

PEDAGOGICAL CONDITIONS FOR FORMING A GENERAL ECOLOGICAL CULTURE DURING CHEMISTRY TRAINING

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Abstract. *The article describes the pedagogical conditions that contribute to the formation of an ecological culture among future chemical education teachers. The formation of ecological thinking among students is considered in the context of the unity of teaching and upbringing as purposeful processes of forming a system of values*

Keywords: *teacher, education, environmental thinking, ecological culture, production ecology.*

When preparing vocational teachers in teaching the discipline “Methods of Teaching Chemistry” an integrated approach to the selection and planning of educational and methodological support for practical training is important. An integrated approach to educational and methodological support involves the implementation of all the main functions of the pedagogical process in their entirety. Thus, when equipping the educational process with teaching aids, it is necessary to take into account that they comply not only with established ergonomic, economic, hygienic requirements, but also with the safety requirements for their use in the educational process, as well as environmental requirements. Taking into account all these criteria is the essence of an integrated approach to educational and methodological support of the educational process.

In the documents of the State Standard of Higher Education, in particular in industrial training programs, the content of production and technological practices, taking into account environmental, economic, and ergonomic factors along with the content of training programs is a mandatory component for students to study these factors.

Unfortunately, in teaching practice, often due to lack of teaching time, many chemical education teachers pay little attention to the study of these factors and their significance for organizing future teaching activities. This leads to a low level of formation of not only ergonomic, but also environmental competencies. In this regard, the issues of planning industrial training and studying its content should be considered in conjunction with many identified factors that determine the effectiveness of the training and production process.

When starting production and technological practice carried out at enterprises, it is necessary to add tasks for students to study environmental factors, make their own decisions to ensure a rational approach to the environmental justification of technological processes in which they are directly involved, as well as to study on the production environment in general.

Thus, the future vocational training teacher as a dual-qualified specialist (teacher and engineer, master) develops a holistic understanding not only of the technological processes carried out in production, but also of the factors necessary to understand and recognize the mutual dependence between a person, his culture and its biophysical environment, contributing to the improvement of environmental quality.

Students who include industrial ecology issues in their reporting materials express original opinions, show great interest in the environmental environment at the enterprise, and are

characterized by initiative, responsibility, and originality in solving problem situations. During the productive work of students on the formation of environmental thinking, not only at the stage of industrial practice, but also in the process of teaching professional disciplines, the systematic formation of independent reasoning and conclusions regarding the environmental support of production and economic activities of those working in production takes place.

By planning the implementation of tasks to improve or optimize the ecological environment, the teacher thereby forms certain methodological techniques in the implementation of the content of practice-oriented environmental education. In this regard, the dominant factor becomes not the actual training, mastering information and acquiring professional skills, but the formation of the ability to act independently and effectively in real life and professional situations.

The future specialist must quickly respond to constantly emerging changes in professional activity. It is no coincidence that when determining the quality of a specialist's training, both category activities and personal characteristics are taken into account. Together, they constitute the professional competence of a specialist.

The formation of environmental thinking in professional pedagogy is considered in the holistic unity of teaching and upbringing as purposeful processes of forming a value system. In this regard, subject-based methods of vocational education are closely interconnected with the formation of professional-ecological thinking and education. Thus, environmental education technologies are successfully implemented through the formation of experience in students' practical activities, in particular creative ones.

One of the important pedagogical conditions that contribute to the development of students' environmental culture, their socialization and self-determination is the formation of environmental competence by means of familiarization with rationalization and technical creativity. The latter contribute not only to the development of professional thinking, but also create the prerequisites for the success of future professional activities.

In the process of solving creative problems, students encounter elements of a rationalization approach: rational organization of production, increasing labor productivity, creating comfort in performing technological processes, studying the environmental safety of performing technological processes, etc.

At the same time, the formation of creative thinking, value systems in needs and activities and, which is especially important, the "greening of behavior" in general. In students' creative works, at least 30% of the volume of the text is usually devoted to optimization of production ecology - this is a mandatory requirement for the organization and content of rationalization, creative and competitive works.

Solving environmental production problems while students perform creative work is possible on the basis of an interdisciplinary approach to the formation of environmental culture through the systematic study of environmental material. Since the content of these types of work differs significantly from the content of planned educational and production work, the methodological service needs to find study time for organizing and conducting creative and competitive work directly during the educational process.

Following the pedagogical conditions in the preparation of future vocational teachers outlined in this article will allow students to purposefully develop environmental thinking and environmental culture in general.

REFERENCES

1. Бидова Б. Б. Познавательная активность студентов как психолого-педагогическая проблема // Образование и воспитание. - 2016.- № 2. С. 64–66.
2. Болотский А. А. Формирование познавательной самостоятельности студентов как психолого-педагогическая проблема // Молодой ученый. -2016.- № 12. - С. 824–827.
3. Гайнеев Э. Р. Конкурсы профессионального мастерства как средство формирования опыта творческо-конструкторской // Методист. - 2009. № 5.- С. 43–47.
4. Гайнеев Э. Р. Деятельностно-компетентный подход в реализации ФГОС как средство повышения квалификации педагогов // Методист. 2013. № 1. С. 44-49.
5. Каримова Д.А., Хатамова М.С. «Особенности контроля знаний у студентов-заочников». Сборник научных статей по итогам работы Международного научного форума Наука и инновации- современные концепции, Россия, 2019. стр.25-30.
6. Каримова Д.А. Профессиональное воспитание студентов. Педагогическая наука и ее методологические проблемы в контексте современности. Сборник статей республиканской научно-теоретической конференции. Бухара, 2017. стр.100-101.