

## THEORETICAL FOUNDATIONS OF THE FORMATION OF STUDENTS' RESEARCH COMPETENCE IN THE STUDY OF BIOLOGY

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In the 21st century, the science of biology is rapidly developing, expanding its boundaries, and new discoveries are taking place. Knowledge in the field of biology is the most important in human culture, without which it would be impossible to obtain knowledge and practices in medicine, pharmacology, agriculture, ecology and other fields.

The modern policy of the Russian Federation sets new tasks for secondary schools – to meet the current scientific and technical revolution. Society is making new demands, and everyone should be able to adapt quickly to the new reality.

Russian educational institutions, in accordance with current regulatory documents, should focus on the practical direction in the field of education, expand the direction of research activities among schoolchildren. A new approach to learning is required – a competency-based approach that allows you to achieve your goals.

It is important to note that in pedagogy, competence is the level of education of students sufficient to independently solve cognitive tasks. The problem of "competence" was considered in the early 21st century in their works by such scientists as A.L. Andreev, V.I. Baydenko, V.A. Bolotov, A.N. Dakhin, A.V. Khutorskoy, V.V. Davydov, F.T. Shishkin, M.N. Skatkin, as well as foreign J. Raven, V. Hutmacher and others.

The analysis of scientific literature does not provide a single definition of the concept of "competence". Each definition has its own characteristics and contains common elements. In general, the concept of competence in pedagogy has a complex structure and manifests itself in the ability to research among schoolchildren.

Biology in secondary schools forms research competence not only in the classroom, but mainly in extracurricular activities among students. It is difficult to get a full-fledged research experience in the lessons, as individual planning and financial support are necessary.

I.N. Ponomareva, Doctor of Pedagogical Sciences, considers the competence approach as one of the ways to reveal the essence of biological education in order to form certain skills and qualities in schoolchildren.

Modern research among teachers and psychologists claims that all skills are formed only as a result of active activity among students. A competence-based approach to education is a response to the rapidly changing social and economic life of citizens.

The use of the competence approach, as a special model in the education system, implies radical changes in the system of organization of the educational process. The main goal is not the assimilation of the amount of knowledge, but the acquisition by schoolchildren of such qualities as

the ability to determine their goals and make decisions in non-standard situations independently. The role of the teacher is also changing, who should be able to organize the educational process in such a way that every student can realize himself. The individual development of schoolchildren occupies a leading position.

Biology is a discipline with potential, as it has a wide range of research topics, and the use of a competence-based approach will enable students to successfully acquire new practical knowledge. Today, the competence-based approach focuses on the formation of universal learning activities. The formation of a student's critical thinking, as well as the ability to solve creative tasks, contributes to the realization of a competence-based campaign.

### **List of literature:**

1. Arbuzova, E. N. Methods of teaching biology: a textbook / E. N. Arbuzova. Omsk: OmGPU, 2013. — 332 p.
2. Smirnova, N. Z. Competence approach in biological education: a textbook / N. Z. Smirnova, O. V. Berezhnaya. Krasnoyarsk: KSPU named after V.P. Astafiev, 2014. — 234 p.
3. Smirnova, N. Z. Practice-oriented activity of students in biology as a condition for the formation of universal educational actions : a textbook / N. Z. Smirnova, I. M. Alexandrova. — Krasnoyarsk : KSPU named after V.P. Astafiev, 2021. — 172 p.
4. Smirnova, N. Z. Formation of research competence of students in the conditions of updated educational practice: textbook / N. Z. Smirnova, O. V. Berezhnaya. — Krasnoyarsk: KSPU named after V.P. Astafiev, 2021. — 180 p.
5. Modern technological education: experience, innovations, prospects: a study guide. — Lipetsk: Lipetsk GPU, 2016. — 149 p.