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TECHNOLOGY OF INTERDISCIPLINARY INTEGRATION OF PRIMARY EDUCATION

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ABSTRACT

The article, using modern educational technologies, highlights the need to integrate primary education, interdisciplinary links in the educational process, implementation of pupils' knowledge, skills and abilities in interdisciplinary communication, strengthening the structural connection between the disciplines through integration technology, their generalization, further enrichment of pupils' holistic perceptions of nature and societ as well as the content of the integration of primary education.

KEYWORDS: *Integration, Education, Interdisciplinary Connection, Subjects, System, Integrative Approach, Teaching, Integration, Primary Class, Technology.*

INTRODUCTION

One of the global challenges in the education system is the integration and stratification of disciplines. The solution to the problem of integration is directly related to the effective use of modern educational technologies in the educational process of educational institutions. Proper organization of this process not only increases the effectiveness of teaching, but also provides the basis for a project-based creative model of teaching.

Consequently, the problems of integration of teaching and education in primary schools are theoretically and practically very important from a modern point of view and become more relevant on the basis of new social requirements. Today, due to the development of science and huge changes in production, the demands are putting new challenges on school education. The modern system of education is aimed at establishing the foundations of science at a high level, developing thinking, understanding and imagining the world as a whole, correctly understanding the events around us, educating young people who understand their essence.

The continuously increasing volume of information leads to an increase in the amount of knowledge shared with pupils, an increase in the number of subjects and courses offered by educational establishments. This, in turn, leads to psychological stress on pupils, a decrease in their interest in these subjects and lower motivation, as well as contributes to a decrease in the level of knowledge acquisition.

Based on the goals and objectives of the educational institution, the study of internal and external relations of a particular subject, its application to other disciplines not only expands the scope of knowledge, but also allows the pupil to have a fuller knowledge of the environment, the formation of worldviews, as well as apply existing knowledge in practice.

In pedagogical dictionaries, the concept of "interdisciplinary relations" is defined as the interdependence of curricula [3]. Interdisciplinary connection in the educational process activates pupils' learning activities. In doing so, the learner mobilizes his or her activity to search for existing unknown relationships or to form new concepts based on clearly established interdisciplinary relationships. Interdisciplinary connection in the educational process activates pupils' learning activities. In doing so, the pupil mobilizes his or her activity to search for existing unfamiliar relationships or to form new concepts based on clearly established interdisciplinary relationships. There is an active pursuit of knowledge acquired as a result of experience in mastering interdisciplinary relationships. Interdisciplinary relevance can be divided into relationships between knowledge and skills specific to each subject and between relationships between knowledge, skills, and competencies that are common to different disciplines.

Interdisciplinary links should be established in the field of knowledge and skills, and also in the formation of emotionally-valuable attitudes to creative activity and assimilated objects in existence. Interdisciplinary connection serves to unite all the components of the educational process (content, form, methods and tools) into a single system. In addition, it is an important factor in ensuring the quality and effectiveness of education. Ways to implement interdisciplinary links are as follows:

- the sequence of study of different disciplines should be chosen in such a way that the study of one of them facilitates the study of the other;

- ensuring a common approach to the formation of general understanding, skills and competencies;

- ensuring the uniformity of requirements for the acquisition of knowledge and the acquisition of skills and competencies;

- extensive use of knowledge, skills and competencies in one discipline in the study of knowledge, skills and competencies in other disciplines [12].

The implementation of interdisciplinary communication in educational institutions also requires the use of computer and information technology. The reason is that pedagogical software tools for teaching, modeling, demonstration and control allow pupils to generalize and synthesize knowledge, master generalized methods of knowledge and problem solving [10].

The development of the theory of the application of integration in the teaching process is important for the development of scientific and pedagogical concepts. Integration is inextricably

linked to differentiation. This coherence is evident in the fact that pupils build a system of aspirations to understand what they are learning.

Integration is the convergence and interdependence of sciences during the differential process [6]. The process of integration is a new, high-quality interconnection between the sciences, which manifests itself in a high way. It should be noted that the foundations of the integration process are based on folk pedagogy and scientific pedagogy of the distant past.

Integration is considered to be an interdisciplinary connection. The foundations of interdisciplinary coherence arose from the need to show and explain nature in its entirety in textbooks. Opinions of great educators in the study of the integration process.

As the great didactic Jan Amos Comenius put it, "Everything that is connected to each other must be studied in the same way".

The idea of interdisciplinary connection was later approached by many educators, who contributed to its development and generalization.

According to D.Lock: "One subject must be supplemented by elements and facts of other disciplines in determining the content of education".

Commenting extensively on the issue of interdependence in textbooks, I.V.Pestalossi says, "Understand that interdependent sciences are in a state of organic connection in nature". Pestalossi argues that the state of one subject being studied apart from another is even dangerous.

Researches in recent years have focused on integrated education. In particular, I.D.Zverev explains that integration is a single synthesis process based on the organic connection, the creation of integrity, the combination of elements of different educational disciplines. [4]

A.N.Zakhlebniy and M.V.Reshkov emphasize that the integration of disciplines should be carried out in the context of individual subjects in the school, taking into account the links in the curriculum and textbooks. Thus, the desire to integrate teaching materials is inevitably natural and characterized as leading in both the world and our national pedagogy. [5].

I.T.Suravegina has studied the activation of the process of teaching biology through the use of interdisciplinary links in biology lessons, increasing pupils' interest in science. From a scientist's point of view, it's hard to imagine teaching biology without linking it to other academic disciplines. Emphasizes that the establishment of interdisciplinary links and their skillful use serve to form a system of pupils' knowledge of nature [9].

R.A.Mavlonova divided integrative education in the educational process into the following classes. In particular, the integration of many disciplines can also be called universal or general, replacing several basic system courses. For example, combining reading, mother tongue, science, art lessons into one common lesson [7].

In Turdikulov's research work the problem of integrated teaching of natural sciences was developed, which in his research work he considered the universe as a whole conception, in a holistic view. In addition, it was noted that the integration of education is a high level of interdisciplinary communication, a tool that allows you to create an integrated knowledge. [11].

Interdisciplinary connection in teaching biology by A.T.Gafurov, ınterdisciplinary connection

in teaching the basics of genetics and selection by S.S.Fayzullaev, and also one of the most important problems of education - the integration and stratification of knowledge - has been studied in the research work of R.H.Juraev. In particular, according to the scientist, integration serves to establish structural connections between different systems of knowledge, to generalize them, to form a holistic view of nature and society of pupils.

N.M.Ahmedova today describes the phenomenon of integration as a leading position of innovation in education. Scientific and pedagogical research is being conducted, which allows to adapt the general scientific category to didactic realizations [2].

According to H.B.Norbotaev, through the organization of integrated lessons it is possible to discuss with pupils, to organize group competitions and quizzes. The main purpose of the use of such modern types of lessons is to activate pupils in the learning process, to achieve a high level of mastery of educational material. Such technology teaches pupils to imagine the world differently, to connect practice with life, not to memorize theoretical rules verbatim, to understand the harmony of the individual and society, to achieve diversity of ideas, as well as to understand ways of self-development. [8].

Typically, the authors of such courses combine the materials of the natural sciences, bring them into a specific system, and call their courses integrative or general. It is clear that the correct sequence in the delivery of natural science materials in the primary education system can be achieved only by maintaining the structure of the lessons. Some scholars point out that this is also being addressed in traditional schools through the sequential study of the natural sciences. A number of scholars believe that the tradition of separate teaching in primary education is also widespread.

The integration of subjects in the primary grades increases the effectiveness of the lesson, leads to the efficient use of time, helps to master the lesson in depth, increases leisure time and enables pupils to be involved in clubs.

The following should be taken into account when teaching through the integration of disciplines:

- Each lesson should be goal-oriented;

- The selected additional material on interdisciplinary relevance must be related to the topic to be covered;

- Ways to work with pupils in the classroom can be identified in order to increase their activity;

- The course should be not only educational but also aimed at shaping and developing positive aspects of humanism on pupils;

- should be aimed at the formation of scientific knowledge, beliefs and convictions about nature, society, human thinking, development, depending on the content of the topic;

In general, the integration lesson should be consistent.

The problems of integration of teaching and education in primary schools are theoretically and practically very important from a modern point of view and become more relevant in the light of new social requirements. Today, due to the development of science and huge changes in production, the demands are putting new challenges on school education. The modern education

system is aimed at laying the foundations of science at a high level, developing thinking, understanding and imagining the world as a whole, correctly understanding the events around us, educating young people who understand their essence.

The foundation of a positive attitude towards the environment is taught in the primary grades. Therefore, new psychological-pedagogical research related to the outcome of economic education in the first stage of school education allows us to consider the notion that the cognitive activities of young schoolchildren are limited. This lays the foundation for mastering and updating all components of economic education in the primary grades.

The key to such an update is to identify a goal that meets the age characteristics of the primary school pupils and meets the course requirements.

A number of works are devoted to interdisciplinary and intra-subject relations in primary education. These problems are the immediate development zone of the transition to the integration of academic disciplines.

The process of mastering the content of these areas of education and the acquisition of interrelated knowledge, skills, abilities, practical application has not been studied theoretically and practically.

The integration relationships of primary school subjects are poorly explored and the concepts are contradictory. There is a lot of controversy among scholars about the nature of these relationships.

There are two concepts in this regard:

1. A system is a concept that expresses the state of interdependence of individual stratified parts and functions of the organism and the process that leads to this state.

2. The process of convergence of disciplines, which is carried out in conjunction with stratification processes.

Integration of educational content is a world tradition (idea, thought, aspiration). The integrative approach reflects the objective integrity of systemic relations at different levels (nature - society - man). Integration involves combining previously divided parts into one whole. It leads to an increase in the level of integrity and coherence of system elements.

During integration, the interdependence increases and becomes more organized, the operation of the parts of this system and the object of its study are regulated. How can these general rules be applied in school education? According to modern didactics and methodology, the success of teaching and educating students depends on the formation of their understanding of world unity, the need to conduct their activities on the basis of common laws of nature, to solve interdisciplinary and intradisciplinary links in science. Integration in education is considered through a systematic approach to the design of the content of academic disciplines.

The simplest of the connections that make up the simplest knowledge of nature or science is a local imagination bounded by a particular place or concept. [1]. This connection is separate from other knowledge and therefore provides the simplest mental activity. This is typical of a small school age. The imagination that belongs to a system is the simplest structural imagination. It is formed on the basis of the study of a particular subject, science, or phenomenon.

Knowledge of any science is achieved by recognizing new facts and concepts by comparing them with knowledge related to any certain field. The simplest generalization of knowledge takes place, but it would be useful if the knowledge gained were linked to knowledge that was close to it all. [13].

This results in students' analytical and generalization activities. Imaginations within the system ensures that students know the whole system of sciences, there is a wide use of knowledge within the studied discipline. The imaginations within the system reflect time, environment, and numerical relationships. Interdisciplinary perceptions are considered the highest stage of mental activity. They combine different systems of knowledge, allowing us to know the diversity of an event or process. Based on this knowledge, general concepts emerge. The formation of intersystem imaginations allows them to use knowledge, to subordinate them to each other, to identify gaps in the boundaries of knowledge.

CONCLUSION

The integration of the primary education process will increase the efficiency of learning subjects, the development of the quality of education on the basis of a single goal. Because the teaching of one subject in different interdisciplinary relationships can be the basis for increasing the activity and interest of students in the classroom.

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