

PROBLEMS OF ENSURING THE CONTINUITY OF THE SUBJECT "COMPUTER SCIENCE AND INFORMATION TECHNOLOGY" IN THE SYSTEM OF CONTINUING EDUCATION

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ABSTRACT

The article discusses the problems of ensuring continuity in the teaching of "computer science and information technology" in the system of continuing education.

Keywords. Information technology, academic sciences, continuity, continuity, computer science.

АННОТАЦИЯ

Мақолада узлуксиз таълим тизимида «информатика ва ахборот технологиялари» фанини ўқитишда узвийлигини таъминлаш муаммолари ёритилган.

Калит сўзлар: Ахборот технологиялари, ўқув фанлари, узвийлик, узлуксизлик, информатика.

АННОТАЦИЯ

В статье рассмотрены вопросы обеспечения преемственности в преподавании предмета «Информатика и информационные технологии» в непрерывном образовании.

Ключевые слова: информационные технологии, учебные предметы, преемственность, непрерывность, информатика.

With the implementation of deep, wide-ranging reforms in our country, priority is given to the formation of a system of continuing education. Consequently, the idea of building a great state for the future depends in many ways on a cadre with a better outlook and a new way of thinking. In recent years, ideas that contradict our ideology in the content of all educational disciplines have been removed from the curriculum and textbooks, and the national ideas of our independent country have been incorporated into the content of education.

The expected results are achieved when the disciplines are focused on the discovery of their individual characteristics, the formation of research qualities in them, which arouse the emotions of learners. In order to form human qualities in the student, attention had to be paid to finding aspects that would make him self-defeating.

The potential of the subject of "Computer Science and Information Technology" in the effective development of intellectual abilities of students of secondary schools, in particular, logical and critical thinking, is innumerable. At the same time, it is expedient to form the content of the subject "Computer Science and Information Technology" at different stages of education in accordance with the leading pedagogical and psychological principles, to use the most effective forms, methods, tools and technologies in the educational process.

Continuity is an important quality that characterizes the organization of the educational process on the basis of a certain sequence, which at a certain stage means the strengthening, expansion and deepening of knowledge, skills and abilities that make up the content of the previous stage of educational activity. Continuity has philosophical, pedagogical and psychological aspects, in particular, philosophically the category of "continuity" is closely related to the category of "development". All the evolving phenomena of continuity express the general and important connections that pertain to the processes, and determine the existence of a new old one.

In terms of development, continuity is interpreted as a process of qualitative change, as well as a transition from one level to another in order to create a new quality. Continuity implies the development of the results obtained in the earlier stages. It is well known that the integral connection between old and new knowledge is the law of negation of dialectics. According to him, without completely denying the new old, it covers important parts of it, as well as identifies areas of its application and makes the old classic or traditional.

Integration in psychology is the study of complex psychological developmental patterns, age-related changes, and crises; gradual acquisition of knowledge; will be considered in the context of changes in leading types of activities.

Pedagogical affiliation is explained as follows:

- didactic principle, ie as a basic rule that determines the content, organizational form and methods of the educational process;
- conditions, ie as conditions conducive to the effective organization of the educational process;
- driving force, ie a factor that contributes to the implementation of the educational process;
- as a mandatory requirement in the process of education, development and upbringing.

In education, continuity is used in two different ways. First, the interdependence between types of education. In this case, the content of the last type of education partially repeats the previous one and continues in its final types of education, with an integral link in terms of content. Second, the interdependence between academic disciplines. This is usually done through interdisciplinary or interdisciplinary links [1-4].

The concept of continuity characterizes the requirements for knowledge, skills and abilities of students in each type of continuing education system. Continuity means the placement of educational material in a certain sequence, systematization, reliance on existing knowledge in the acquisition of knowledge, the application of educational material to a certain extent in the next stages, the duration of the stages of the educational process.

This event will help to effectively select the types of activities for the placement of materials on the subject and the basics of the subject. In this process, it is important to take into account the following two factors: the content, logic and laws of the process of acquiring knowledge of a particular science. Continuity is specific to the curricula of educational institutions, ensuring

that students in each type of education receive a certain level of knowledge and continuity of education.

The definition of continuity in education in these approaches shows the universality and versatility of continuity, but in general secondary education, the problem of studying the relationship between classes "Computer Science and Information Technology", as well as chapters and topics in textbooks has not yet been fully resolved.

Usually when it comes to ensuring continuity, most people understand the content of education to ensure continuity, while most researchers deal with the problem of continuity of curricula.

Indeed, we must not forget that the choice of educational content is also important in ensuring the continuity of education. In this sense, it should be noted that the choice of educational content is based on the principles of modern education, the level of production and the basic requirements of a developing democratic society, the unity of meaningful and process aspects of education, the formation of educational content at all levels. should be reflected. In the formation of the content of education, it is important to be humane, scientific, consistent, historical, systematic, relevant to life, age-appropriate, understandable [1,2].

With regard to general secondary, vocational education and higher education, it is necessary to take into account the integration of higher and lower level educational programs in the development of educational programs at different levels. On the other hand, the incompatibility of the school learning process and the teaching methods of the higher education institution, the incompatibility of technologies leads to a decrease in the student's interest in learning.

Particular attention is paid to the continuity and continuity of education in the modern pedagogical system. The separation of the sciences in the past has largely ensured the separation of the sciences. In addition, integration is now taking place not only in related disciplines, but also in non-related disciplines. Not only can such a process be explained by the internal logic of that knowledge content, but science is also explained by the social features of technical processes and changes its form.

The continuity process is conditionally divided into 3 types.

- strengthening of interdisciplinary processes, such as pedagogy and psychology, sociology, ethics, aesthetics and other interdisciplinary links;
- integration of interdisciplinary processes, in particular, the conclusions of the methodology of sciences in didactics;
- processes in the context of science, ie a general theory that summarizes the results of research in different areas carried out within one science.

A comparative analysis of the curriculum combined with the curriculum specified in the STS from "Computer Science and Information Technology" can be distinguished as a factor of integration:

- Every student who graduates from general secondary school has a profession;
- The knowledge, skills and abilities acquired in "Computer Science and Information Technology" in general secondary education should be the basis for the successful continuation of higher education;
- To prevent repetition of topics in the same interpretation in different types of education.

In general, the following three main directions should be highlighted in achieving continuity in the education of "Computer Science and Information Technology":

- Continuity in the discipline "Informatics and Information Technology";
- Integration between "Informatics and Information Technology" and other disciplines (eg, physics, mathematics, geography, chemistry, biology, economics, etc.);
- The connection between the subject of "Computer Science and Information Technology" in high school and the subject of "Computer Science" and "Information Technology" in academic lyceums.

Ensuring the continuity of the science of information technology with other sciences in general education also guarantees effective results. The problem of ensuring the connection of "Computer Science" with other general education disciplines, as a methodological aspect of adaptation and management of the content of science and teaching methods in relation to professional disciplines, are systemic-logical, conceptual-linguistic, polytechnic and career-oriented aspects.

If we study the interdisciplinary function of "Informatics and Information Technology" in the cycle of natural sciences (physics, mathematics, chemistry, biology), we consider it necessary to develop a separate curriculum, plan and methodological developments for teachers of science.

We believe that in solving the problem of interdisciplinary (interdisciplinary) continuity in the lessons "Computer Science and Information Technology" can be taught special courses for the application of "Computer Science and Information Technology" in a particular subject. Therefore, the rapid development of science and technology and social relations, the introduction of new requirements to the content of education require continuity in education, which ensures the quality of content and effectiveness of education, lays the foundation for improving forms, methods, techniques and tools of education. Ensuring continuity and continuity in the process of transition from one type of education to another is related to the process of acquiring students' consciousness and thinking, knowledge, skills and abilities, ensuring interaction in their social adaptation. Commenting on the analysis of the current state of teaching computer science and information technology in the country, N.I.Taylakov states that the factors ensuring the continuity and continuity of the definition of the content of science by educational stages are as follows [5]:

- To inculcate in students the knowledge of receiving, transmitting, storing, collecting and processing information in secondary schools, to acquaint them with the structure, devices and capabilities of modern computers, to use selected knowledge and skills in solving educational problems, computer software content, functions and cognitive skills such as identifying application possibilities are imparted;
- The teaching of computer science in academic lyceums and vocational education is determined by specific features, ie it is studied in terms of applying the basics of computer science, taking into account the age and physiological mental characteristics of students, their level of preparation. Although some of the subjects in the subject are studied in general secondary education in the subject of "Computer Science and Information Technologies", they are given with an in-depth and practical focus. The basic concepts of information technology in professional colleges are given, the full acquaintance with its technical means and formation of skills of work of students in them are considered in teaching of a subject "Information technologies";

• In higher education, the subject is called "Informatics, Information Technology", the content of which is an integral continuation of the subject "Informatics and Information Technology" taught in secondary schools. It is planned to divide the content of science into sections, to ensure the degree of freedom in the process of determining the content in them, taking into account the specialties in higher education.

In higher education, computer science is studied with a focus on practical activities, in which the subject program is closely linked with the subject of "Computer Science and Information Technology" in secondary schools.

Thus, while there are different solutions to the problem of continuity and its provision in continuing education, this problem is renewed by changes in the education system or the content of education, as society's demand for information education increases or decreases.

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