

METHODOLOGY OF ECONOMIZATION OF CHEMISTRY COURSE AT THE INSTITUTIONS OF GENERAL SECONDARY EDUCATION

Viktoriia F. Valiuk, *Candidate of sciences (Chemistry), Associate-professor of the department of chemistry, ecology and teaching methods, Pavlo Tychyna Uman State Pedagogical University*

viktoriavalyuk@gmail.com;

ORCID 0000-0003-2244-5927

DOI: 10.32342/2522-4115-2019-2-18-2

Key words: school course of chemistry, economization, chemical-economic-geographical educational sphere, integration of knowledge, chemical knowledge, motivation of students.

The purpose of the methodology of economization of a chemistry course, as an encouragement for students to study chemistry and to successfully acquire chemical knowledge, was analyzed in the paper.

It has been shown that the promising purpose of the economization of education consists in enhancing the interest of school-leavers in manufacturing industries of the national economy, in the orientation of the industrial sector of economy. The main purpose of the economization of a school chemistry course is to develop a chemically educated individual who realizes the interconnection of chemical and economical knowledge. The main task of the economization of chemistry course is to enhance practice-oriented informative components of teaching which increase the implementation of chemical knowledge. The main idea of the economization of chemistry course is to establish the interconnection between material and social-economic needs of an individual and social-economic activity in the course of teaching. The implementation of this idea is based on integrative and individually-active approaches, expressed in informative and psychological components of a methodological teaching system.

It has been determined that the extended studying of production, which is ensured by the integration of chemical and economic knowledge, helps students acquire an integral idea about production activity in general, connected with the satisfaction of needs in a certain economic development, actualizing their chemical knowledge. The basic economic concepts of the informative component are: natural resources; production of economic benefits; a production cycle; economic activity. The basic chemical concepts of the informative component are: substances (raw materials and output), their properties and application area; chemical reactions and the conditions they take place in; technology and principles of production, equipment and materials; labor safety; environmental protection.

To provide unity and interconnection of informative and psychological components, a system of studying production in chemical-economical-geographical educational sphere was worked out. The inclusion of a geographical component is explained by the fact that the factors of the location of enterprises and sectors of the national economy, important from the point of view of production activity, are studied by students in the geography course. An informative component of this system includes chemical, economic and geographical knowledge.

It has been shown that the economization of the school chemistry course facilitates the increase of students' interest in studying chemistry and allows both paying proper attention to practically important issues for the life of each person, which are connected with chemistry, and complementing the subject-matter of the basic course with information, which supports students' professional self-determination.

References

1. Velychko, L.P. (2006). *Teoriia i praktyka navchannia orhanichnoi khimii u zahalnoosvitnikh navchalnykh zakladakh* [Theory and practice of teaching organic chemistry in general educational institutions]. Kyiv, Heneza Publ., 330 p. (In Ukrainian).
2. Bulka, N.I. (2001). *Ekonomizatsiia khimichnoi osvity* [Economics of Chemical Education]. *Obdarovana dytyna* [Gifted Child], no. 8, pp. 13-21 (in Ukrainian).
3. Lypova, L., Lysytsina, S. & Malyshev, V. (2008). *Spetskurs yak komponent profilnoho navchannia khimii* [Special course as a component of profile education in chemistry]. *Biologiia i khimiia v ridnii shkoli* [Biology and chemistry in native school], no. 4, pp. 44-46 (in Ukrainian).
4. Hyria, O.O. (2009). *Aktualni problemy profilnoi khimichnoi osvity* [Topical problems of profile chemical education]. *Pedahohichni nauky. Profilna osvita* [Pedagogical sciences. Professional education]. Sumy, Sumskiy derzhavnyi pedahohichnyi universytet imeni A.S. Makarenka Publ., pp. 23-31 (in Ukrainian).
5. Korostil, L.A. (2009). *Ekonomizatsiia ta sposoby roboty z neiu v shkilnomu kursy khimii* [Economization and methods of working with her in the school course of chemistry]. *Teoretychni*

pytannia osvity ta vykhovannia [Theoretical issues of education and education]. Kyiv, Tsentr KNLU Publ., issue 38, pp. 74-78 (in Ukrainian).

6. Karbovanets, O., Kuruts, N., Holub, N. & Maiorosh, A. (2008). *Ekonomichniy pidkhid yak priorytetnyi napriamok rozvytku osobystosti v systemi suchasnoi osvity* [An economic approach as a priority trend in the development of personality in the system of modern education]. *Naukovyi visnyk Uzhhorodskoho natsionalnoho universytetu. Seriya "Pedagogika. Sotsialna robota"* [Scientific Bulletin of Uzhgorod National University. Series "Pedagogy. Social work"], no. 15, pp. 76-79 (in Ukrainian).

7. Hrydasova, N. (2011). *Mistse i rol ekonomichnoi kultury u strukturi zahalnoi kultury osobystosti* [Place and role of economic culture in the structure of the general culture of the individual]. *Molod i rynek* [Youth and market], no. 2 (73), pp. 141-145 (in Ukrainian).

8. Zhakeyev, A., Wang, H., Xuan, J., Zhang, L. & Shu, W. (2017). Additive Manufacturing: Unlocking the Evolution of Energy Materials. *Advanced Science*, no. 4 (10), pp. 74-102. doi: 10.1002/advs.201700187

9. Lytvynenko, S. (2006). *Ekonomichniy pidkhid v osviti* [The Economical Approach to Education]. *Zbirnyk naukovykh prats Poltavskoho derzhavnoho pedahohichnoho universytetu im. V.H. Korolenka* [Collection of scientific works of the Poltava State Pedagogical University named after V.G. Korolenko], issue 3, pp. 215-219 (in Ukrainian).

10. Zavhorodnia, A.I. (2015). *Systemoutvoriuiuchi katehorii ekonomichnoi kompetentnosti* [System-building categories of economic competence]. *Visnyk Universytetu imeni Alfreda Nobelia. Seriya "Pedagogika i psykholohiia". Pedahohichni nauky* [Bulletin of Alfred Nobel University. Series "Pedagogy and Psychology". Pedagogical sciences], no. 1 (9), pp. 113-118 (in Ukrainian).

Одержано 12.09.2019.