

CONTEXTUAL TASKS AS A TOOL FOR COMPETENCE-ORIENTED APPROACH TO STUDY BIOLOGY IN SCHOOL

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Abstract. The essence and pedagogical effect of using contextual tasks in biology as a tools of forming students' competencies are considered. Several types of contextual tasks are given.

Key words: school biological education, contextual tasks, competence-oriented approach

Educational systems in almost all countries of the world are focused on preparing school graduates for effective activities in various spheres of life, in particular further self-determination and development, active participation in society, social and professional mobility. In modern education, these tools that will help everyone succeed in life, regardless of gender, profession, place of residence, are defined as competencies. This led to the searching and development of tools for competency-based learning and their introduction into school practice. Let us consider one of the effective tools of forming students' competencies in the process of studying biology - contextual (situational) tasks.

These include tasks that allow identifying students' ability to analyze the situation, to justify the strategy of their behavior in this situation, and to choose the best solution. In contextual tasks the principles of problem-solving, special formation of methods of mental activity, individualization, independence are realized. Therefore, situational tasks are chosen as tools of competence-oriented teaching of biology [2].

Each contextual task is a problem-cognitive complex because it includes elements that are complementary to the main and subject biological competences (knowledge, methods of activity, attitudes). During the solving such tasks, students may find that their life experience, some points of view, evaluation criteria and choice of solutions, that were previously correct and reliable enough for them, are ineffective in real conditions. This encourages students to seek new knowledge, ways of working, and reviewing their own system of values.

The first important characteristic of the situational task is its problematics, which will result in finding new knowledge that the student will perceive as his personal result. The second feature is relevance, which is achieved through the ability to model the holistic context of real events (real life or learning situation).

An example of a situational task. In a biology class, you receive three microscopic specimens: 1) onion peel, 2) watermelon pulp, 3) Elodea leaf. What do you need to know to determine where a particular specimen is? Make a sequence of actions for their recognition. Components of competence that are formed / tested by this task (according to the curriculum) are: knowledge - give examples of parts of the cell; activity / ability - to recognize plant cells and their components on microscopic specimens; and attitude - to realize the possibility of deeper study of the cell with the help of modern devices and research methods [1].

Based on the integration of the components of subject and key competencies, we have identified the pedagogical effect of the task. It consists in the fact that the student: reproduces from memory the information necessary for the task; independently transfers existing knowledge and skills to a new situation; analyzes objects to highlight features.

The main criteria of the contextual task are: accessibility for students to understand; the presence of a connection with the components of subject biological competence, which are defined by the program (knowledge, activity, value) [1]; display of elements of key competencies; personal and social significance. Often one situational task helps to create conditions for the formation of several components of one or several competences, and can be used to test them.

While working on contextual tasks, students perform various actions: identify the problem, choose the method of task performance, justify their choice, work individually or in a group, present the results of the task. In addition, tasks on ecosocial orientation deserve particular attention. They have two main characteristics: they contain value problematic situations, and their solution characterizes the student's moral choice in a given context. Considering this, the implementation of such tasks is not limited to finding the right answer - students should also assess the situation and decide on how to behave in these conditions. In other words, students show a socially active position while both receiving new knowledge and using it to correct their own behavior in the environment. An important feature from a psychological point of view of ecosocial tasks is that their condition simulates situations in which their own choice of behavior requires not only reliance on acquired knowledge and skills, but also a willingness to resist the influence of various factors.

Overall, the usage of contextual tasks in school biological education provides formulation of students' competences based on solving simulated educational or real life situations

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