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## FUNDAMENTALS OF AN ECOLOGICAL APPROACH TO PHYSICAL EDUCATION OF ACADEMIC LYCEUM STUDENTS

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### **Аннотация**

В статье в целях освоения метода повышения устойчивости организма к воздействию вредных факторов окружающей среды, вызванных производственными, химическими и другими видами промышленных отходов, осуществляется защита, восстановление и экологическая защита здоровья учащихся в результате использование средств физического воспитания в процессе физического воспитания, объясняются закономерности связи между задачами. В статье автор дает рекомендации по развитию экологического подхода к физическому воспитанию учащихся академических лицеев, обучающихся в неблагоприятных условиях загрязненного атмосферного воздуха, в связи с активным развитием систем экологического мониторинга.

### **Ключевые слова**

студенты, экологическое образование, физическое воспитание, подходы, мониторинг, окружающая среда, активное развитие, здравоохранение.

### **Annotation**

In the article, in order to master the method of increasing the body's resistance to the effects of harmful environmental factors caused by industrial, chemical and other types of industrial waste, the protection, restoration and environmental protection of students health is carried out as a result of the use of physical education means in the process of physical education, the patterns of connection between tasks. In the article, the author gives recommendations for the development of an ecological approach to physical education of students of academic lyceums studying in unfavorable conditions of polluted atmospheric air, in connection with the active development of environmental monitoring systems.

### **Keywords**

students, ecological education, physical training, approaches, monitoring, environment, active development, healthcare.

**Introduction.** The relevance of environmental education is determined by the need to protect the country's nature, ecosystems, and environment from instability and degradation, to raise the ecological culture of the population, and to contribute to these extremely serious, vital issues by all segments of the population, especially young people.

However, a systematic analysis of the process of implementing environmental education shows that serious problems and shortcomings remain in the organization of environmental education, hindering the full implementation of reforms in this area.

The set of rules forming the theoretical and methodological basis of the ecological approach is aimed at the effective use of physical culture tools in the educational field of academic lyceum students. For their implementation, it is necessary to develop a system of comprehensive measures that complement and enhance the health-improving effect of students performing physical exercises in environmentally unfavorable conditions [1.60].

**Methods.** The article used research methods such as working with documents, analysis of scientific and methodological literature, pedagogical observation, and interviews.

**Results and discussion.** According to O.M. Dorozhko, there are two approaches to the introduction of the cultural paradigm into the system of environmental education [2.34].

The first approach is aimed at the formation of ecological culture, for which elements of environmental knowledge and environmental protection activities are introduced into the educational field of academic lyceums. In this regard, the introduction of new special courses addressing the environmental problems of the region or the methodology for organizing environmental education in the training of future specialists is becoming widespread.

The second approach indicates the need to expand the spatial and temporal boundaries of ecological culture by creating the spatial core of ecological culture and familiarizing subjects of the educational process with it.

However, the ecology of physical culture is not limited to these approaches. First of all, we need to define an approach related to the active development of various environmental monitoring systems designed to collect data on the state of the environment, as well as statistical data on diseases of various categories of the population. Unfortunately, most existing systems do not provide an analysis of the

relationship between the state of the environment and the human body's attitude towards it. Therefore, in modern conditions, it is relevant to conduct medical and environmental monitoring as a comprehensive system for monitoring, assessing, and forecasting changes in the state of the environment under the influence of anthropogenic factors. The purpose of such monitoring is to regularly compare the morbidity of the population with the nature of environmental pollution, their analysis and development forecast, which allows determining the content and ensuring the effectiveness of various health improvement measures. Such monitoring ensures the identification of signs of environmental degradation and reflects the impact of various environmental pollutants on human health and can serve as a basis for the development of regional health programs.

The ecological situation in modern society, physical activity in the open air with high loads, swimming in bodies of water located near sources of pollution do not give the expected health-improving effect, since the amount of harmful substances entering the body increases due to the activation of the respiratory and cardiovascular systems.

Consequently, there is a need for a scientific and theoretical justification of the concept of an ecological approach in order for the implemented educational and training programs to have a health-improving effect.

Therefore, the subject of the ecological approach in our research is the search for patterns of increasing the human body's resistance to specific negative environmental factors as a result of the creation and use of new educational, sports, healthcare, physical culture, rehabilitation and recreation technologies, and physical education tools.

In addition, the basis of the environmental approach to the organization of physical education should be the monitoring of the air pollution index. For this purpose, in places where physical culture, recreation, and sports events are held, environmental monitoring is carried out according to the data of relevant laboratories, and for urgent information - using portable gas analyzers.

In accordance with the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated May 27, 2019 No. 434 "On Approving the Concept for the Development of Environmental Education in the Republic of Uzbekistan," the Concept for the Development of Environmental Education, in the process of general education, should provide students with information and skills about the professional activities of healthcare workers, which should include:

- knowledge of basic concepts, laws, concepts of ecology, various relations between man and the environment, legal issues;

- the ability to identify various environmental parameters and take measures aimed at maximizing the impact of negative environmental factors on the human body;
- skills in identifying and using environmentally friendly conditions in the construction of health improvement zones, sports grounds and other sports facilities;
- defining specific methodological tasks for conducting physical culture and recreation classes in areas with unfavorable environmental conditions;
- conducting large-scale, targeted information work among the population on the level of air pollution in places where physical education classes are held daily;
- promotion of health improvement and recreation activities to prevent negative environmental consequences.

The study of processes occurring in the environment and the study of biological objects requires the widespread use of information technologies for processing measurement results, analyzing collected data, and supporting information in decision-making, which creates the necessary conditions for modeling the physical education process in environmentally unfavorable conditions [3.114].

One of the attempts to use computer technologies for modeling complex systems based on a cognitive approach is carried out to analyze the dynamics of the development of the physical education system in a region with environmentally unfavorable environmental conditions [3.115].

The developed methodology for creating the model consists of the following stages:

- Construction of a cognitive map of the social system "Physical education in a region with ecologically unfavorable environmental conditions";
- analysis of the cognitive map, which consists in studying the purpose of the signs and weights of the arcs connecting the nodes of the map;
- construction of a dynamic model of the system based on the obtained cognitive map;
- dynamic modeling of the analyzed system.

Using this algorithm, it is possible to obtain the main factors of the modeled system, described as the vertices of the cognitive map:

- the population of the region (district) covered by the physical culture system;
- the number of professional personnel in the field of physical culture, sports and tourism in a certain region;
- the number of professional workers who do not have higher physical education;

- the number of professional workers with higher education in physical culture;
- monitoring the health status of the population in a certain region;
- monitoring the physical development and physical fitness of various age groups of the population of a certain territory;
- average life expectancy in the region;
- air pollution index;
- availability of sports facilities;
- the number of sports events held per year;
- financing of physical culture and sports events;
- public opinion advocating for the development of the physical education system in the region.

**Conclusions and recommendations.** The results obtained during the modeling process allow us to develop the basic provisions of the concept of an ecological approach to the content and organization of physical education of students, including the following basic provisions:

- Study of legal documents on environmental protection in the international sports movement;
- observation of the state of the environment and methods of its use in the process of physical exercises for health improvement;
- ecology of physical culture, sports and tourism;
- ecology of sports facilities;
- information support for monitoring the ecological state of places where physical culture, sports, and recreation events are held.

As a result of theoretical research, it has been established that the ecological approach to the physical education of students is a scientific method for substantiating and implementing a set of interconnected and complementary means and methods at each level of the organization of the educational system. The science of physical education is aimed at effectively solving specific ecological, health-improving, and educational tasks in accordance with existing unfavorable conditions.

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