training future specialists in social work.

Yu. Krasnoboky & I. Tkachenko (2014) note the importance of strengthening the fundamental, methodological and methodological training of specialists in the field of natural sciences, in particular, physics teachers, in order to ensure the implementation of the provisions of the concept of sustainable development of society.

N. Dushechkina (2014) believes that on the way to sustainable development of society, environmental education should be carried out in parallel with economic one.

A. Ulishchenko (2014) considers the image of a teacher of higher educational institutions in the context of education for sustainable development.

M. Horova (2015) in the context of sustainable development addresses issues of environmental literacy.

The team of authors headed by O. Bondar (2015) believe that the necessary condition for the successful sustainable development of society is environmental education and environmental thinking of all specialists in different fields.

I. Korenieva (2018) offers a concept for the training of future biology teachers to implement education functions for sustainable development; investigates the current state of education for sustainable development in Ukraine – analyses the activities of non-governmental organizations and higher educational institutions on the implementation of education for sustainable development in Ukraine. The author points out that education for sustainable development is more offered to students of technical and pedagogical specialties of natural science. The author also states that modern domestic researchers sometimes identify the concept of “environmental education” and “education for sustainable development” I. Korenieva (2018a, 2018b). As a rule, this is observed in the case of considering the concept of “education for sustainable development” by specialists in natural sciences. The reason for this is that environmental education in Ukraine has not been properly introduced; it has not become total, as it should be. This led to the use of the concept of “sustainable development”, one of which is the ecological component, in the sense of “environmental education”. We are confident that this is not correct, because the international community that defined the concept of “sustainable development” determined it as a combination of economic, environmental and social components.

If we turn to the Sustainable Development Goals for Ukraine, which were approved at the United Nations Summit on Sustainable Development in 2015, then we can consider much more constituents of the concept of “sustainable development”, that is, to further elaborate on it. More practical education for sustainable development is being implemented in Ukraine on the basis of environmental education through the Internet sites of civil society organizations and pilot secondary educational institutions (The role of the Partnershi, n.d.).

In view of the foregoing, the professional training of specialists, who, having received the relevant knowledge, remains, in our opinion, beyond the attention of the scholars, may become the driving force for education for sustainable development not only for the younger generation, but also for the adult population. These are teachers of physical education and specialists in physical education and sports. They work with children, young people and adults both in formal and non-formal educational institutions. Therefore, their acquisition of knowledge about sustainable development and the possibility of their use in professional activities will allow expanding and accelerating the process of formation of the competences necessary for the achievement of the goals of sustainable development in children, youth and the elderly population and to reach the education for the sake of sustainable development of a wide population of the country of different age categories and different professional orientation.

## **2. Education for sustainable development for students of physical education faculties**

There are no relevant courses in the higher educational institutions of Ukraine that would facilitate the training of future teachers of physical culture and specialists in physical education and sports in the principles of sustainable development of society. Therefore, for their professional training we have offered a course “Education for sustainable development: the steps of the EU and Ukraine”. The course aims to promote the European Union’s education provisions for sustainable development. Its feature is the study of the idea of sustainable development and the introduction of European experience in the implementation of education in the interests of sustainable development in higher education institutions for students – future teachers of physical education and specialists in physical education and sports. The program is based on modern methodology and the latest innovative forms and methods of training. It provides an interdisciplinary and systematic approach to studying the main areas of human interaction with society and the environment from the standpoint of principles and strategies for sustainable development. It will form a deep knowledge and understanding of the mechanisms for achieving a compromise between humanity and nature in order to achieve sustainable development of society.

The course aims to build competencies necessary for decision-making in further professional activities in line with sustainable development goals. In particular, it is preservation of the environment, health improvement and promotion, tolerance to people with special needs, initiative, involvement of a person in decision making, etc. Therefore, the result of studying the course should be reformatting the consciousness of the participants in the direction of the need for the transition of society to sustainable development. The proposed course will contribute to the realization of specific goals of sustainable development from the point of view of education.

Since the Sustainable Development Strategy has many goals, the course is interdisciplinary.

The program “Education for Sustainable Development: Steps of the EU and Ukraine” has two thematic sections:

1. The history of the concept of sustainable development: the first experience of Europe.
2. Education for the achievement of sustainable development goals: EU view and steps.

The purpose of the first section “Sustainable development: from the emergence of the concept to the realities of the present” is to show students the benefits of the development of society, which are now directed by the EU countries. Studying this section, students will get acquainted with the history of the concept of sustainable development, the activities of the Roman Club, the strategy and objectives of sustainable development in Europe, UNECE documents on sustainable development and education for sustainable development. Students will also consider the peculiarities of interpreting the concept of sustainable development in Ukraine and Ukraine’s steps towards sustainable development.

For a better understanding of the sustainable development strategy of the European countries, the topic “Human values for sustainable development” they will be invited to find personal and professional values in the list of sustainable development goals. This will contribute to the formation of an understanding of the ownership value of information on environmental, economic and social well-being, and will require a change in the own consciousness and consciousness of the Ukrainian population in order to transform society towards sustainable development, for example, of the EU countries and orientation of Ukraine’s education on sustainable development.

The second section, “Education for the achievement of sustainable development goals: views and steps of EU countries”, consists of four themes, each of which addresses the ways of realizing the goals of sustainable development in Ukraine, using the experience of the EU countries.

Topic 1. “Global environmental problems solving: the view and steps of the EU countries” will familiarize students with the global problems of the atmosphere, hydrosphere and the lithosphere of our planet, their causes and consequences. Students will get acquainted with the latest trends in reducing anthropogenic impact on the environment, in particular, with the following: prevention of climate changes and air pollution, cleaning drinking water and surface waters from pollution, restoration of soil fertility and land ecosystems; stabilization of urboecosystems due to reuse of raw materials, garbage disposal, environmentally friendly production and consumption; environmental management, etc., which are used in the EU and other countries. Students will be able to compare the ways of European countries and Ukraine in the specified directions of nature use and nature conservation; learn about the activities of European sports organizations and sports brands in support of sustainable development goals. Having borrowed the European experience,

they will be able to use it in their professional activities. Consideration of this topic will allow students to demonstrate possible ways of achieving the following goals of sustainable development of society: Climate change mitigation, Clean water and proper sanitary conditions, Conservation of marine resources, Protection and restoration of land ecosystems, Affordable and clean energy, Sustainable urban development and communities.

The study of the topic will be completed by a student's search for ways to transfer acquired knowledge and skills to the schoolchildren for use during future pedagogical and coaching activities.

Topic 2. "Strong health and well-being: educational technologies from the EU experience" will familiarize students with the provisions of the EU Sustainable Development Strategy for Health. This topic is a logical continuation of the previous one as the students will receive information on the impact of exogenous (abiotic, biotic and anthropogenic) and endogenous factors on health, which will contribute to the understanding of the importance of maintaining health in order to minimize the accumulation of negative information in their genome. Students will analyse the programs of the EU and Ukraine on the response to dangerous infectious and non-infectious diseases, to consider the latest educational technologies of EU countries aimed at disease prevention. Considerable attention will be paid to issues of reproductive and sexual health. Students will get acquainted with the experience of EU countries, aimed at solving demographic problems, family planning, and prevention of reproductive diseases of men and women. Consideration of this topic will allow students to demonstrate possible ways to realize such a goal of sustainable development as sound health and well-being not only from the position of motor activity, but also from the standpoint of ecology, sociology and economics.

The topic will be completed by developing a student project and discussing the methods of the population health improving that it is advisable to use in their professional activity as teacher of physical culture, or a specialist in physical education and sports.

Topic 3. "EU Standards for Food Quality" is a logical extension of previous topics. After all, the nutrition of the population is a factor that depends on the state of the environment, natural and anthropogenic, and affects human health and athletes in particular. Therefore, students will familiarize themselves with the European standards of food quality; consider the technical, environmental and sanitary requirements for them. Comparison of EU normative documents on food quality with the relevant legislative acts of Ukraine will deepen understanding of the importance of implementing European standards in all spheres of life in Ukraine. With the help of biochemical research methods, students learn to independently determine the most important health indicators, can detect malicious foods. Consideration of this topic will allow students to demonstrate the potential ways of achieving the goals of sustainable development as: Strong health and well-being, Sustainable development of cities and communities, Responsible consumption and production.



The study of the topic will be completed by the student's search for ways of realizing the European standards of food quality in the realities of Ukrainian society.

Topic 4. "Inclusive processes in Europe – equality in education" will help to make a step forward in achieving the goals of sustainable development, such as Reducing inequalities, Sustainable development of cities and communities.

Students will get acquainted with the experience of the European Union on the introduction of inclusive education; the modern system of inclusive education in Ukraine, will understand the role of the individual in this process and the prospects for development. While studying this topic, students will work on information on the level of education rights and the implementation of the principles of inclusion in EU countries. They will also analyse the latest achievements of the EU and Ukraine in the field of equal rights and access to education for all, will work on identifying common themes and areas of cooperation with EU countries. The peculiarities of development of the normative-legal base of Ukraine in the direction of inclusive processes will be considered. Also, the problems of inclusion in Ukrainian society will be studied, for example, as citizens perceive children and adults with special needs, what mental, political and cultural bases of inclusion are there, etc.

The study will complete the selection of innovative developments in the context of the introduction of European experience in inclusive education.

Consequently, the second part of the general program aims to familiarize students with some of the global environmental, economic and social problems of humanity and the ways out of what they see and implement in the EU. Students' special attention will be directed to ways of solving the issues of preservation and restoration of health, which are being implemented in educational institutions of the EU countries, because it is important for future teachers of physical education and specialists in physical education and sports to grow a healthy personality. One of the central issues in the topic is to overcome the inequality and accessibility of education regardless of social status. This will help make a step forward, focusing on the experience of European countries in the massive engagement of people of all ages with motor activity as a mandatory element of a healthy lifestyle, in addressing the issues of access to education and the rehabilitation of people with special needs. The question of how to protect, preserve and restore the environment is obligatory for consideration, since human health and well-being depend entirely on the state of natural and artificial ecosystems, urboecosystems and the biosphere as a whole: climate change, air quality, water, soil, etc. The study of the proposed topics will contribute to:

- understanding of the consequences of anthropogenic impact on the planetary scale and the opportunity to change the situation for the better thanks to the joint efforts of each of the inhabitants of the planet, international co-operation and the involvement of the experience of the EU countries. This will motivate students – future educators to take appropriate actions in education on the improvement of the state and protection against environmental problems of the atmosphere, hydrosphere, lithosphere, urban ecosystems, natural ecosystems in their region and rational nature use.

– awareness of the consequences of the impact of the quality of the environment on the health of each person, the importance of introducing in Ukraine European standards on the quality of food and other living standards;

– the formation of the students' system awareness and understanding of issues of relevance to their age issues of the relationship of reproductive health of a person and the tools of family support in the field of state regulation of demographic processes in the EU. Students will be able to actively use preventive measures for the most dangerous infectious and non-infectious diseases in their own way of life and further professional activity; learn to maintain their own mental health and avoid early professional burnout in their professional activities.

As a result of consideration of the proposed topics, the experience of the EU countries will be studied and the aspects that can be used by future physical education teachers and specialists in physical education and sports in pedagogical and sports activities in Ukraine are outlined. This will significantly increase the number of qualified teachers who will be competent in implementing the EU's experience in achieving the goals of sustainable development in all levels of education, including through international cooperation in teacher training.

Consideration of these topics will be one of the steps in realization of such an important goal for EU countries and Ukraine as "Qualitative Education", as it will facilitate the preparation of a teacher, a specialist competent in the ways of realizing the goals of sustainable development through education. Students will acquire the relevant competencies and will have a wide range of information on the goals of sustainable development of the EU and Ukraine and possible ways of their implementation through the system of continuous – formal, informal and informational education in Ukraine.

Due to the acquired competencies, physical education teachers and physical education and sports specialists will be able to transfer their knowledge and skills to their pupils and pupils, to show the leading role of the EU countries in achieving the goals of sustainable development.

### **Conclusions.**

1. The term of Ukraine's exit on the path to sustainable development was long. Despite the support of the course of sustainable development in 1992, real steps took place only in 2014 after the signing and ratification of the "Association Agreement between Ukraine and the EU". The first official document confirming that Ukraine took the course on sustainable development was the decree of our country's president "On the Strategy of Sustainable Development Ukraine-2020". The goal of the Strategy for Sustainable Development "Ukraine-2020" was to determine the introduction of European standards of living in Ukraine. To this, a number of reforms were envisaged, including reform of education.

One of the key provisions of the Law of Ukraine “On Education” is that education is recognized as a state priority, which ensures the sustainable development of society and the state.

2. Most research works on the implementation of education for sustainable development in Ukraine are theoretical. Quite often, education for sustainable development is equated with environmental education, but recently the works started to appear, the authors of which state that education for sustainable development cannot be reduced to only one educational branch, it needs an integrated approach and must be combined with a complex of sciences. In Ukraine, in fact, at an amateur level, education for sustainable development begins to be implemented in schools, non-formal education institutions and individual institutions of higher education for students of technical and natural sciences.

3. For the implementation of the education project in the interests of sustainable development, it is proposed to involve teachers of physical education and specialists in physical education and sports. They work in institutions of formal and informal education. This will allow education for the benefit of sustainable development to a wide range of people of different age groups, from the smallest to the oldest, and different professional orientation.

For the mastery of physical education teachers and specialists in physical education and sports with the relevant competences for education in the interests of sustainable development, the course “Education for Sustainable Development: Steps of the EU and Ukraine” was developed. As a result of consideration of the proposed topics, the experience of the EU countries will be studied and the aspects that can be used by future physical education teachers and specialists in physical education and sports in pedagogical and sports activities in Ukraine are outlined. The greatest attention is paid to the issues of maintaining health, the environment, reducing inequality, quality education.

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