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INTEGRATION IN MODERN EDUCATION

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Abstract

The article reveals the integration approaches and their pedagogical possibilities in teaching biology in secondary schools. As we know, the integration approach in the field of education allows students to develop learning activities.

Key words

integration, education, didactics, ability, natural sciences, integrative education, competence, humidity, temperature, photosynthesis.

Enter. Integration in education is the process of establishing connections between the components of the content within a certain educational system in order to form a holistic view of the world aimed at the development of the child's personality and self-development. lim makes the student interested in practice, helps him to solve any problem by himself in the future.

Integration of subjects in a modern school is one of the ways of developing the creative skills of pedagogical staff in order to actively search for new pedagogical solutions and have an effective and reasonable impact on students.

Integration helps to eliminate the fragmentation and mosaic of students' knowledge, ensures that they acquire integrated knowledge, a set of universal values. In the conditions of rapid growth of the volume of information, the ability to perceive and understand it decreases sharply. The way out of this can be seen in the synthesis of various subjects, in the development of integrated courses, in the interconnection of all school subjects.

The main part: The main ideas of integrative education are as follows: Personal orientation of education (Man is the main value of the educational process); formation of generalized subject structures and methods of activity (mastery of knowledge based on the understanding of laws); the priority of meaning-making motives in education (motivational, internal, external and organizational); consistency in teaching (understanding of connections within scientific theory); problem-based learning; reflect activity; dialogic (Truth is born in the process of dialogic communication).

The goal of integrative education: to form a holistic vision of the world. In the framework of integrated education, separate technologies can be distinguished:

• integration; design technologies; educational technologies in the world information community; Teaching large structured training courses based on the Internet.

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The process of integration requires the fulfillment of certain conditions: the objects of study are the same or sufficiently close; integrated subjects use the same or similar research methods; they are built on the basis of general laws and theoretical concepts. For example, in the process of teaching computer science to young students, it is desirable to establish connections between the Russian language, mathematics and other subjects. However, every combination of different subjects in one lesson does not automatically become a whole lesson. A leading idea is needed to ensure the coherence and integrity of this lesson. There are pros and cons to integration:

1. It enables the implementation of one of the most important principles of didactics - the principle of systematic teaching.

2. It creates optimal conditions for the development of thinking, rationality, flexibility, criticality.

3. Contributes to the development of a systematic worldview and the harmonization of the personality of students. Multiple subjectivities are reduced, interdisciplinary connections are broadened and deepened, and more knowledge becomes available.

4. It is a means of stimulating the education of schoolchildren, it helps to activate cognitive activity and encourages students to be creative.

The integrated approach requires the teacher to have a high level of pedagogical skills, the universality of his education.

The negative aspects include the following: increased density of the lesson, lack of details, individual cases, large time spent on preparing for the lesson.

In the teaching of natural sciences, not only the knowledge obtained from biology is relied on, but also the knowledge obtained from other natural sciences and humanities is relied on. In particular, the use of integrative education in the training of biological specialists makes learning the science easier.

Integration of natural sciences. It can be carried in 2 forms:

1. External integration - interdisciplinary connection

2. Internal integration - inter-thematic connection (Inter-thematic connection; Connecting the topics to each other).

In order to form an interdisciplinary competence in the study of topics related to mineral nutrition of plant roots, one should have skills related to chemical elements and their properties, physical properties of the soil.

The quality of many agricultural crops can be determined by measuring their densities. In our people, there is a saying that a melon that looks the same, but is heavier when squeezed by hand, tastes sweeter. So, the density of the sweet melon is greater than the other, it can be done with the help of experiments. It can be determined experimentally that the amount of starch in potatoes with the same density is greater than in others. This, in turn, requires students to thoroughly master the topic of density in physics and chemistry courses.

When the topic of "temperature" is studied, the temperature on the ground for planting crops, the importance of sunlight for flora and fauna, and, accordingly, the energy supply of nutrients, require the close connection of physical and biological sciences. Therefore, integration is a source of

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finding new evidence that confirms or deepens the student's observations and conclusions in various subjects. Certain conditions are necessary for each seed to germinate. The seed absorbs water, swells and grows under great pressure. In order to understand that under this force of pressure, the skin of the seeds will burst, students need to have the understanding of the subject of pressure in physics. Another factor necessary for the germination of seeds is temperature. Different plants require different temperatures for their seeds to germinate. In order for students to distinguish the minimum, optimal and maximum value of temperature in the life of plants, it is necessary to have skills related to this subject in physics.

Water is necessary not only for seed germination, but also for the nutrition of the developing lawn, as it contains the nutrients in the seed.

dissolves, starch turns into sugar. This is the reason why sumac made from wheatgrass is sweet. In addition, the natural circulation of water is provided by plants. This in itself once again proves the connection of botany with the sciences of geography, ecology, physics and chemistry.

There is absolutely no way to learn the process of photosynthesis without fully mastering the elementary course of physics and chemistry. This, in turn, enriches and complements the content of each subject taught in general education schools.

Summary. In conclusion, the use of integration in the teaching of natural sciences increases the activity of students in the lesson, teaches students to think independently, strengthens and updates the knowledge of the students in the sciences, and increases the interest in learning.

References:

1. Azizkhodjayeva N. "Pedagogical technology and pedagogical skills" TDPU 2003
2. Usova A.V. Mejpredmetnie svyazi v prepodavanii osnov nauk // Narodnoe obrazovanie. - 1984. - No. 8. - P.78-79.
3. Aripdzhanova A.R. Development of creative potential of pedagogues of higher education institutions in the conditions of education informatization.: Autoref. ... Dis. Ped. Science. (Phd). - Tashkent, 2017. -28 pages.