

THE USE OF THE PROJECT METHOD TO DEVELOP STUDENTS' INFORMATION COMPETENCE

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Abstract : The state describes the application of the project methodology for the formation of information competence of students in the system of pedagogical higher education. It defines the requirements and objectives in terms of knowledge, intelligence and skills that students must be in mastering the subject.

Key words : information competence, systematization of knowledge, project method, communication skills, information retrieval, information processing, information presentation.

Education in our country is currently undergoing major changes due to the transition to the new generation of educational standards. This relates primarily to the issue of quality management and allows a shift from a minimum of learning content to a minimum of learning outcomes.

The main task of the general education system is to lay the foundations of personal information competence, i.e. to help students to master the methods of collecting and accumulating information, as well as the technology of its comprehension, processing and practical application.

The notion of 'information competence' is ambiguously defined at the present stage of pedagogical development. In a narrow sense, it relates to the ability to use new information technology, tools and method. Information competence can be seen in a broader sense, as an integrative quality of the individual, manifested in the ability to independently seek, select, interpret, analyze, organize, systematize, transform, store, present and transmit information in various forms and media.

Information competence is one of the key competences. It has its own structure and performs the following functions:

cognitive, aimed at systematizing knowledge, cognition and self-knowledge;

communicative, aimed at conveying information using a variety of media;

Adaptive, allowing one to adapt to living and working in an information society;

normative, comprising a system of norms, rules and requirements in the information society;

The ability to navigate information flows, to identify and select what is known and what is new, and to assess what is significant and what is secondary;

developing, promoting an active and creative personality.

All functions interact closely with each other, flowing one into the other and in fact representing a single process.

Let's focus on the project method that we use in teaching the "Theoretical Foundations of Computer Science" course. More than any other subject, computer science must distinguish between theoretical knowledge and practical work skills. We use the project method as a final control for the entire Theoretical Foundations of Informatics course, which reflects both theoretical information knowledge and the level of applied information skills of the students.

In didactics, a project is a set of activities that are specially organized by the teacher and completed by the student, culminating in the creation of a creative product. The project method is a set of techniques and operations for mastering a particular field of practical

or theoretical knowledge, an activity, in our case information.

Therefore, when we talk about using the project method as a control of information activity, we mean the way to achieve the didactic objective through a detailed elaboration of the problem, which should result in a completely real, tangible practical result, shaped in one way or another. The project method is a set of learning and cognitive techniques that allow a problem to be solved through the students' independent action, with the results necessarily presented.

The use of the project method in computer science lessons is dictated by the nature of the subject. Computers are always available in computer science classrooms, and doing practical tasks on the computer becomes an integral part of the lesson.

The project method is based on the development of students' cognitive skills, their ability to construct their own knowledge and to navigate in the information space. It is, on the one hand, a set of techniques, operations for mastering a particular area of practical or theoretical knowledge, an activity. On the other hand, it is a way of organizing the process of learning. Therefore, when we speak of the project method, we are referring specifically to a way of achieving a didactic objective through the detailed development of a problem (technology), which should culminate in a practical result, shaped in one way or another. This result can be seen, understood and applied in actual practice. In order to achieve this, it is necessary to teach children to think for themselves, using knowledge from different fields, the ability to predict the results and possible consequences of different solutions, and the ability to establish cause-effect relationships. The project method always focuses on students' independent activities - individual, paired, group - which students carry out over a period of time. This method is organically combined with a group approach to learning. The project method always involves solving some kind of problem. Many of the tasks in computer science lessons can hardly be described as problematic. When students complete projects in computer science classes, they are not solving a problem, but rather performing certain algorithms

and exercises.

Project activities in computer science lessons:

creates a strong positive motivation to learn relevant material and to solve application problems independently;

builds a sense of responsibility for the work being done;

creates the conditions for a collaborative relationship between students;

builds skills in applying the software in different application areas;

the program is designed to promote creative problem-solving and the ability to find and choose the best solution to a problem;

makes it possible to create a real product.

Information competence tasks may be of the following types:

preparation of thematic reference material: booklets, e-textbooks and e-tutorials (using multimedia encyclopedias, reference books, Internet resources, databases - work with text and HTML editors).

mathematical and simulation modelling (collecting statistical material, identifying dependencies - using spreadsheets, using computer-aided calculation programs, working with graphical plotting programs);

developing multimedia presentations on various topics.

In all types of tasks, the learner is placed in a situation of necessity:

1) information retrieval (it is recommended to use Internet resources, with provision for search engines, open multimedia encyclopedias, databases);

2) Information processing (analyzing the search task, identifying the sources needed, checking the validity of the material obtained, converting formats.

3) presentation of information (working with graphics and text editors, publishing results on the Internet, preparing and displaying presentations, drawing up graphical relationships);

4) information transfer (use of different media and computer telecommunications).

Based on E.S. Polat's research, we identified the requirements for students to work on an information project and to monitor their information activities. Students are required to:

- knowledge and mastery of basic research methods (literature analysis, information source search, information collection and processing, scientific explanation of the results obtained, vision and proposal of new problems, hypothesis formulation, methods of their solution);
- computer literacy, which includes: the ability to enter and edit information (text, graphics), use computer telecommunications technology, process the resulting quantitative data using spreadsheet programs, use databases, and print out information on a printer;
- mastery of communication skills;
- the ability to independently integrate previously acquired knowledge from different subjects to solve cognitive problems contained in an information project.

the use of the project method as a final control for the "Theoretical Foundations of Computer Science" course requires students to make active use of computer technology. This builds certain knowledge, skills and abilities in the use of computer technology in learning activities, which in turn provides a full picture of the student's theoretical information knowledge as well as the development of their information skills and abilities.

All of the above leads to the conclusion that the use of the project method helps to fully implement the formation of students' information competence.

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