

Application of ecoprophyllaxis principles in Australian schools, using Melbourne as an example

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Abstract. This article examines the application of ecoprophyllaxis principles in schools in Melbourne, Australia. Ecoprophyllaxis is seen as an advanced approach that integrates environmental education, health and sustainable development. The article presents the results of applying this approach in school education, focusing on the impact on students' health, environmental awareness and socio-cultural changes in the community. Findings are presented on how Melbourne schools have become centers of ecological transformation, demonstrating the successful combination of traditional education with innovative environmental and health approaches. The article emphasizes the importance of education in the formation of values and suggests Melbourne's experience as a model for other educational institutions. The outcomes of eco-prophyllaxis-based education include: 1. Enhanced learner health: Green school spaces and regular physical activity improve learners' physical well-being, fostering psychological comfort that nurtures confidence and social skills. 2. Environmental consciousness and sustainability: Integrating environmental education cultivates a profound understanding of ecological issues and promotes sustainable lifestyles. Involvement in environmental projects instills a sense of responsibility for the planet's future. 3. Sociocultural transformation: Melbourne schools serve as hubs for spreading environmental knowledge, shaping a more conscious and environmentally responsible society through ecoprophyllaxis initiatives.



Keywords: eco-prevention, environmental education, sustainable development, green school spaces, health education.



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Introduction

Ecoprophyllaxis is an advanced approach in the education of modern man, which combines environmental education, health and sustainable development. The above is especially relevant in the context of school education. In recent decades, the issues of

ecology and health of students have become more and more important in the educational agenda. The emergence of eco-prophyllaxis as a modern concept in education reflects the growing awareness of the need to integrate environmental education into school curricula in order to prepare students for life in a changing world.



Picture 1. Melbourne school, Australia. Source: the archive of Melbourne school

Stanišić J., Maksić S. (2014) [1] review the state of environmental education in elementary schools in Serbia. Despite the fact that the topics of human health protection and environmental preservation are an integral part of the school curriculum, the research showed that pupils do not have enough knowledge to form a culture of healthy lifestyle and environmental awareness. The authors emphasize that although the relevance of environmental education is recognized at the school policy level, practical changes have yet to be implemented. The article discusses the difficulties encountered in implementing the envisioned program and offers recommendations for improving curricula, teaching methods, and teacher training to improve environmental education.

Kashuba V., Goncharova N., Butenko H. (2018) [2] consider the actual problem of the impact of active tourism on morbidity indicators and the degree of resistance of the organism of primary school children to unfavorable environmental factors. The study involved 265 students of 1-4 grades. It was revealed that 55.09% of them had certain violations in their health, mainly diseases of the bone and muscular system. Children, in general, had a low level of physical health. In order to determine the impact on these

indicators the concept of technologies of health formation on the basis of active tourism means was developed. As a result of the experiment it was found out that children from experimental groups, compared to children from control groups, demonstrated statistically significant improvement in the level of physical health and resistance of their organism to unfavorable environmental factors.

Shuba L.V. (2016) [3] aims to develop and experimentally prove the technology that promotes the formation of a healthy lifestyle of students. The study involved children aged 8-9 years old, who were divided into experimental and control groups. The results of the study showed that the greatest absolute increase in physical fitness indicators in the experimental group was observed in such motor abilities as flexibility, arm and trunk muscle strength, as well as speed and strength qualities. It is noted that for the effective development of physical qualities of students the decisive factor is the consideration of sensitive periods and an integrated approach in physical education lessons. The conclusions of the study indicate the effectiveness of the technology developed by the author, consisting of two blocks with the predominant use of exercises aimed at health.

Murodilovich U. R. (2022) [4] analyzed the results of pedagogical control over the organization of physical education and health-improvement work of the teaching staff of rural general education institutions and improvement of the quality of training of physical education teachers working in rural schools. It focuses on the modern problem of the school education system of the Republic of Uzbekistan related to the modernization of the content of education and the introduction of innovative pedagogical technologies in the teaching process of physical education, taking into account the influence of regional factors.

Reid S.J. (2011) [5] discusses the need to develop a unified theoretical approach in the field of rural health. The author analyzes the different theoretical frameworks used in the rural health discourse and tries to identify the most relevant theory based on the educational paradigm. The concept of “pedagogy of place”, which recognizes the importance of the learning context, is discussed. A “critical pedagogy of place” is proposed as an appropriate theoretical framework for developing a unique health pedagogy for rural areas.

The topic of environmental education is also raised by Kazakhstani scholars. Lifareva N.A. et al. [6] analyze the current state of health of students in the context of educational institutions, emphasizing the importance of health saving as a factor of success and productive life activity of students. Special attention is paid to the role of components of the learning environment in the formation of the attitude to a healthy lifestyle.

Rusanov, V. P. [7] considers the influence of factors of the educational process on the health of schoolchildren and their impact on the effectiveness of educational reforms. The necessity of creating conditions for extracurricular physical education and sports activities is theoretically substantiated. The author emphasizes that the success of innovations in education depends on the professionalism and personal qualities of the teacher, in particular, his readiness for health-saving activity.

Ahaev A. V. et al. [8] developed a program to form basic habits of healthy lifestyle in environmentally unfavorable conditions. The program covers various aspects, including increasing environmental culture, developing motivation for health saving, forming knowledge and skills necessary for health preservation, mastering eco-prophylaxis methods and stimulating social and creative activity of students.

Materials and methods

The study is based on the practical experience of Melbourne schools, using methods of analyzing green school spaces, assessing students' physical health and psychological comfort. The integration of environmental education into the curriculum is analyzed through learner participation in environmental projects and initiatives. The study also covers socio-cultural changes in local communities and the role of schools in shaping them. Innovative teaching methods used in Melbourne schools are analyzed to identify successful practices that foster an environmentally aware society.

In addition, existing research on environmental education and health promotion in the educational process is analyzed. Research papers on the impact of green spaces on physical and psychological well-being are reviewed, as well as studies on the effectiveness of environmental education methods. This analysis allows the study to include a broad overview of current trends and scientific evidence in the field of environmental learning.

Results

Education is the foundation for learning and personal development. Education lays the foundation of knowledge, skills and abilities that will be actively used in the future. Therefore, it is extremely important to carefully approach the choice of methods and directions that will be used in the pedagogical process. Let us consider the necessity of studying and implementing a number of directions in a modern school:

First, health pedagogy: strengthening and preservation of children's health is a priority. Technologies of realization of this direction in elementary school allow to form correct habits in a child, which will become a guarantee of health in the future.

Secondly, the organization of research activities: the development of curiosity, the ability to ask questions and search for answers stimulates the intellectual development of the child.

Thirdly, individualization and differentiation: taking into account the individual characteristics of each student allows to optimize the learning process, making it more effective.

Fourthly, ecological culture: the modern world faces ecological problems. Formation of ecological culture from the early years will help to prepare responsible citizens.

Fifth, the laboratory of scientific and practical research: practical work teaches children to analyze, draw conclusions and apply theoretical knowledge in practice.

Sixth, development models, contests, creativity development, diagnostics of gifted children, project activities and innovative technologies: all of these areas are part of the school's educational program.

The study and adaptation of international and domestic experience in these areas will make elementary school education more modern, qualitative and in line with the requirements of the time.

The modern world is actively changing, and together with it, human needs are changing. One of the key directions in the field of education is health pedagogy, which seeks to ensure not only intellectual but also physical development of students. Children's health is the key to a successful and productive future society. Nevertheless, in the system of primary education there are still gaps in health pedagogy and in the technologies of its realization. It is necessary to consider international experience on modern approaches, methods and technologies

in the field of health pedagogy and explore the possibilities of their integration into the process of primary education.

Studies conducted by foreign and domestic scientists emphasize the importance of integrating health-saving activities into the educational process and the development of environmental culture among students.

Thus, health pedagogy in the education system plays a crucial role in the formation of value orientations, attitude to one's body, understanding the importance of a healthy lifestyle among schoolchildren. Application of modern technologies and methods in the field of health pedagogy allows to make the learning process not only effective, but also interesting for children. Through the systematic and integrated application of these methods and approaches, it is possible to achieve high results not only in educational, but also in health-improving spheres.

Discussion

At a time when environmental issues such as climate change, pollution and biodiversity loss are becoming global, the importance of eco-prevention in the educational environment cannot be overemphasized. Melbourne City Schools provides a prime example of the successful implementation of this approach.

The scientific and practical concept of "Ecophylaxis" proposed by Dr. D.M.S., Professor D.V. Vorobiev is based on the fact that modern man should look at the protection and improvement of environmental quality through the prism of his own health. There can be no quality health in a poor-quality environment, including the educational environment. The educational environment can and should contribute to the promotion of students' health and cultivate in them a careful attitude to nature. This approach includes both direct measures to improve the environmental situation and the health of students, and educational initiatives aimed at the formation of environmental culture.

By definition, ecophylaxis is a set of health-improving activities carried out in

natural environmental conditions, maximally corresponding to the physiological capabilities of humans and aimed at preventing ecotoxicosis [9].

The tasks of ecoprophylaxis are 1) improvement of environmental protection measures; 2) development of medical and health-improving technologies aimed at preventing ecotoxicosis; 3) improvement of ecological culture and training people in correct ecological thinking. According to the set tasks, the main directions of eco-prophylaxis - ecological, medical and technical, and educational - have been identified. The educational direction is based on the formation of healthy lifestyle principles from the point of view of eco-prophylaxis, by increasing environmental culture and teaching life safety rules in modern conditions and is based on the fact that schools should play a key role in the implementation of eco-prophylaxis principles. In doing so, they become not only places of learning, but also models of sustainable development, where children can learn in practice about the importance of environmental conservation and healthy lifestyles. Studies show that being in a green, eco-friendly environment has a positive impact on children's cognitive abilities and psychological well-being. In addition, learning based on the principles of environmental education fosters critical thinking and a deep understanding of natural processes. Melbourne schools place great emphasis on creating a healthy and stimulating environment. This is achieved through the use of eco-friendly materials in construction, green spaces and landscaping. Environmental science, biology and sustainability courses are integrated into the learning process. These programs are aimed at developing in students a deep understanding of environmental processes and their impact on human life. Schools actively involve students in environmental projects such as growing plants in school gardens, recycling waste and participating in environmental initiatives. This not only promotes practical application of the knowledge gained, but also fosters a sense of responsibility and care for nature. This approach is already proving effective in cre-

ating a healthy environment for children's learning and development. In Melbourne schools, eco-prevention is not just a theory, but a practice embedded in every aspect of school life. This approach incorporates many innovative practices, methods and projects to create a healthy and stimulating learning environment.

Examples of successful implementation of eco-prophylaxis principles in the educational process are the programs of additional education:

- 1) Ecological construction and design - active use of ecological building materials and technologies. This includes the use of natural materials, rainwater harvesting systems, solar panels for energy efficiency and the creation of green roofs, as well as classrooms and common spaces designed to maximize natural light and fresh air. All of these contribute to a healthy learning environment.
- 2) Integrating ecology into the learning process - incorporating ecology, sustainability and biology courses into the curriculum. These subjects not only enrich students' knowledge, but also foster a careful attitude towards the environment.
- 3) Environmental projects and initiatives - active involvement of students in various environmental projects that include elements of environmental education, such as creating eco-friendly products, researching local ecosystems and organizing school gardens where children can learn how to grow plants, understand the processes of nature and the importance of sustainable agriculture. Recycling and waste management programs are also conducted, which helps children develop healthy habits of responsible consumption and care for nature.

Physical development and health of students - outdoor physical activity is a key element of the school program. Regular sports

and outdoor play contribute to the physical health and general well-being of pupils. It allows them to be more active and in contact with nature.

Practicing the basic principles of eco-prevention in Melbourne schools demonstrates how educational institutions can become leaders in environmental education and sustainability. These schools not only teach, but also nurture a deep understanding of the importance of caring for health and the environment.

Eco-prevention in Melbourne schools has a profound and multidimensional impact on students and their environment. This approach not only promotes the development of healthy and environmentally aware citizens, but also shapes a model of education that fosters a green economy and can serve as a model for schools around the world.

The results of education based on the principles of eco-prophylaxis are:

1. Positive impact on learners' health:

Green school spaces and regular physical exercise contribute to the physical health and well-being of learners. Providing psychological comfort in schools helps build confidence and social skills in children.

2- Environmental awareness and sustainable development:

Integration of environmental education in the curriculum helps in developing a deep understanding of environmental issues and the need for sustainable living among the students. Participation in environmental projects and initiatives influences them to develop a sense of responsibility for the future of our planet.

3. Social and Cultural Change:

Melbourne schools have become centers for disseminating environmental knowledge and practices to local communities. Ecoprophylaxis in schools contributes to a more aware and environmentally responsible society.

Conclusions

1. Melbourne schools demonstrate how education can be a key factor in the ecological transformation of society. They prove that an integrated approach to learning that encompasses health, ecology and sustainability can shape not only knowledge but also values.
2. The experience of Melbourne schools can serve as a model for other educational institutions around the world. The innovative practices and methods developed and implemented in these schools show that it is possible to successfully combine traditional education with modern ecological and healthy approaches.
3. The educational community faces the challenge of further developing and disseminating the scientific and practical concept of Ecoprophylaxis, adapting it to different contexts and cultures in order to create a sustainable future for the next generations.

Ecoprevention in Melbourne schools is a successful and inspiring story of how innovative approaches in education can contribute to a healthy, sustainable and environmentally aware society. This experience highlights the importance of education as a fundamental tool and perspective for achieving the global goals of sustainable development and a green economy.

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Мельбурн мысалында австралиялық мектептерде экологиялық алдын алу қағидаларын қолдану

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Аңдатпа. Мақалада Австралияның Мельбурн қаласындағы мектептерде эко-алдын алу қағидаларын қолдану қарастырылады. Экологиялық алдын алу экологиялық білім, денсаулық және тұрақты дамуды біріктіретін озық тәсіл ретінде

сипатталады. Мақалада оқушылардың денсаулығына, экологиялық санасының қалыптасуына және қоғамдағы әлеуметтік-мәдени өзгерістерге әсер ету мәселелеріне назар аудара отырып, мектептегі білім беруде осы тәсілді қолданудың нәтижелері берілген. Мельбурн мектептерінің дәстүрлі білім берудің инновациялық жасыл және салауатты тәсілдермен табысты үйлесімін көрсететін қоршаған ортаны өзгерту орталығына айналғаны туралы қорытындылар берілген. Мақалада құндылықтарды қалыптастырудағы білімнің маңыздылығы айтылады және басқа оқу орындары үшін үлгі ретінде Мельбурн тәжірибесі ұсынылады. Экопрофилактикалық білім берудің нәтижелері: 1. Оқушылардың денсаулығын жақсарту: жасыл мектеп кеңістігі және тұрақты физикалық белсенділік оқушылардың физикалық әл-ауқатын жақсартады, сенімділік пен әлеуметтік дағдыларды нығайтатын психологиялық жайлылықты арттырады. 2. Экологиялық сана және тұрақтылық: экологиялық білім берудің интеграциясы экологиялық мәселелерді терең түсінуді дамытады және тұрақты дамуға ықпал етеді. Экологиялық жобаларға қатысу планетаның болашағы үшін жауапкершілік сезімін оятады. 3. Әлеуметтік-мәдени трансформация: Мельбурн мектептері экологиялық білімді тарату, экопрофилактикалық бастамалар арқылы саналы және экологиялық жауапты қоғам құру негізі ретінде қызмет етеді.



Түйінді сөздер: экологиялық алдын алу, экологиялық білім, тұрақты даму, жасыл мектеп алаңдары, білім берудегі денсаулықты сақтау.

Применение принципов экопрофилактики в школах Австралии, на примере г.Мельбурн

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Аннотация. Статья рассматривает применение принципов экопрофилактики в школах г. Мельбурн, Австралия. Экопрофилактика рассматривается как передовой подход, объединяющий экологическое образование, здоровье и устойчивое развитие. Статья представляет результаты применения этого подхода в школьном образовании, сосредотачиваясь на влиянии на здоровье обучающихся, формировании экологического сознания и социокультурных изменениях в обществе. Приводятся выводы о том, как школы Мельбурна стали центрами экологической трансформации, демонстрируя успешное сочетание традиционного образования с инновационными экологическими и здоровыми подходами. Статья подчеркивает важность образования в формировании ценностей и предлагает опыт Мельбурна в качестве образца для других образовательных учреждений. Результатами экопрофилактического образования являются: 1. Улучшение здоровья учащихся: Зеленые школьные пространства и регулярная физическая активность улучшают физическое благополучие учащихся, способствуя психологическому комфорту, который укрепляет уверенность и социальные навыки. 2. Экологическое сознание и устойчивость: Интеграция экологического образования развивает глубокое понимание экологических проблем и способствует устойчивому развитию. Участие в экологических проектах прививает чувство ответственности за будущее планеты. 3. Социокультурная трансформация: Школы Мельбурна служат центрами распространения экологических знаний, формирования более сознательного и экологически ответственного общества посредством экопрофилактических инициатив.



Ключевые слова: экопрофилактика, экологическое образование, устойчивое развитие, зеленые школьные пространства, здоровьесбережение в образовании.