INTER-SUBJECT COMMUNICATIONS IN THE LEARNING OF MATHEMATICS IN ACADEMIC LYCEUMS

D. Abdukhalikova

Academic Lyceum of the Tashkent Institute of Irrigation and Melioration, 39, Kari Niyazov ko‘chasi, Tashkent 100000 Uzbekistan
diloradt@mail.ru

Abstract: This article describes the study of mathematics inter-subject communication in academic lyceums, where the need to pay special attention to the relationship of mathematics with other subjects, especially with the basics of economic knowledge. Inter-subject communication is raised to a higher level of scientific weight training process, providing multifaceted influence on the personality of student academic lyceum, ensuring unity of education, educational and developmental functions. So much attention in academic lyceums for economic education is primarily due to the fact that economic knowledge defined by renowned economists who can teach economic theory necessary for the formation of the economic way of thinking and economic culture of the students. Besides knowledge form the basis of economic education and training student. Influence of inter-subject communications so broadly that it covers the area of teaching all disciplines affects the curriculum, programs and textbooks, beyond the narrowly defined as training, affecting the formation of the world students. So there is every reason to believe inter-subject communication one of the principles of didactics.

Keywords: modern scientific, definitions, properties, concepts, mathematical facts, theorems, axioms, formulas, intra-subject and inter-subject communication.

In the multifaceted process of educating the younger generation and the formation of well-rounded students play important role modern comprehensive academic lyceums, which problem - to help students master the basics of modern knowledge and culture form a scientific outlook, national morality, willingness to fight and work for the good of the people. An integrated approach to solving problems in a cohesive identity in a developed society requires greater attention to the problem of inter-subject communications.

The most important factor in setting up and solving this problem is also a process of differentiation and integration of science and production, determines the development of scientific and technical progress. In general educational academic lyceums traditionally situations, when the structure of subjects is not isomorphic to the structure of modern scientific knowledge. It is possible to confirm, that the ongoing process of integration and differentiation of modern science has not yet touched virtually curriculum, although some private aspects of integration manifested within individual disciplines.

Having different approaches to classification of inter-subject communications due to the fact that interdisciplinary communication can be implemented in the educational process in solving a wide variety of teaching tasks. Nature of the relationship between the individual elements of subjects defined as the specific content of the specific academic disciplines and their respective sciences and features of mental activity of students of different ages, as well as educational and developing learning objectives. The above suggests the need to integrate the variety of interdisciplinary links with the educational process on the basis of interdisciplinary.

Analyzing the role of interdisciplinary links in the learning process is considered as a condition for interdisciplinary communication implementation of the basic functions of the learning process: the educational, developmental and educational. Allocate separate didactic functions of interdisciplinary relations: methodological, constructive, forming and coordinating.

Motivational function inter-subject connections are to form a stable basis for their positive learning motivation. Didactic function of interdisciplinary relations are closely interrelated and mutually reinforcing, which ultimately leads to the conclusion about the complex influence of inter-subject connections both on the content of education, and the formation of the personality of the student.
Psycho-physiological basis of mental activity, developed in psychology, define the special role of inter-subject communications in the learning process. This role is only effective use of both types of communications can provide training to give students a system of scientific-knowledge necessary for understanding the dialectic-materialist naturalistic picture of the real world, its material unity.

Thus, the problem of inter-subject relations is inseparable from a practical solution to the problem of formation of the whole personality, didactic displays trends in the development of modern scientific knowledge, and is a major factor in increasing the efficiency of the educational process in academic lyceums.

To improve the efficiency of learning requires a systematic and consistent realization of inter-subject communications, objectively reflecting patterns and dependencies that exist in nature and society. Value of the subject and purpose of the system is determined to further strengthen communication education with life, preparing students to master their chosen specialty, improvement of labor education.

One of the meanings of the word "communication" is as follows: "The relationship of mutual dependence, conditionality as concepts and commonalities between anything. It is in this sense it is used in the phrase "inter-subject communication". To these expressions could be seen as a concept and therefore make the object of study, it is necessary to clearly define what exactly between inter-subject communication set a particular relevance.

The study of any academic subject is to give students a knowledge system, consisting of scientific concepts, information and facts that reflect the laws of the existence and development of nature, society, thinking and methods of knowledge of these laws. Elements of this system is the knowledge of having a relative independence, i.e. such knowledge that at any time during training or for training of any time become the object of special study or means of solving theoretical, practical or educational problems. Elements of mathematical knowledge are representations of concepts (ideas about figures, sets, numbers, and various intuitive visual representations), definitions, properties, concepts, mathematical facts (the formulation of theorems, axioms, formulas), problem-solving methods and proofs of theorems.

Mathematic symbols and terms are not elements of a system of knowledge that form the content of the subject, as no one character or the term itself cannot be used for any training or knowledge.

During training, the communication between the two elements of knowledge manifested in the fact that one of these elements of knowledge used in the organization of learning another. If some element of knowledge A is used in the study of knowledge element B, then this relationship between them will be denoted as A → B, if A and B are studied within the limits of one subject, then A → B - intra-subject, if A and B are studied in within different subjects, then A → B inter-subject communication. Thus, the communications between the elements of knowledge that make up the contents of one of the subject are intra-subject and in communications between the elements of knowledge systems that constitute the different subjects are inter-subject communication.

Realization of inter-subject communications is to use the knowledge and skills acquired by students in the study of one subject, the organization of learning another subject. It is easy to see that in terms of structure or the practical realization of no significant difference between intra and inter-subject communication. The differences between them are mostly subjective.

Influence of inter-subject communications so broadly that it covers the area of teaching all disciplines affects the curriculum, programs and textbooks, beyond the narrowly defined as training, affecting the formation of the world students. So there is every reason to believe inter-subject communication one of the principles of didactics.

Inter-subject communication primarily involve mutual consistency of educational content on various subjects, construction and material selection, defined as the overall objectives of education and taking into account the best of educational challenges posed by the specificity of each subject.

Mathematic lesson for many areas, including economic, characterized by an increase of applied nature and removal of a large emphasis on training students the application of mathematical methods in different areas depending on the selected profile.

So much attention in academic lyceums for economic education is primarily due to the fact that economic knowledge defined by renowned economists who can teach economic theory necessary for the formation of the economic way of thinking and economic culture of the students. Besides knowledge form the basis of economic education and training student.
It should also note that each of the sections and mathematical methods used to solve a particular class of economic problems: arithmetic and algebra is used for economic calculations associated with a particular share, interest, composition ratios, calculating profits, revenues, expenses, taxes, subsidies, etc.; geometry used for calculations related to spatial relationships and forms of economic objects and phenomena; mathematical analysis is a powerful tool in the development of optimal solutions in the economy; the probability theory proves the economic calculations connected with the phenomena of casual character; mathematical statistics provides data collection, processing and analysis of static economic information; mathematical logic is used to assess the economic situation in terms of the truth or falsity of the information used; game theory allows a general analysis of the strategic interaction of economic agents; network planning is used for the preparation and realization of management plans of rational economic transactions involving the solution of problems in the shortest possible time and with the best results.

Thus, modern economic science is widely used mathematical methods to study processes occurring in it. These methods allow it to accurately and compactly express many of the basic postulates of economic theory, receive theoretical conclusions of the studied economic problems, to express forecasts, make recommendations and to establish links between different economic characteristics.

References