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FORMATION OF ABILITIES AND SKILLS OF INDEPENDENT COGNITIVE ACTIVITY OF STUDENTS WHEN WORKING WITH A TEXTBOOK IN CHEMISTRY LESSONS

Abstract. *The Student Textbook is the most important reference among all other study guides, encyclopedias and dictionaries of chemical terms. It is the main source of knowledge on the subject, as well as a means of forming educational skills and mastering the techniques of cognitive activity.*

When organizing independent work with a textbook, the most difficult issue is the selection of educational material. An effective activity is when the material is well and accessible, is simple and does not require visual proof, is related to the study of industrial processes, it does not contain new theoretical concepts, it is based on previously acquired knowledge.

Key words: *textbook, independent cognitive activity of students, students, chemistry teacher, chemistry lesson, school chemistry course.*

Along with the oral presentation of the material from the school chemistry course by the teacher, a significant place in the learning process is occupied by the methods and techniques of independent work of students for the perception and understanding of new knowledge and the formation of abilities and skills of independent cognitive activity of students.

According to V.K. Buryak, independent work, is one of the important and widely discussed problems in modern didactics. We believe, first of all, that a student's independent work is a consequence of his precisely organized educational activity in the lesson, which motivates his independent expansion, deepening and continuation in his free time. Accordingly, the teacher must organize the student's educational (classroom and extracurricular) work, having developed a program of his independent activities to acquire knowledge, and manage it. Secondly, the independent work of a schoolchild is a broader concept than homework (fulfillment of homework assigned by the teacher). It can also include an extracurricular task assigned to the student by the teacher. But in general, this is a parallel existing employment of the student according to the program of mastering the material developed by him. Thirdly, independent work should be considered as a specific form (type) of the student's educational activity, characterized by its features listed above. This is the highest form of his educational activity, which is a form of self-education [1, p. 49].

According to O.A. Kushnirchuk, O.Ya. Zelinska, Z.M. Shpyrky, that independent work is work that students perform without the direct participation of the teacher, but according to his task, in the time specially provided for this. It plays a significant role in the formation of mental activity, development of educational skills and cognitive interest of students. By the independent work of students, we understand work with a chemistry textbook, with a

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workbook, solving problems and exercises, writing chemical reaction equations, preparing for practical work, doing homework, writing essays, preparing for state final certification and external independent evaluation [2, p. 19].

In the learning process of students' independent work, work with the textbook is mandatory. It develops the ability to make a plan, choosing the most important from what is read, allows you to better understand and remember the content of the educational material. When working independently with the textbook in class, there is an opportunity to immediately clarify unclear points with the help of the teacher.

The textbook for students is the most important guide among all other textbooks, encyclopedias and dictionaries of chemical terms. It is the main source of knowledge on the subject, as well as a means of forming educational skills and mastering the techniques of cognitive activity. Teaching students how to work with a book should begin precisely with the organization of work with a textbook. The textbook reveals the content of the subject in accordance with the purpose of study, the program for secondary school and the requirements of didactics. During the organization of independent work with the textbook, the most difficult issue is the selection of educational material. An effective activity is when the material is well and accessible, is simple and does not require visual proof, is related to the study of industrial processes, it does not contain new theoretical concepts, it is based on previously acquired knowledge [3, p. 30].

The work with the textbook on the formation of the abilities and skills of independent cognitive activity of students consists in the fact that the mastering of new knowledge is carried out independently by each student by thoughtfully studying the material of the school chemistry course from the book and comprehending facts, examples and theoretical generalizations (rules, conclusions, laws) that are contained in it.

The analysis of scientific and pedagogical literature [1-5] allowed us to come to the following conclusions: in order for working with the textbook in class to have an educational effect, the chemistry teacher must comply with the following requirements:

• First of all, the correct choice of material (topic) for independent study from the textbook in class is of significant importance. It is known that not every question can be mastered by students on their own without a detailed explanation by the teacher. Thus, compliance with the principle of accessibility of learning is one of the conditions for the correct organization of students' independent work with the textbook in order to master new material.

• In the course of classes, the teacher needs to observe the progress of the students' independent work, ask some of them questions to find out how they understand the material being studied. If some of them will encounter difficulties, it is necessary to help them understand the unclear positions.

• Serious attention should be paid to the formation of schoolchildren's ability to independently understand and learn new material from the textbook.

• Often, independent work with the textbook can be preceded by a demonstration of experiments and visual aids in order to create a problem situation in class and stimulate students to more thoughtfully understand the material being studied.

• The study of new material from the textbook is often carried out in the form of selective reading of individual passages with the aim of independent assimilation of questions

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of a descriptive nature. In the case of teaching the material, the teacher alternates with the students' work on the textbook.

• When studying new material, there is often a need to turn to a brief reproduction of previously covered topics. The main method in such cases, as a rule, is an oral survey. However, most often it does not give the desired effect, since many students cannot always remember and reproduce the material they have studied. In this case, it is better to use independent work with textbooks.

• Work with the textbook should in no case occupy the entire lesson. It must be combined with other forms and methods of education. So, after working with the textbook, it is necessary to check the quality of assimilation of the studied material, to give exercises related to the development of abilities and skills and the further deepening of students' knowledge. And when talking to the student, don't forget to ask him two questions: «Does the textbook help you become a person?», «Become the best person?».

The given examples show that students' independent work with the textbook on learning new material as a teaching method requires the teacher to have good knowledge and practical mastery of various methods of its organization.

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