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TASKS OF TRAINING ON THE DIRECTION OF INFORMATICS AND INFORMATION TECHNOLOGY AND THEIR WAYS OF IMPLEMENTATION

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Abstract:

This article deals with the peculiarity of teaching subjects in the areas of computer science and information technology, problems in this area, and the problems of eliminating these problems.

Keywords: knowledge, skills, skills, informatics, information technology, pedagogical technology, integration, standard, test, manual, didactic software, textbook, educational and methodical manuals, electronic textbook, portfolio, electronic educational resources, syllabus, etc.

МАШҒУЛОТЛАРДА ТАЪЛИМ ТЕХНОЛОГИЯЛАРИДАН ФОЙДАЛАНИШНИНГ ЎЗИГА ХОС АҲАМИЯТИ

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Аннотация:
Ушбу мақолада информатика ва ахборот технологиялари йўналишидаги фанларни ўқитишнинг ўзига хос хусусиятлари, бу соҳадаги муаммолар, уларни бартараф этиш бўйича амалга ошириладиган вазифалар ҳақида сўз юритилади.

Калит сўзлар: билим, кўникма, малака, информатика, ахборот технологияси, педагогик технология, интеграция, стандарт, тест, мажмуа, дидактик таъминот, дарслик, ўқув-методик қўлланма, электрон дарслик, портфолио, электрон таълим ресурслари, силлабус ва бошқалар.

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ЗАДАЧИ ОБУЧЕНИЙ ПО НАПРАВЛЕНИЮ ПРЕДМЕТОВ ИНФОРМАТИКИ И ИНФОРМАЦИОННЫХ ТЕХНОЛОГИИ, И ИХ ПУТИ ОСУЩЕСТВЛЕНИЙ

Аннотация:
В данной статье речь идёт о своеобразности обучение предметов по направлений информатики и информационных технологии, проблемах в этой сфере, и о задачах устранений этих проблем.

Ключевые слова: знания, умение, навыки, информатика, информационная технология, педагогическая технология, интеграция, стандарт, тест, пособие, дидактическая обеспечение, учебник, учебно-методическая пособия, электронный учебник, портфолио, электронные образовательные ресурсы, силлабус и др.

Today, in the teaching of subjects in the field of informatics and information technologies, the development of modern pedagogical and information technologies and private methodologies, ensuring the full mastery of knowledge, skills and qualifications in the educational system, the design of lectures, discussions, practical and laboratory exercises based on innovative technologies in the teaching of subjects in this field, and in pedagogical activities application, it is time to study the best practices of developed countries in the teaching of subjects in this direction [1].

For this purpose, it is necessary to improve the skill and creativity of using innovative technologies in educational activities, the types, directions, types, functions of integration of educational subjects, as well as determining the prospects for future development, processing of educational information in the teaching of informatics and information technology subjects, developing problem questions, case-study tasks, this organization of independent education of students in the teaching of subjects, ensuring the coherence of course work, graduation qualification work, master's thesis, improving the methodology of solving problems from these subjects, improving the mechanisms of objective assessment of students' knowledge in teaching these subjects, developing a set of standard and non-standard training and test tasks, didactic support it is necessary to implement such tasks as creating textbooks and teaching-methodical manuals, electronic textbooks, portfolio, electronic educational resources and syllabus of the educational course.

In solving these tasks:

- equipping teachers with knowledge, skills and qualifications for creative teaching of computer science and application of new pedagogical and information technologies in their practical activities;
- training teachers of informatics to organize and conduct various forms of classroom and extracurricular activities in the field of informatics;
- to develop and deepen their imagination about the modern ways and great prospects of informatization of the educational system;

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- in higher education, it is necessary to improve the knowledge of the methodology of teaching informatics, to acquire and introduce modern approaches, to apply and create skills and competencies in educational practice.

In addition:

- to explain the importance of informatics taught in general education schools, academic lyceums and vocational colleges, higher education institutions of the growing generation of informatics teachers, the principles of separating its content, the relationship of informatics to each other and other subjects;
- creation of mechanisms for continuous updating and development of professional knowledge, skills, and qualifications of pedagogues in the field of computer science teaching methodology;
- to increase the level of professional competence of pedagogues necessary to ensure the quality of higher education in accordance with modern requirements;
- to ensure effective mastering of modern information and communication technologies and foreign languages by pedagogues;
- mastering innovative technologies of teaching in the field of special subjects and advanced foreign experiences;
- in this direction, it is important to ensure the integration of training processes with science and production [4].

Thorough preparation of the teacher for the lesson ensures the effectiveness of the education, therefore, before entering the lesson, the teacher must undergo thorough preparation both psychologically and scientifically, that is, develop the criteria of professional knowledge and ability of the teacher.

Social skills:

- organizing an effective form of interaction with the audience during the lesson;
- getting along with students;
- creating a healthy spiritual environment.

Methodological knowledge:

- to convey all his knowledge and experiences to students in an understandable, fluent language;
- effective use of educational technology and methods.

Expertise:

- having deep and comprehensive knowledge of his subject and field of study;
- working on oneself;
- his interest in science and news;
- knowledge of modern ICT innovations;
- to be able to understand his system of needs, his demands and proposals to the teacher.

Cognition:

- always follow the discoveries in the field of his science;
- perfect knowledge of the material, interest in it;
- carrying out scientific research works.

Ability to understand:

- to explain the educational material in a way that is understandable to the students;

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- to be able to arouse interest in independent thinking.

Tracking ability:

- psychological observation related to the ability to understand the personality of the student and his temporary mental states.

Speaking ability:

- clearly and clearly express their thoughts and feelings by means of speech and gestures;
- speech is aimed at students in class.

Organizational skills:

- organizes, unites the student team, inspires them to solve important tasks;
- correctly plan and control the work when organizing his work;
- correct distribution of time, reach within the specified period.

Ability to gain reputation:

- direct emotional and volitional impact on students;
- good knowledge of science;
- kindness, honesty.

Ability to deal with:

- approaching students, establishing effective interaction with them from a pedagogical point of view.

The ability to see the future:

- to see the consequences of his actions;
- the student imagines what kind of person he will be in the future, etc.

Psychological preparation should be understood as follows. The lesson is a complex process, in which students with different mental characteristics, character, willpower, memory, attention, thinking and temperament participate. During the lesson, the above-mentioned characteristics are demonstrated by students in one form or another. In addition, in every moment of the lesson, situations arise that no one can plan in advance in any way.

However, the teacher should be mentally prepared to solve the problem in the right way without losing himself in any situation. For this, each teacher should imagine the environment of the upcoming lesson and prepare for it in advance.

Preparation in the field of science means the following: before organizing the lesson, the teacher considers which subject should be covered from the curriculum of his subject in the specified group. Then, referring to the State educational standards on this topic, he determines what to teach students about.

Determines the extent to which existing textbooks or literature, as well as visual or other educational aids, meet the requirements of the curriculum, and identifies opportunities to help cover the topic. Get acquainted with the educational material described in the textbook, adapt it to today's tasks and the level of knowledge of the students of the group, make changes and corrections if necessary [3].

Determines practical tasks for students to practice, then draws conclusions on the topic, determines the definition of laws. Students prepare tasks for independent work during class and at home. The type of lesson and the methods used during it will be clearly defined.

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At the same time, the subject of the lesson with the previous topics and the interdisciplinary relations with some students are planned individually and the lesson plan is started to be written. The daily lesson plan is written by the teacher separately for each lesson.

One of the main features of the lesson is scientificity. It is necessary that the knowledge learned in the lesson reflects the achievements of modern science, the goal of the educational process, and the real knowledge capabilities of the students. The lesson is a creative process. Class-team work process.

Creative organization of the lesson, efficient use of time, training on time, formation of teamwork skills in students, mutual support and cooperation between students will turn training into a team work process.

The lesson differs from other forms of education in terms of its internal and external characteristics. External characteristics of the lesson, such as a group of students of a certain age and with certain training, mode, order of the lesson, conduct of activities in a certain room, the purpose of the lesson, feeling, interest, awareness, and understanding of the educational content are considered its internal characteristics. The lesson is organized based on the mutual harmony of these two types of external and internal features. Course requirements include:

- clearly defining the purpose of each lesson;
- determine in advance the optimal content of lessons, the scope of knowledge to be learned, the skills and qualifications to be formed;
- selection of educational methods and tools related to the organization of the lesson, stimulation of students' cognitive activity, application of educational tasks, independent work to education.

Various areas of society are constantly developing, and a specialist who has not worked on himself and is not aware of the latest developments in the field is destined to be left behind. For this reason, it is necessary to update and make changes in computer science in line with the times.

Informatics as an educational subject is inextricably linked with the science of informatics and its development. Therefore, the subject "Informatics teaching methodology" is primarily based on the methodology of informatics science [2]. 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, this science directly uses the laws accepted by the sciences of physiology and psychology.

Based on the uniqueness of informatics as a science, which is one of the main goals of education, its place and importance 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 in students;
- to ensure that students have a solid and conscious mastering of the basics of knowledge about the processes of information processing, transmission and use;
- to reveal to students the importance of information processes in the formation of a modern scientific view of the world, the importance of new information and communication technologies in the development of society;
- formation of the skills of conscious and effective use of computers.

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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 train students' thinking and create a scientific worldview only on the basis of solid mastery of the basics of informatics.

On the other hand, only by teaching logical thinking, students can achieve deep understanding of computer science as a science. In addition, in order to achieve the correct solution of the task of preparation 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. Also, practical work expands students' worldview and enriches it with new facts, and increases the level of knowledge in informatics, ensuring that it is deep and solid.

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