International Journal of
Inclusive and Sustainable Education
ISSN: 2833-5414
Volume 1 | No 5 | Nov-2022

Priority Directions of the Development of Computer Science

Akhmedova Z.[1]

[1] Lecturer at the Kokand State Pedagogical Institute

Abstract: The article provides clear and complete information about the priority directions of the development of computer science.

Keywords: Informatics, teaching of informatics, methodology of teaching of informatics.

Informatics as an educational subject is inextricably linked with the science of informatics and its development. Therefore, the methodology of teaching informatics is primarily based on the methodology of informatics. In his conclusions, he relies on the general principles of education and upbringing. It is known that these principles are developed by pedagogy and didactics. In addition, the methodology of teaching informatics directly uses the laws taught by the science of physiology and psychology.

Informatics as a science from the general goals of education and training

Based on its uniqueness, its place and role in the system of modern sciences, and its importance in the life of today's society, the goals of teaching informatics can be defined as follows:

- formation of computer literacy among students;
- to ensure that students acquire the fundamentals of knowledge about the processes of information processing, transfer and its use in a solid and conscious manner;
- to reveal to students the importance of information processes in the formation of a modern scientific view of the world, the role of information and communication technologies in the development of society;
- formation of the skills of conscious and rational use of computers in life;

Pedagogical functions of the subject of informatics are determined by the unique story that a person contributes to solving the main tasks of general education.

1. Students acquire the basics of informatics and develop their thinking. This task is the first task facing the computer science teacher.
2. Forming the foundations of a scientific outlook. In solving this important task, the entire pedagogical team participates in the process of teaching all subjects.
3. Education in the spirit of national ideology.
4. Preparing students for practical activities, work, and continuing education.

None of the above issues should be solved in isolation. They should be implemented as a whole and closely related to each other. It is possible to educate students' thinking and create the foundations of a scientific worldview only on the basis of solid mastery of the basics of informatics by students. On the other hand, only by teaching logical thinking, it is possible to achieve a deep understanding of computer science as a science and its specific aspects.

In addition, in order to achieve the correct solution of the task of preparing for practical activities in the process of teaching informatics, it is necessary to increase the scientificity of the informatics course. Only if they can make correct and deep conclusions, students can take a critical and creative approach to solving each problem, do not lose themselves in front of new problems, and can work effectively in different conditions. In addition, practical work increases students' worldview and enriches it with new facts, as well as increases the level of knowledge in informatics, ensures that it is deep, complete and solid.

In order to teach informatics, an informatics teacher must first have a deep understanding of informatics, its methods, and the history of its development.

Informatics teaching methodology is a science that studies informatics as a subject and the laws of the process of teaching informatics to students of different ages.

Informatics teaching methodology as a science was formed in the second half of the 20th century, and in Uzbekistan since 1985. The main factor for this was the introduction of the subject "Basics of informatics and computer technology" to general secondary schools.

- ✓ what are the goals and tasks of teaching informatics;
- ✓ what should constitute the content of informatics as an educational subject;
- ✓ in which sequence the computer science educational material should be placed and delivered to students;
- ✓ what methods, forms and tools should be used to fully and deeply study the educational material of informatics.

In other words, three traditional questions are put before the computer science teaching methodology:

1) Why should you study computer science (ie, determine goals and objectives)?
2) What should be learned (ie, content identification)?
3) how to teach informatics (that is, to determine effective methods and tools of education within the selected form of education)?

The purpose of studying the methodology of teaching computer science is to develop and form a personal methodological system for teachers. In order to get an answer to the question of what and how to teach in informatics, first of all, it is necessary to clearly define the tasks of teaching informatics at the current stage of the development of this science. These tasks are common to all general sciences. At the same time, it is necessary to analyze the specific aspects of these tasks in the teaching of informatics based on the concept of teaching informatics in the continuous education system and state educational standards.

When determining the content of computer science education, it is necessary to proceed from the assumptions that computer science is a science and, on the other hand, an educational subject. Informatics science and educational subject differ from each other primarily in the size and depth of their content. The subject of informatics provides students with information from informatics that will form a whole, integrated system of knowledge about informatics and will be necessary in their future practical activities. Informatics as an educational subject is reflected in educational programs and textbooks. After solving the issue of the size of the educational material included in the computer science subject, it is necessary to determine in what sequence it is appropriate to deliver this educational material to the students. One of the peculiarities of the methodology of teaching informatics is to determine the methods and ways of acquiring the content of informatics and the methods of scientific research specific to it, practical knowledge and work skills. These include methods of studying educational material and forms of organizing educational activities based on modern pedagogical and psychological research. In order to conduct computer training effectively, it is necessary to have an appropriate material base, that is, a specially equipped computer room. The

effectiveness of the configuration of security technologies, taking into account modern requirements, combining these issues is another issue of the computer science teaching methodology.

And indeed, one of the issues of computer science teaching methodology, or rather, its special part, includes looking at all sections of the computer science course from the point of view of their presentation skills. In general, Informatics teaching methodology is a branch of pedagogy and informatics, engaged in the research and development of educational-methodical, software, organizational and technical support for teaching the subject "Informatics" can be seen.

References:

1. Yuldashev U.Yu., Boqiev R.R., Zokirova.F.M. Informatics and information technologies. Electronic training manual. - T, 2004.
2. Internet basics tutorial. - T, 2008.
3. Aripov M. Informatics and information technologies. Textbook for university students T. 2005