

Greening education at the university in the socio–economic and pedagogical areas of training

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Abstract. Socio–economic processes have accelerated in the information society, technological cycles are not 20–30 years, as before, but 3–5, which radically changes the tasks of professional training of personnel of all levels and specialties. The problem of environmental education has now gone beyond national boundaries and acquired international importance. Domestic pedagogy should more actively introduce scientific developments and achievements into educational practice, in particular, through new special courses, technologies for the formation of ecological thinking, consciousness, and culture of university students, using modern psychological and pedagogical approaches. The intellectual potential of a country determines its place and role in the international arena. Today, the cost of this product in the economic exchange of developed countries is close to the value of the mass of commodities, therefore, domestic education should become a priority, widespread field of activity in the state, and environmental education – the most prestigious, most powerful basis for active and vital research in various areas: social, technical, medical, pedagogical, economic. Practical and theoretical contributions to the world education and science system can raise the level of national environmental and educational achievements to a prominent place in the world.

1 Introduction

Environmental education (EE) is considered one of the main factors in the formation of a sustainable, harmonious society, a means of improving the organization of production,

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efficient and rational consumption of biosphere resources, taking into account its capabilities. [2, 227–230]. EO is viewed as a system of knowledge about the global conditions for the existence of living things, a complex of educational and pedagogical activities in order to form environmental consciousness, and on its basis, motivation for responsible activities.

The peculiarity of environmental education is to teach all segments of the population, various social groups to understand the causes of global environmental changes in the environment and ways to overcome them. [3]. Without a wide and intensive dissemination of environmental knowledge, greening education, skills, skills and competencies, it is impossible to form a new generation with appropriate beliefs and consciousness, an activity-based approach to preserve natural values, cultural achievements [13, 15–20].

In economically developed countries, EE has become an integral part of the curriculum of schools of all levels, has become a complex of knowledge about the global conditions of human existence, has contributed not only to the protection, but also to the improvement of the environment. The number of public organizations has increased, the influence of which has become noticeable, active, effective [4, 1664–1669]. One of the goals of EO was the formation of a free, comprehensively developed personality with a scientifically grounded, rational, but saturated love for Nature and the environment. The Director-General of UNESCO F. Mayor believed that the most important factor in solving environmental problems is global education with environmental issues at the center of all curricula: “Our survival, environmental protection can only become abstract concepts if we do not bring up in every child a simple and confident thought: people are a part of nature, we should all love our trees and rivers, fields and forests, as we love life itself” [7].

In the post-Soviet countries of Bulgaria, Hungary, the Czech Republic, Yugoslavia, environmental education is received by managers and entrepreneurs, as a rule, on the job, since it is they who decide on the directions of investment and the implementation of development programs. In addition, EA forms a significant part of the training programs for workers in enterprises.

Data on the critical and distinctive skills necessary for those working in the Environmental Education field from the Bureau of Labor Statistics. Environmental Education majors need many skills, but most especially Speaking. The revealed comparative advantage (RCA) shows that Environmental Education majors need more than the average amount of Management of Material Resources, Learning Strategies, and Operations Analysis. Radar Distribution (Figure 1).

The content of these programs depends, first of all, on the specialization of production and the nature of work at each workplace, and environmental issues are more represented in the natural than in the social sciences [9].

French President Mitterrand was one of the first to realize the importance of education in modern society and invited 70 Nobel Prize winners to Paris. The main conclusion of the conference was the following: "Education should have an absolute priority in the country's budget and contribute to the development of all types of creative activity." The planning of the education system was included in the strategic plan, which took into account not only national, but also general European and human trends in the development of civilization. A new structure of education according to cycles is proposed, which unites the process from preschool institutions to higher educational institutions. It became obligatory to master a certain cycle of training and only after that the transition became possible to another, professional cycle. As a result, the problem of repeaters that existed in the French school system disappeared. [6]. Everyone learns according to an individual plan. Teachers are prohibited from comparing the results of some students with the results of others; assessment is carried out only after completing the tasks of the individual plan. Instead of classes, groups are being introduced that unite students with the same pace of learning and

related interests. In such groups, children feel more comfortable, it is easier to enter into friendly relations, the assessment system is becoming a thing of the past.

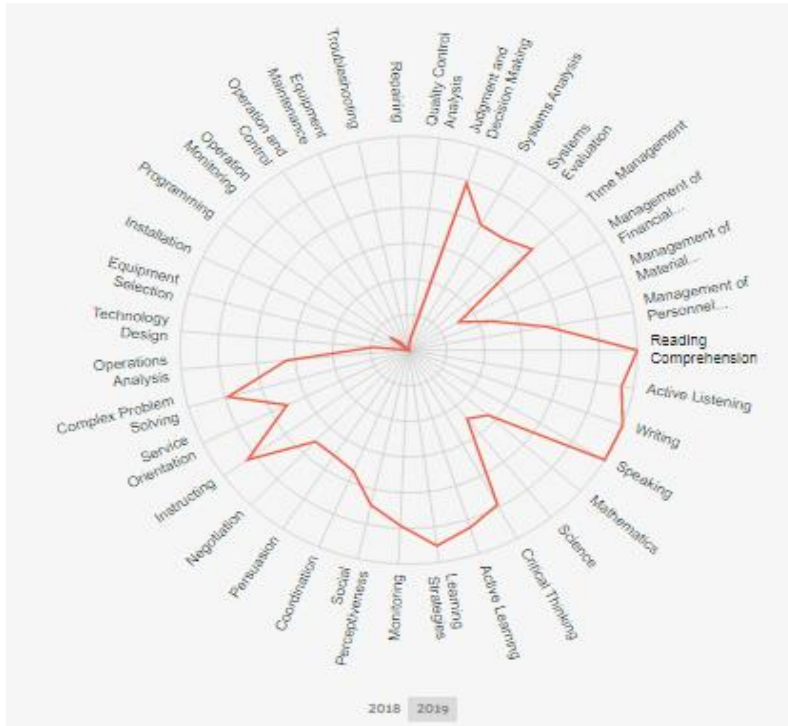


Fig. 1. Radar Distribution, 2. Source: <https://datausa.io/profile/cip/environmental-education>.

2 Literature review

Rudolf Steiner [17], who founded the Waldorf School in 1919 in Stuttgart, can be considered an active organizer and distributor of environmental education in Germany and Europe. Now in the world there is a whole area of Waldorf pedagogy: in Germany, Holland, Switzerland, England, Canada, USA, Australia. She has certain characteristics, so in Eastern Europe her schools were opened only in the late 80s and early 90s. XX century. Today they already exist in Hungary, Poland, Czech Republic, Romania, Estonia, Ukraine, Russia. The Waldorf School is a harmonious combination of many components: academic, aesthetic and practical aspects, new methods of science education, painting, foreign languages, music, the art of speech. These measures are not empirical, but deeply fundamental from the new system of the timetable for the academic year in the special structure of the lesson, the form of the social organization of the school. The latter create an organic unity, marked by the anthroposophical core with an approach to the noospheric ideal. In Germany, the Waldorf schools enjoy broad government support, with significant financial assistance, while remaining fairly independent. There is also an extensive system of teacher training and continuous improvement of their qualifications, a lot of literature is published and, which is very important, the association of Waldorf schools is represented at a high academic level. One of the main principles of the Waldorf School is a compromise between the requirements of human nature and the requirements of a social, far from nature-coordinated life. [5].

Higher education in Germany has characteristic social factors, but the status of environmental specialties is quite high. The provision of universities with a general educational component in ecology, in particular, an applied one, is worth attention and imitation, along with the level of payment for teachers and the introduction of the educational process at all its levels. Japanese education has deep roots and is based on the synthesis of Buddhism, Confucianism, elements of the Japanese spiritual heritage – Shintoism [10]. Ethnocentrism is its distinctive feature and is cultivated in educational institutions; Its main goal is to preserve the nation, traditions, way of life, and it is achieved with the help of Buddhist principles of self-improvement, moral norms based on Confucianism and includes five main points: 1) love for a person and mercy for all living things; 2) a sense of responsibility and duty; 3) respect for the elders and condescension to the younger; 4) wisdom, based on justice and goodness, 5) honesty and sincerity. Under such conditions, the defining task of the education system is to master its own culture, its endless rules that govern the entire life of the Japanese. The small territory, limited natural resources made environmental protection an important part of culture, therefore, nature and energy-saving technologies have become widespread in Japan, and the lifestyle and upbringing of the younger generation are as environmentally friendly as possible (a term that was introduced by the famous philosopher G.S. Skovoroda). National achievements, of course, should be harmonized with the proposed measures, in particular, with the reduction of known and outdated shortcomings and contradictions [4].

3 Results

An analysis of the experience of using education and science for harmonious and balanced development in some foreign countries showed that each of the models cannot be adapted to the conditions of the Russian Federation: new energy, and climate change should become an incentive for the modernization of domestic industry. Russia needs new comprehensive approaches in various areas of energy, including hydrogen and nuclear. Russia must adapt various industries to climate change, establish strict control in the field of combating harmful emissions. In cities, it is necessary to introduce emission quotas. It is necessary to accelerate the establishment of the financial responsibility of enterprises for causing environmental harm, as well as to ensure expanded responsibility of manufacturers for the disposal of packaging in 2021.

Environmental payments should be "painted" and go to the restoration of the environment. Therefore, the dissemination and development of environmental education is not only important for the present, but should become a priority of state policy, a guarantee of the state's environmental safety. Society, at last, albeit slowly, but is moving towards understanding a simple thing laid down by Nature in each of us: to live in accordance with its laws, to discard the consumer and frankly parasitic way of existence, since it will have to pay dearly for it, if not the current one, then the next generations.

At the present stage of the socio-cultural development of Russia, science and practice have formed a new social order for education – the formation of an ecological culture and a holistic worldview of students, which cannot be fulfilled in the old ecological-pedagogical paradigm. A new concept of ecological and pedagogical training of a teacher is needed. The modern understanding of the ecological and pedagogical training of a teacher should be based on the eco-humanitarian paradigm that harmonizes the freedom of the individual in education (humanization and humanization of education, the choice of an individual learning path, subjectification) and human responsibility for the fate of nature and society (ecologization, holistic self-determination and attitude). The teacher must realize a new function – the transmission of the values of ecological culture in the individual and society. When preparing a teacher, environmental education should be viewed not as an academic

subject, but as “a social goal and a system-forming factor of the entire education system”. The goal of environmental education is to achieve the harmonies of society and nature, the formation of human civilization as steadily developing in harmony with nature. An integral part of the formation of a new – ecological, humanitarian and educational paradigm is the greening of pedagogical education. The upbringing of responsibility for the preservation of an integral system of life becomes an important addition to the upbringing of a personality. The core of modern technologies of pedagogical education is becoming the standards of higher education in the group of pedagogical specialties. With the help of scientific pedagogical responsibility, all blocks of standards: general cultural, biomedical, psychological and pedagogical and special ones have a certain ecological potential today. “The requirements of the standards are implemented in specific programs, curricula, in the real pedagogical process. And it largely depends on the ecological culture of a higher school teacher whether the requirements of the standard for the formation of the ecological and pedagogical readiness of a university graduate, teacher, educator will be implemented. “Pedagogical universities today occupy a special place in the system of environmental training, since it is the future teachers and educators who will have to instill in students love and respect for natural resources, which is especially important, the inner conviction of the need and prospects of measures taken in our country to improve the environment. At the same time, environmental education and upbringing of students should be carried out not only in the course “Ecology”, but also in the study of other disciplines of the curriculum, including humanitarian, economic and special. Environmental and environmental training of students at a pedagogical university will be successful if it is carried out at a sufficiently high scientific level, will be carried out consistently and systematically, in various forms that allow students to be creative and see the results of their work. It is advisable not only to be aware of, but also to actively act in the development and dissemination of ecological culture at all levels of public life, where the infection of consumer existence is rapidly multiplying, and the satisfaction of only one's own, momentary needs.

4 Discussion

In the new legislative acts, the problem of adapting a child to life in a modern complex world has taken an important place. This process was thought of as learning, which begins at school and then continues by each independently. For this purpose, six main directions of the educational process have been identified: economy, development of society, environment and native land, information, health and safety of life. The difficulties that await are not hidden from children; the goal is to teach oneself to reason and find the correct answers to current questions. The success of an individual in life is directly associated with a solid education, has no beginning or end, because the main goal of pedagogy is to form in children and students the ability to live in the modern world, to use knowledge and skills in various disciplines.

In higher education in the USA, too, mainly adhere to the principles of individualized learning. In addition to the compulsory program, the student has the opportunity to choose additional courses. The best universities try to make sure that the student listens to disciplines in accordance with his own needs, even if they are not in the curriculum. There is an agreement between universities, according to which students can be sent to other universities in order to study a certain discipline. The main feature of the US higher education system is its mobility. Together with the theoretical disciplines that form the foundation of education, the curriculum includes short special courses, if necessary, which can be easily modernized taking into account the achievements of science, technology, technology. Additionally, new, interdisciplinary courses are being developed to organize the training of specialists in new areas of production and scientific activity. The education

system is rapidly adapting to the accelerated development of scientific and technical knowledge, the content, forms, and teaching methods are being promptly modernized. US universities fulfill not only an educational function, but also powerful research centers, in which many students take part. They are also active in the social life of the university, in numerous social events, movements, organizations, including environmental ones, such as "Green Peace". Despite a number of shortcomings, especially in terms of acquiring skills in the learning process, education in the United States is humanistic, because it is a matter of everyone's free choice. The student chooses a specialization, is responsible for the level of his culture. The education system helps him realize the principle of individual learning: everyone is given the right to choose the courses that he wants to know, those textbooks that he likes and correspond to his personal worldview, style of thinking. In many universities, the educational process unfolds as a creative community of teachers and students, and the opinion of the latter is always taken into account. The structure of education in the United States is increasingly providing the formation of a creative personality capable of working productively at any level – local, national, global, in any field of activity – from a government institution to a private firm.

5 Conclusion

So, modern pedagogy should adopt new approaches and methods of ecological training of specialists, taking into account social realities and the needs of the present. Along with traditional teaching tools, it is advisable to disseminate and actively implement educational approaches for balanced (sustainable) development through the greening of all disciplines and the formation of environmental awareness. Creation, testing and introduction into the educational process of new special courses of environmental content for general humanitarian, technical education, training of future environmental specialists and teachers of the disciplines "Fundamentals of Ecology", "Environmental Management", "Fundamentals of Formation of Environmental Culture", "Environmental Foundations of Information Processes in higher education" becomes a promising task for teachers and an effective measure of influence on the content of higher education, the formation of modern ecological thinking.

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