MANAGEMENT OF FUTURE SPECIALISTS TRAINING PROCESS IN THE FIELD OF ECOLOGY TO THE BALANCED NATURE MANAGEMENT

SHOFOLOV Denys – RIDEY Nataliya – KLYMENKO Liudmyla – PALAMARCHUK Svitlana, UA

Abstract

Article substantiated and experimentally verified the effectiveness of structural and functional model of management process of future specialists training in the field of ecology to the balanced nature.

Keywords: management of training, future environmentalists, sustainable use of natural resources.

Problem statement

Despite the availability of diverse and very large-scale scientific works, problem of management training of future ecologists to future environmental sustainable nature remains poorly explored. Relevance of the research due to the presence of contradictions between: social and ecological order of society to prepare competent specialists and imperfection of future environmentalists training in accordance with the qualification requirements for the solution of professional problems; need for institutional controls in the highly qualified environmentalists and mismatch of industry standards for higher environmental education; increased requirements for content and quality of training of future ecologists to sustainable environmental management and the necessity of optimization of the management system of their training.

An overview of the recent scientific research.

Research objectives

Object of study is managing of future specialists training. Subject of the study is a system of managing of future specialists training in the field of ecology to the balanced nature. The purpose of the research is a theoretical substantiation and experimental testing the structural and functional model of managing of future specialists training in the field of ecology to the balanced nature.

Results and discussion.

On the basis of scientific and educational literature the meaning of management training of future environmentalists to sustainable nature, have concreted and which is defined as: a set of measures and actions aimed at creating optimal conditions to achieve a high level of quality educational services under minimizing resource costs in the process of preparedness experts to sustainable nature; function of a continuous process of training future environmentalists to sustainable nature due to organizational and administrative mechanisms for implementing management processes using appropriate methods - administrative, economic, social, political, ethical (environmental, personnel and security); form of structural units management in the organization of the educational process, management objectives and functions to ensure the quality of educational services, to meet the needs of all categories of consumers in accordance with the socio-ecological order.

Summary of theoretical and methodological approaches to the stages training and consideration of types diversity of structural organization of management training experts (Drobnokhod M., M. Zgurovskyi, S. Nikolayenko etc.) permits to determine the dominant organizational management platforms: content - methodological and functional (combination of conceptual approaches, principles of content forming, forms, methods and means of the educational process); systematizing - institutional (system of structural control units of raining requirements for policies and regulatory procedures (regulations, instructions, guidelines, etc.)); technology - a set of educational technology and management (creating databases for forecasting, modeling, designing measures to eliminate inconsistencies in ensuring the effectiveness of the quality management training); efficient - organizational and executive (monitoring and expertise in the process of self-examination, accreditation and licensing). This permitted to develop the structural and functional model for future environmental management training to sustainable environmental management, which includes the following components: aim, organizational and content, diagnostic and effective.

Readiness criterion of future environmentalists to sustainable nature have been distinguished by levels: motivational value (formation of ecologically significant properties) - sufficient (prompting to acquiring professional skills), middle (promoting awareness of environmentally appropriate constructive qualities of future ecologists for environmental management), high (environmentally aimed personal values and motivation for professional adaptation under ensuring sustainable environmental management); organizational competence (formation of abilities) - sufficient (ecotechnological - to implement the standard environmental procedures), middle (professionally oriented - for their own organization and scientific research), high (self-management - to carry out environmental monitoring and control); system-management (preparedness to management activities) - sufficient (environmental organization), middle (professional and managerial and environmental with sustainable nature under the defined organizational and administrative
procedures), high (professional and managerial system at different levels of environmental management for sustainable environmental management).

On the statically stage actual level of future ecologists to solve professional tasks for the criteria has been determined and it did not differ significantly in the control and experimental groups of students. During the formative experiment the effectiveness of the proposed structural-functional model of management training of students-ecologists to the balanced nature has been determined and the level of their readiness for professional activity too. The sample consisted of 1582 person, from them in the experimental groups studied 792 person, in control - 790 person.

Students – ecologists of experimental groups were trained under specially developed programs with advanced organizational and methodical support during their speed of preparation for the balanced nature and recommended organizational and managerial procedures to manage, in the control groups – by traditional programs. The effectiveness of structural and functional model for future environmentalists management training was evaluated not only by criterion (measuring the level of preparedness of students to environmental sustainable nature, by given criteria), but also expert (establishing the model effectiveness based on the questionnaire results of the two groups of experts - heads of high educational establishments and employers).

In order to confirm the validity of the proposed structural and functional model for future environmentalists management training to the balanced nature applied a statistical criterion of Pearson ($\chi^2$). According to the calculation of the actual value ($\chi^2$) was 93.1, with tabulated - is equal to 7.815. The degree of freedom (m) at the same time was 3. Whereas, $\chi^2(93.1) > \chi^2(7.815)$ the null hypothesis $H_0$ deviated and taken alternative - $H_1$. This indicates that the proposed structural and functional model for future environmentalists management training ensures the formation of a high level of readiness environmental experts to balanced environmental management.

To confirm the authenticity of the organizational and managerial procedures by expert assessments of individual and integrated indexes were tested the effectiveness of structural and functional model of management training experts using questionnaires. It was established that the results of expert evaluation of scientific and pedagogical staff and administrators of universities and their partners - employers do not contain significant differences in assessing the effectiveness of organizational and managerial procedures to prepare students to environmental sustainable nature. These results demonstrate the effectiveness and relevance of the application developed structural - functional model for future environmentalists management training based on the proposed organizational and managerial procedures to prepare students to environmental sustainable nature.

**Conclusion**

Defined organizational and managerial procedures to prepare future environmentalists to balanced nature as a system that summarizes: mutually in a certain order organizational, functional, forecasting and planning processes (educational, scientific, research, educational, research and production); operations (such as actions of informational, scientific and methodological supporting under the technological and financial support); the proceedings (rules of document circulation); institutional combining of structural and organizational units, which are aimed at achieving the goal - effective management of training future specialists in sustainable environmental management.

The management process of future specialists training in the field of ecology to the balanced nature is a pedagogical system of multi-level (levels of degrees) structure, which covers structural (fixed according to requirements) components - educational, scientific and research processes, content and structure of the curriculum, professional compliance personnel to provide scientific and pedagogical staff, administrators, support staff, logistics and information program of practical
training and training and production training in educational farms and landfills of universities and their strategic partners as potential employers, social and welfare benefits for all participants in the learning process, including the regulation of athletic and artistic and aesthetic leisure; functional components - goal-setting, planning, organization, regulation, adjustment, reflecting the educational process in the dynamics of development and foresee the prospect of improving the quality of training. Synthesis of structural components promotes effective management training and the objectives through strong relationships of functional components through systematizing conditions, organizational and administrative procedures that provide structural and functional unity and integrity of the information.

Criteria (motivational value, organizational competence, system-management) and levels (adequate, intermediate, high) of future ecologists to sustainable environmental management have been determined. Developed and grounded structural and functional model for future environmentalists management training to sustainable environmental management, which includes interrelated and interdependent components, namely the target (goal, objectives and principles), organizational, semantic (stages of preparation, organization and management platform - Content, system-technological), diagnostic - efficient (productive platform, criteria and readiness). Confirm the probability of the results calculated by the local Laplace formula. The data obtained with the probability $P_n(K) = 0.962$ allowed to confirm the effectiveness of this model, since the resulting value is in the range of statistical significance $0.95 \leq P_n(K) \leq 1$.

References

Lectured by: doc. PhDr. Miroslav Chráska, Ph.D., doc. PaedDr. Jiří Kropáč, CSc.

Contact Address:
Shofolov Denys,
PhD of Pedagogic Sciences, Assistant Professor of the Department of Agrosphere Ecology and Environmental Control, National University of Life and Environment Sciences of Ukraine, Street Heroiv Oborony 13, Kyiv, Ukraine, 0304, e-mail: shofol@i.ua

Ridey Nataliya,
Doctor of Pedagogic Sciences, Professor of the Department of Agrosphere Ecology and Environmental Control, National University of Life and Environmental Sciences of Ukraine, Street Heroiv Oborony 13, Kyiv, Ukraine, 03041, e-mail: n_ridei@mail.ru

Klymenko Liudmyla,
post graduate student of Pedagogical Sciences, National University of Life and Environmental Sciences of Ukraine, Street Heroiv Oborony 13, Kyiv, Ukraine, 03041, e-mail: l_klymenko@i.ua

Palamarchuk Svitlana,
Candidate of Agricultural Sciences, Assistant Professor of the Department of Agrosphere Ecology and Environmental Control, National University of Life and Environmental Sciences of Ukraine, Kyiv, e-mail: spal@i.ua