Some Issues Of Improving Teaching Chemistry And Actual Problems In Training Personnels

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Abstract: Chemistry as one of the fundamental natural-science cycle which is intensively developed and improved in science . "The information boom" that has engulfed the whole of mankind, above all, concerns and chemistry, and its technology. The relationship of modern chemistry and physics and biology should be reflected in the content of chemical education. Correct and scientifically based production and organization of the processes of teaching chemistry, after all, should lead to the elimination of Chemo phobia -negating opinion among the population, the strengthening of the role of chemistry in the creative growth and social welfare, on the contrary, harm reduction for destroying chemical nature and society. Based on the modern methodological problems of chemical science is necessary to competently organize the teaching process. Only in this way we can achieve the formation of a mass of the chemical thinking, chemical and chemical culture consciousness.
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Chemistry as one of the fundamental natural-science cycle which is intensively developed and improved in science . "The information boom" that has engulfed the whole of mankind, above all, concerns and chemistry, and its technology. Field of study of this science is too broad, since it is in contact and productively cooperates with physics on the one hand and biology on the other. The basis of chemical reactions are the physical processes of atom-molecular transitions from one structure to another, change the state of the electron shells of atoms and molecules. Based on these considerations, some physicists have advanced the idea that the chemistry is completely absorbed in physics, and it does not have its own characteristics. This is nothing like a physical "chauvinism." The chemistry - more complex process, even the most elementary chemical act can not be fully explained by physics. Physicalization entire chemistry, although it is one of the characteristic features of the development of modern chemistry and the impact of physics is very diverse and covers a wide range of issues of theoretical and experimental chemistry, it should be emphasized that physics can not take on the task of explaining the chemical world, but this task is provides invaluable assistance. In turn, affects the chemistry productive biology, helps to clarify the secrets of life. Biology includes physics and chemistry as a major component. Direct transfer of the chemical methodology to biology and the ensuing error resulted in charges and in all directions mechanistic, and the accusation of the sins of reductionism. From the point of view of the methodology scientific knowledge among biological sciences are considered to be currently less advanced research methods than the physical and chemical. In the biological sciences is less than the physical, the development of experimental methods. Therefore, the study of living objects chemistry methods gradually passed into the hands of biologists. There was a fairly motley conglomeration of scientific fields. But in all cases, the chemistry retains its "face". Even in such related sciences as physical chemistry and biological chemistry, chemistry pronounced and determines the specificity of these sciences. According to the figurative expression of the English scientist, historian of science George Bernal (he is the founder of the science of science), modern chemistry is based on the "three pillars": the theory of the structure of matter, chemical thermodynamics and chemical kinetics. And fortunately, none of them, even though they "float and live" in limitless scientific "Ocean", do not dissolve in it.

Methodological problems of modern chemistry, scientists are divided into three groups: the ontological, epistemological and social / 1 /. They are all interconnected and interdependent. From a single substance in their class, from single to the total, from the individual to the mass-such is the dialectical path of the chemical knowledge of the objective material world. Like all science, chemistry, first of all, it must

serve society (humanity). Today's civilized society can not exist without the intervention of chemistry.

Chemistry "stretches out his hands" in the following global objectives: 1. to provide society with a problem with food, increased productivity in livestock production and productivity in agriculture, storage and processing of raw materials and food. 2. The problems of energy supply, environmentally friendly fuel and its recoverable resources. 3. Preservation of the environment. 4. Harmless and non-waste production technologies. 5. Health care, treatment and prevention of diseases. 6. The combination of chemical engineering to biotechnology. 7. Development of regenerative chemistry. 8. Techno savings. 9. The coordination of macro- and micro-nanotechnology. 10. Substitution metallomaterials and non-metallic materials with polymers and plastics.

These and other issues should be reflected in the content of chemistry courses in continuing education.

State educational standards (CRP) general secondary, specialized secondary, vocational and higher education, developed and implemented in practice, gradually improved, dynamically developed and being tested, according to the requirements of the law "On Education" and the National Programme for the preparation of the Republic of Uzbekistan frames.

The theoretical foundations of chemistry courses are as follows: a) atomic-molecular doctrine; b) the basic stoichiometric laws; c) the structure of matter and chemical bond; g) the theory of electrolytic dissociation; d) the periodic law and the system of chemical elements; e) the doctrine of the solutions; g) redox processes; h) the rate of chemical reactions and chemical equilibrium; u) structure theory organic compounds etc.

Among these issues, special place belongs to the chemical atomic theory, which is not only determined the fate of chemistry, but also had one of the decisive influence on the development of science. Throughout the course of chemistry red thread should pass the idea of chemical atomism, which took its start from the works of the great English scientist John Dalton, no less famous for his research, in addition to chemistry, in the field of color vision. Here one can not but recall the famous words of the American physicist, Nobel Prize R. Feynman, which contain an adequate assessment of the role of the atomic theory in the history of science: "If as a result of a global catastrophe all the accumulated scientific knowledge would have been destroyed and future generations of living creatures moved if only one sentence, what a statement composed of the smallest number of words that would bring the most information? I believe that this - the atomic hypothesis ... "/ 2 /.

The current GOS in chemistry made an attempt to formulate the requirements for knowledge and skills of each course: 1) knowledge of a theoretical nature (concepts, laws, laws, regulations, theories);

2) knowledge relating to the language of science; 3) knowledge of ideological character; 4) to the most important knowledge of the facts of chemistry;

5) skills to carry out methods of mental activities (operation of logical thinking);

6) to the practical skills, etc. But unfortunately, this directive and regulations are still far from perfect. There is therefore a need to train them in the new version and upgrade them.

In the current environment, to teach and be taught are a number of organizational and didactic, scientific, theoretical and pedagogical tasks: 1. Ensure the chemical mass literacy. 2. A thorough study of the theoretical foundations of chemistry. 3. Mastering the techniques and methods of chemical experiment - the main practical method of teaching chemistry. 4. Solution of problems and exercises, as well as test items. 5. Improve and strengthen the financial security of chemical education. 6. Increase the contribution of extra-curricular work in the basic organizational form of training - lesson. 7. The broad inclusion of local materials, reflected progress of chemistry, chemical industry and technology achieved in the years of independence of the Republic of Uzbekistan, in the content of education. 8. The introduction of modern educational technologies.

9. System including facts and materials from the history of chemistry for a more complete disclosure of the chemical genesis of knowledge in the content of education. 10. Strengthening the practical orientation of Chemical Education, etc.

Of great importance for the improvement of teaching are interdisciplinary communications. From the skillful implementation of their success depends on the solution of many of educational objectives: achieving awareness of the assimilation of knowledge, their strength, learning to apply knowledge, the development of cognitive activity of students and the formation of their outlook /3/.

The relationship of modern chemistry and physics and biology should be reflected in the content of chemical education. Correct and scientifically based production and organization of the processes of teaching chemistry, after all, should lead to the elimination of Chemo phobia -negating opinion among the population, the strengthening of the role of chemistry in the creative growth and social welfare, on the contrary, harm reduction for destroying chemical nature and society.

Based on the modern methodological problems of chemical science is necessary to competently organize the teaching process. Only in this way we can

achieve the formation of a mass of the chemical thinking, chemical and chemical culture consciousness.

Annotation

This article is analyses about the methodological problems of modern chemistry, shows the global challenges to which "stretches out his hands" chemistry issues that should be reflected in the content of chemistry courses in continuing education, knowledge and skills requirements of each course, problems and their solutions in teaching and learning.

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