

Improving The Methodology Of Teaching The Science Of Information Technologies

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Annotation. The integration of information technology with other subjects can be determined by analyzing the content of the subject, forms, methods and teaching aids recommended by designers when implementing integration. If we name the listed external dependencies, then there is also an internal dependency between the chapters and sections of the discipline. We will consider the features of this connection and its significance when studying a certain subject using the example of the "Information Technologies" course.

Key words: biophysics, chemistry, electrophysics, geophysics, "bridge" formulas, gas mixture, volume fraction, mass fraction, interactive modules.

Nowadays, computers, which are the basis of modern information technologies, are rapidly entering all spheres of our life. Therefore, it is necessary to pay special attention to the study of computer technology. Studying computer science is of particular importance in this regard. In the effective teaching of informatics, the importance of the course of teaching methods of informatics is very great.

The computer science teaching methodology course is aimed at solving issues such as the ability of future computer science teachers to independently solve teaching problems, use modern teaching methods, develop independent teaching skills, and develop methodological creativity. Informatics teaching methodology course for students of a higher educational institution in general secondary schools, academic lyceums and vocational colleges, in-depth study of the structure and content of the subject from a scientific and psychological-pedagogical point of view. is a course that provides learning.

"Methodology of Informatics" subject to students on the basis of the National Personnel Training Program, as well as further development of the field of information and communication technologies in our country, increasing students' interest in creating innovative ideas in the field of IT, general secondary education as a future informatics teacher fulfills the tasks of formation of theoretical knowledge, practical skills and qualifications regarding the importance of the science of Informatics and information technologies taught in schools, academic lyceums and vocational colleges, its content, principles, as well as the connection of the science with other disciplines. The following requirements are set for the knowledge, skills and qualifications of students in science.

- the place and role of informatics and information technologies in the educational system, the connection of informatics teaching methodology with pedagogy, psychology, the history of informatics teaching methodology, modern methods and tools of informatics teaching, the Internet related to informatics, to knowledge about features of distance education and network educational resources, textbooks, teaching-methodical manuals based on Web technologies;

- integration of informatics teaching methodology with other subjects, modern forms, methods, tools of informatics teaching, their theoretical foundations, purpose of teaching informatics in general secondary education and secondary special, vocational education, content and tasks, didactic principles of teaching informatics, specific features of its parts and chapters in the teaching of informatics and information technologies, organization and conduct of extracurricular activities in informatics, internet, distance education and Web technologies in informatics education the ability to know the place and use them;

- to be able to use modern methods and tools in teaching informatics, to generalize advanced methodological experiences in teaching informatics, to send students to independent education in informatics and information technologies, to teach informatics formation and development of information culture among students, ability to evaluate students' knowledge of informatics, keeping

all required documents for informatics lessons and educational work, planning informatics and information technology lessons, using the Internet, distance learning and Web technologies in teaching informatics must have qualifications.

The textbook consists of two sections, the first section describes the general issues of the Informatics teaching methodology, and the second section describes the specific issues of the Informatics teaching methodology. This textbook is not without flaws. The authors would like to express their gratitude in advance to colleagues and dear readers who expressed their thoughts and opinions about the textbook.

The course of science teaching methodology and its place in the system of continuous education. Today, the person who plays an important role in teaching science and conveying its concepts to students is a pedagogue. The ability of a teacher to convey scientific and grounded information in the field of science to students clearly and comprehensibly depends on his pedagogical skills, teaching style and technologies used in teaching. Solving these issues requires a good knowledge of teaching methods. This requires extremely complex and versatile work from the pedagogue. It is necessary for every specialist to know the problems of the teaching methodology, to apply the learning in his pedagogical activity. In order for young people to learn science with interest, the teacher's teaching methods and ability to use them skillfully are of particular importance.

In our republic, special attention is paid to education and training of today's youth, and all conditions are being created for them to become mature specialists. Education and training are always the basis of the development of society, and it is at the center of all relations and connections of a person in society. The revolution in science, technology and technology has turned man and his scientific and educational potential into a decisive factor of social and economic development. Application of the advanced results of science, technology and technology development, intensification of production, use of high-efficiency equipment and technologies, and most importantly, training of highly qualified specialists is one of the important directions in this regard. In this regard, from the first days of his presidency, the head of state has been paying special attention to the issues of training innovative and creatively thinking modern personnel in our country, educating young people in the spirit of patriotism and high spirituality, and for this purpose, improving the education system.

The training of knowledgeable specialists in the implementation of such tasks and the development of human potential depend in every respect on pedagogues, who organize and teach the teaching process using all their knowledge and skills. In this, special attention is paid to the organization of the educational process, the use of educational methods that help the student to gain in-depth knowledge. Organization of the educational process in the current period requires the teacher not only to have deep knowledge, but also to have pedagogical skills, to know various methods of teaching, and to work tirelessly on himself.

And the students of the higher education institution, especially the higher educational institutions in the field of pedagogy, do not only know the content of the subject, but also identify and analyze a wide range of pedagogical problems, evaluate the prospects for the development of the pedagogical field, what pedagogical results these changes will lead to in the future. It is necessary to teach that he can feel the possibility. For this, in-depth knowledge of methodical sciences is required. It is important to choose the right method for learning science. If the correct method is not chosen during the lesson, it will not give the expected result, regardless of the theoretical knowledge of the teacher. The teacher's knowledge leads to quality organization of the educational process only when pedagogical skills and lesson organization techniques are added. This requires knowing how to use various methods and tools in organizing the educational process. The methodology of science teaching is aimed at this goal. He teaches teaching methods and ways, methods and tools to be used in the course of the lesson.

The subject of the methodology of teaching subjects (Methodology, methodology) is the process of teaching a subject. Usually, the term "technique" means the science of a set of forms and methods of scientific knowledge activity. It is a set of methods or operations of learning, theoretical or practical knowledge of truth, reality, activity, to achieve a theoretically set goal. Methodology of

teaching subjects: a) teaching methods of the pedagogue and methods of studying of the student and the interaction of the student with the teacher;

b) the uniqueness of working in cooperation to achieve the intended goal of teaching, that is, teaching methods; c) includes the cooperative activities of the teacher and the student in solving educational tasks to achieve the set goal. Methodology is a component of pedagogy, and it is a science of systematic activity aimed at a specific goal in the formation of a person and the content, form and methods (styles) of education. Methodology - belonging to the methodology, strictly following a strict sequence (algorithmic character), system, pre-set plan (rule), system. Methodology is a set of methods and ways of carrying out a task in accordance with the purpose. In the field of pedagogy, he researches the laws of teaching a certain academic subject.

Integration of science education. Integration - to combine the goals and factors of education into a whole. Integrative function is a link connecting general education and professional education. It incorporates all the constituent elements of the educational content - knowledge, skills, qualifications, norms, pedagogical systems: organization of systematization of knowledge, students in various subjects and technical and technological processes. formation of skills to establish mutual integration and all-round connection between events, concepts, ideas, theories; ensure that these connections help deepen professional knowledge; To solve the problems of creativity in students in a theoretically correct, technical and practical way, based on the knowledge and skills they have acquired in studying various educational subjects, to understand the purpose, criteria and function of technical-economic, social-ecological, organizational-pedagogical systems. It implies that they will develop the skills of formation.

Integrating - Latin "integer" - totality, "integerara" - filling, creating, restoring the totality. The problems of ensuring harmonies in the content of education are also a field of integration. It is to teach generalization of concepts. In education and training, it summarizes the formation of knowledge, concepts, skills and qualifications and makes them look like laws or rules. 8 The concept of integration is an important scientific term, which is considered a methodological tool for generalization and conclusion, because with its help algorithms of general harmony between the contents of processes and events are created.

Integration of teaching content is the understanding of interaction, communication, process and results of transition to each other, synthesis of knowledge, types of activities and talent (ability) as a whole system. The integration of disciplines is the convergence and connection of these disciplines, and is a process that achieves the desired goal in the state of unification of separate departments within the discipline. In addition, integration can be considered a psychological-corrective principle, its content is emotional and intellectual of the learner. development and unification of the fields. Integration is a tool that makes lessons more effective. By using integrated technology in the educational process, it is possible to better observe the similarity of ideas and principles when studying a problem than by studying subjects separately, because this information can be used simultaneously in different fields. allows to apply.

The main goal of integration is to see the world in which the students live as a whole and to form worldviews. The importance of integrated lessons lies in the importance of generalizing knowledge within the scope of one's subject. An integrated lesson is combined with the study of educational materials on different topics, but they are distinguished by the object or application of information technology tools on a common topic. The advantage of such an educational system is that it allows students to study a certain topic from different angles, to see it in different ways. This is an important element in the formation of universal educational activities of students.

Methodology of teaching subjects. Methodology –

1. Complex of research methods.
2. A set of research methods used in a specific science (field direction).
3. The doctrine of scientific knowledge and influence on world development.

Methodology is the doctrine of the scientific method of knowledge. A set of methods used in a science or a specific direction or field. It teaches how to approach reality in general to methodological methods. It is known that in the process of scientific knowledge, each subject has its own 9 research objects, and for comprehensive research of that object, it is necessary to create its own special

research methods based on general methodological research methods. In this case, the methods can meet in general and private options depending on the scope of influence.

A general method is a method that is suitable for conducting research in most disciplines. But it is general in its scope, and it also has a special (limited) task (function). These tasks are: analysis, synthesis, generalization, abstraction, induction, deduction, comparison, modeling, etc.

Methodological knowledge appears, firstly, in the form of habits and norms, which include the content and consistency of certain types of activities, and secondly, as the effect of activities performed in practice. In contemporary literature, methodology is primarily understood as the methodology of scientific knowledge, that is, the forms and methods of scientific knowledge activity. The methodology is defined in the national encyclopedia of Uzbekistan as follows:

"The doctrine of methods is called methodology in science"

1. "Methodology is a system of principles and methods of organizing and restoring the theoretical and practical activity of research and the doctrine of such a system"
2. "Methodology is also defined as the doctrine of methods or general method of general knowledge."

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