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TEACHING METHODOLOGY OF PROGRAMMING DISCIPLINES ON THE BASIS OF COMBINED FORM OF LEARNING

E.G. MAKEICHIK, V.V. CHEPIKOVA, V.Yu. TSVIATKOU
Belarusian State University of Informatics and Radioelectronics

The advantages and disadvantages of holding lectures in higher education institutions were considered. The possibility of applying the practical lecture in the course of programming disciplines was analyzed. The use of combined form of learning was suggested.

Key words: lecture, workshop, higher education.

The system of higher technical education places high requirements on the training of technical specialists, which should be in demand on the labor market, capable of solving non-standard tasks, continuous self-learning and development.

Due to the complexity of the tasks faced by higher technical education, the program of its further development is focused on the design and implementation of innovations at all levels and for all elements of educational activity.

Meanwhile, the practice of higher technical education continues to use verbal teaching methods for the presentation of educational materials. Among them, an important place is occupied by a lecture, which serves as the main type of classes, allowing to reveal the basic concepts and issues of the studied field of

science, to give students an idea of the essence of the discipline. Oral presentation of the material is the basis for further forms of study such as seminars, workshops, laboratory works and so on.

A lot of specialists in the field of higher education consider lectures to be an outdated type of activity. Nevertheless, a lecture as a teaching method has undeniable advantages.

Lecture as a type of lesson allows:

– to systematize knowledge of a discipline;

– to understand the state and prospects of the relevant areas of science and technology;

– to focus students' attention on the most complex, key issues;

– to form the necessary competencies through interaction between the lecturer and the student.

However, this type of class is a rather passive form of study, in which the student can be involved in the educational process only in a minimal degree. It is challenging for the lecturer to reach out to large audiences and to control how students respond (and therefore their understanding) to the material. As a result, the rate of memorization and reproduction of the information received decreases as the number of students increases, as does the effectiveness of the lecture as a whole.

The given lacks can be overcome at the expense of rational structure of a studied material, application in educational process of nonconventional kinds of lectures delivery and the modern technical training means promoting uniform distribution of leading roles between the lecturer and students, activating cognitive activity of students.

For the lectures the processes of perception of the material are extremely relevant. Diversity in the selection, construction and methods of presentation of the lecture material is determined not only by the peculiarities of scientific discipline, but also the profile of the university, faculty and department. The method of lecturing depends on the stage of study of the discipline and the level of general training of students, the form of its implementation - on the theme and content of the material. The task of the lecturer is to allow students to make a meaningful outline, meaning to listen, comprehend, analyze and briefly note down information for further use in solving practical tasks or laboratory activities.

The sequence of lectures and practical classes plays an essential role in the educational process. Lecture is the first step in training students for practical classes. Issues raised in it acquire concrete expression and solution in the practical lesson. The practical classes are designed to deepen, expand, and detail the knowledge received at the lecture in a generalized form, and to help develop professional skills. They provide an opportunity to check students' knowledge and act as a means of prompt feedback. A practical class, being a traditional developing and strengthening class, can also serve as a preparatory class for the

subsequent active perception of the lecture. Unfortunately, it is not always possible in the course of the educational process to form a schedule of a study group in such a way that practical classes follow in a strict order with lectures.

The solution to this challenge is to combine elements of lecture and practical classes, or, in other words, to move to "lecture-workshop" classes. In a workshop lecture, the following types of lessons are supposed to be combined:

– lecture-discussion;

– lecture with planned mistakes;

– a lecture-research;

– lecture with a feedback technique.

Combined type of classes is especially effective for the courses related to programming, computer design, and modeling.

Conducting a lecture-workshop is possible with a limited number of students (up to 60 people in the classroom). This will allow the lecturer to adequately assess assignments and receive feedback from course participants. The classroom in which the lecture-workshop is planned to be held should be equipped with multimedia, since multimedia technologies enrich the educational process and allow to make learning more effective by expanding the opportunities for perception of educational information. A personal computer for each participant is necessary to ensure independent and deep working through of all tasks.

By conducting such type of lecture, the student has an opportunity to apply the theoretical knowledge gained in practice, which facilitates better understanding and memorization of new material. The solution of the simplest practical examples during a lecture allows not only to get adequate feedback to the teacher, but also contributes to the systematization of knowledge among students. As a result, the practical classes may devote more time to solving more complex tasks that students will face upon completion of their studies in their professional activity. Thus, the quality of educational services is significantly improved and the knowledge gained during the course of study becomes practice-oriented.

So, the lecture-workshop allows to maintain a high level of students' productivity. The use of this lecture form ensures cognitive activity, interest in discipline, work engagement and preoccupation, and explanations availability. This is achieved through the correct organization of the lecture, namely, through the change of various activities, which reduces the level of fatigue, exhaustion, and increase the interest of listeners.

МЕТОДИКА ПРЕПОДАВАНИЯ ДИСЦИПЛИН ПО ПРОГРАММИРОВАНИЮ НА ОСНОВЕ КОМБИНИРОВАННОЙ ФОРМЫ ОБУЧЕНИЯ

Е.Г. МАКЕЙЧИК, В.В. ЧЕПИКОВА, В.Ю. ЦВЕТКОВ

Учреждение образования «Белорусский государственный университет информатики и радиоэлектроники»

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Ключевые слова: лекция, практикум, высшее образование.