

Forming self- educational activity of students with the help of the subject “Methods of Teaching Chemistry”

The article reveals the importance of self-educational activity in the formation process of professional and methodical competencies of students, the case of preparing the outline of lesson structure shows the opportunities of self- educational activity.

Keywords: *self- educational activity, professional competence of teaching methods.*

At present there is a highly increasing demand in specialists whose personalities are directed at constant self - education. This statement is dictated not only by significant volume of incoming information and limited study time to take and interpret it, but also by fast/ accelerated modernization of education system in Russia. Global scientific- technological process and social- economic development of the society contribute to getting a specialist with a high level of professional- pedagogical culture ready for innovational activity, mobile and competitive. The objective demands for a modern teacher are: mastering communicational and information technologies; ability to create conditions for knowledge and skill integration; exercising creativity and self- educational wants. The basic competencies of a future teacher of Chemistry are psychological and pedagogical and subject knowledge and skills; pedagogical capabilities; personal and

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professionally relevant qualities. How to get such a specialist during study years? The mentioned above allows us to point out cognitive activity as a basic one the successful implementation of which depends on students' activity during educational process in out-of-school time. For research aims we distinguished the area of self-educational activity, the study of its opportunities and working out the system of recommendations for self- education. It presents to be very actual nowadays [2, 3].

The demands of the society to educational process turn out to the facts that a student as future specialist should "create" his personality by himself; in the process of education he should "realize" his professional perspectives. So that on the basis of actual ideas about profession there are formed personal qualities: zeal, initiative, responsibility, creativity, etc. The part of the teacher is seen in creating motivation for self-education and supporting it. Let's analyze the opportunities of self- educational activity of students in the case of performing the task of preparing the outline of the lesson structure. We refer to the experience of using tasks and generalized algorithms published in 1995 [1]. In the class students study the algorithm of preparing the outline of the lesson structure. We pay attention to establishing aims of the lesson, principal stages, and summing- up. After the first introduction to this kind of activity we exercise in every element of preparing the outline of the lesson structure during hands-on training. Students get the task: "Work out the actualization stage of theory and practice; students' motivation to create knowledge".

Recommendations for self- preparation. The teacher informs the tasks and the agenda; organizes students' activity to determine the readiness to perceive new material; discuss typical difficulties; studied facts, revise notions. Students should recall in the memory theory and practice from the previous class that new material is based on.

Succession of steps:

1. Choose theory and practice that will be used at creating new knowledge in the given class.
2. Offer the forms of work activity of students, a set of pedagogical tools at the actualization stage.
3. Make an exercise and offer a model answer of students.
4. Prove an offered task definition in regard with their demands.
5. Bring to reality knowledge motivation; finish it with defining cognitive task.

Exercises for self- preparation to make the activity plan at creating knowledge of different types.

Recommendations for self- preparation. The teacher thinks over students' motivation to create knowledge, defines individually or with students' help cognitive task of the lesson; "creation" of knowledge is the result of concrete activity, in relation to that it is necessary to plan motivation, activity plan, testing stage.

Development stage.

1. It is necessary to take into account didactic units or elements of Chemistry knowledge: 1) Chemistry notions (substance, element, Chemistry reaction, chemical reaction, and chemical production); 2) scientific facts; 3) laws; 4) theories; 5) methods of chemical science.

2. Study the demands of the program: 1) for mastering theoretical material, 2) mastering facts, 3) mastering chemical language, 4) making chemical experiment, 5) do chemical sums.

3. Think over forms of work activity (individual, frontal, group and team).

4. Make a selection of didactic tools to organize students' work.

5. Define didactic outcomes of tests in the school program and plan the actions of a teacher and students while performing chemical experiment (demonstrational or pupils').

6. Think over and model a technology of using calculatory chemical sums.

7. Stand out steps in each kind of activity, it means to present logical activity plans to create new knowledge.

8. Finish the stage by defining new knowledge.

Tasks for self- preparation to make a plan of students' activity while applying knowledge.

Recommendations for self- preparation. The teacher defines aims and exercise content on applying knowledge mentioned in the lesson aims on students' development.

Development stage.

1. Remember that there are two types of processes on practicing knowledge: identification and reproduction of concrete situations corresponding to the given element of knowledge.

2. Organization of students' activity on applying new knowledge means: 1) students' motivation (why should we apply knowledge, what is the aim?); 2) task definition corresponding to the aims of students' development; 3) making a program of activity (what should we do?); 4) demonstrating a model (of activity) of exercise fulfillment; 5) individual performance of the exercise by students.

3. The lesson finishes by a test which is designed to control a level of mastering a type of knowledge.

The completion of this work takes place in the seminar: “Modern lesson: actualization of theory and practice; students’ motivation to create new knowledge; activity planning for students’ knowledge “creation”. The stage of organizing students’ activity to apply knowledge”.

Aim: mastering knowledge about modern lesson, structure of the lesson, meaning of each stage; studying different variants of stages to create new knowledge at the lesson.

Lesson content (Body of the lesson):

Discussion: 1) of reference points to work out the outline of actualization stage of theory and practice; 2) of students’ motivation to create new theory (knowledge) (it finishes with defining a cognitive task).

Making a project of technology of this stage of the lesson oriented at “creating” new knowledge.

Make a part of the lesson aimed at setting up practical learning skills.

Organization of students’ activity: discussing the variants of the lesson outline (scenario).

These recommendations are given beforehand with the Internet (e- mail, information published in the website) or in the printed form.

Defining a graduate we point out that he is able to organize his own activity, to provide for his own learning, rational (responding scientific principles) work, using modern tools and information and communicative technologies. Innovation processes in nowadays education lead to appearing various kinds of educational and cognitive activity of students that demand more effective self-educational activity, in the basis of which there is management of skills for individual cognitive activity. Independence is looked upon as a personal quality forming during the whole educational process from school to university.

It gives us an opportunity to study independence as a key competence. To bring up key competencies it is necessary to choose such kind of a technology so that most part of their time students work independently, learn how to plan, organize, self- control, and estimate their actions and activity as a whole.

References

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