

The Importance of Using Modern Technologies in Chemistry Lessons

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ABSTRACT

In the article importance of using modern technologies in chemistry lessons, its influence on learners mastering new knowledge on chemistry were discussed. On the other hand, objectives of using project technology such as the ability to navigate in the information space, development of cognitive skills and abilities of students, integrate knowledge from different fields of science were deeply studied.

KEYWORDS: cognitive, Project technologies, approach, application, problematization, project-based learning, communicative skills, d- elements.

Nowadays, attention to using modern technologies in education are highly given. Independent discovery of the slightest bit of knowledge by a student gives him great pleasure, allows him to feel his abilities, elevating him in his own eyes. The student asserts himself as a person. This positive range of emotions the student keeps in his memory, strives to experience again and again. In this way, there is interest not just in the subject, but, more importantly, in the process of cognition - cognitive interest. Various types of technology contribute to the development of cognitive and creative interests of students: technology, problem and research training, game training, technology, the use of tests computer technology.

One of the promising areas of modern education is project technologies, they are also called fourth-generation technologies that implement a personal approach to learning. In modern society, project is increasingly used in traditional spheres of human activity: construction, architecture, engineering, etc., which are the most popular in the world. Social, environmental, genetic project is becoming popular. Humanitarian projects are widely spread: in journalism, on television, in show business. This allows us to say that project has wide application possibilities and universal approach, universal regularities. Thus, project is mastered by the modern man due to the necessity of its application in different spheres of life and professional activity. Certainly, the university should teach project skills. Therefore, using project technology at the lessons of chemistry, the priority is to put the process of learning, in order to prepare a student who is able to independently acquire the necessary knowledge, flexibly adapt to changing life situations, skillfully apply them in practice to solve emerging problems.

The training project allows develop special skills of students, namely to teach them:

- consideration of the problem field and the identification of specific problems, the formation of a leading problem and setting tasks arising from this problem which is called problematization;
- goal setting and planning for meaningful activities;

- find out and selection of relevant information and the acquisition of necessary knowledge;
- practical application of acquired knowledge in various, including non-standard situations;
- selecting, mastering and using the appropriate project product technology;
- Presentations of the results of their activities in various forms using a specially prepared project product (layout, poster, computer presentation, models, etc.);

By forming project as a universal skill that all students should be able to master to some degree, project lessons should be introduced directly into the classroom system and included in thematic planning. However, project-based learning cannot and should not be a substitute for meaningful subject-based learning. The whole project lesson consists of project work. Let's consider an example of collective project activity at the chemistry lesson on the theme: "Study of chemical properties of copper, silver and zinc compounds". It is a research project using a problem and partial search approach. To summarize the information and present the results, students utilize a computer using the Smart Notebook software, which contains a pre-compiled collection of photographs of experiments prepared by the teacher .

Study objective: to update and expand students' knowledge about the properties of compounds d-elements - copper, silver and zinc, through laboratory experiments in the form of research; to create conditions for the development of skills to gradually conduct research, quickly process and summarize information, as well as pay attention to the formation of communicative skills, ability to work in a team.

The students are assigned to three groups in advance. Each group at the lesson was given the task of conducting experiments with compounds of one of the above mentioned elements and information texts for studying their physiological role in the human body. The problem question was put, to find out to what extent properties of copper, silver and zinc compounds correspond to the general laws characteristic for compounds d- elements.

Then each group makes a plan of research:

- setting a goal;
- proposing a hypothesis;
- Production of experiments (observations, analysis of results, conclusions).

The group presents the results in the form of a presentation of three slides, the program Smart Notebook allows you to make a report quickly and efficiently, the scheme of experiments should be presented with photographs, the physiological role of copper, silver and zinc in the human body should be presented in the form of a cluster.

In our view, research approach in the study of the topic and the value of such an experience of applying a project is that the teacher has the opportunity to organize work on the formation of key competencies of students:

- educational competencies in general (work with scientific text, selection of necessary information);
- subject competencies (topic assimilation);
- Communication, etc.
- information and technology (using a PC);

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