

INFORMATION TECHNOLOGIES IN BIOLOGY TEACHING

Koltun Yana Alexandrovna

Student of Belgorod State National Research University, Russia, Belgorod

Markov Alexander Vladimirovich

научный руководитель, Scientific supervisor, Senior lecturer Foreign languages department,
Belgorod State National Research University, Russia, Belgorod

Abstract. The article is devoted to the analysis of the implementation of information technology tools into the educational process, which enables teachers to qualitatively change the content, methods, and techniques of the teaching activity. The use of information technology in the classroom has both advantages (competence formation) and disadvantages (lack of communication). The use of information technology at different stages of the lesson activates students in the learning process.

Keywords: information technologies, improving the efficiency of the educational process, information technology tools, pros and cons of using information technology, learning new material on the lesson.

Introduction

At the moment, there is a huge variety of information technology tools used in teaching, each of which has its advantages and disadvantages. The teacher needs to learn how to use new information technologies correctly at different stages of the lesson. According to Sadykova G.Sh., computerization of education is an integral and most important part of the information technology implementation process. Computer technologies are directed towards improving the efficiency of the educational process [1]. Consequently, in the conditions of modern social development, the use of information technologies in the educational process is an urgent problem of educational activity.

General characteristics of information technologies in education

Nasyrova B.H. and her supporters claim that the introduction of information technology in the educational process makes it possible to implement a change of methods and forms of education, and, consequently, the entire learning process [2].

New opportunities are opening up for teachers and students in the learning of information culture. This direction develops creative thinking, promotes the acquisition of new knowledge, skills, and skills in self-education. Due to the automation of some processes, psychological, temporary, aesthetic burdens on the human body are reduced.

Shadrikov V.D. and Shemet I.S. say that the educational process is becoming more individual and differentiated thanks to modern information technologies. The use of the latest techniques increases the motivation of children to study.

Interactions between parents of students, children and the teacher are reaching a new level.

Communication tools help to keep in touch with the parents and directly with the children themselves.

Information technologies increase the potential of the student's personality development, activate creative abilities, form creative thinking [3].

All of the above-mentioned advantages are the main ones in the informatization of education. Along with the advantages of introducing information technologies into the educational process, there are also disadvantages of using new technologies.

Modern search systems have negative aspects associated with an overabundance of information. Wrong use of the information found by the student can lead him astray, which will affect school grades. There are a lot of different "information garbage and noise" on the Internet, which is present in almost any search query. The student must be able to correctly select the information [5].

Incorrect use of various multimedia systems negatively affects the memorization of information by students. For example, a presentation with a scientific text may be oversaturated with pictures, which will distract students from the topic of the lesson, or, instead, the presentation is oversaturated with textual content, which will lead to bad learning of the material. In this regard, it is necessary to consider various factors: the level of preparedness of schoolchildren, their age, psychological characteristics, etc. When a student interacts with a computer, the dialogue with the teacher and the student is minimized, which also leads to negative outcomes. The child receives little dialog communication, that's why, there is no practice in forming his thoughts.

In addition to all of the abovesaid, it is important not to forget about the impact of information technology on the health of children, which bring their permanent harm. For example, electromagnetic radiation, the impact of technology on eye health and mental state, etc. Thus, we see that information technologies have both advantages and disadvantages of use in the educational process. In modern society, almost all schools are equipped with the latest technologies, therefore, the process of informatization of education is inevitable. The main task of the teacher is not only to acquire knowledge in the field of information technology, but also to learn how to apply them in practice.

Conclusion

Today, an important place is occupied by the process of introducing information technologies into education. These technologies are used in conducting various types of lessons: the study of new material, the lesson of generalization of knowledge, the lesson of verification and consolidation of knowledge. The use of information technology on the lessons is highly effective.

However, information technologies will not replace teachers, they only create opportunities for the development of the education system in the world. The actual task of education is to maintain and develop students' knowledge. Modernization of the educational process is aimed at changing teaching methods, changing the content of academic disciplines, increasing the variety of methodological techniques of the teacher.

Bibliography:

1. Sadykova G.S. Information technologies in education // Issues of science and education. – 2018. – No.29. – pp. 76-78.
2. Nasyrova B.H., Azaryan M.A., Kirakosyan G.O. Information technologies in education // Achievements of science and education. – 2021. – №4 (76). – Pp. 54-56.
3. Shadrikov V.D., Shemet I.S. Information technologies in education: pros and cons// Higher education in Russia. - 2009. – No. 11. – pp. 61-65.

4. Bogush V. Information technologies in education // Science and innovation. – 2015. – №11 (53). – Pp. 9-12.
5. Information technologies in education: advantages and disadvantages. – 2019 [Electronic resource]. Update date: 12/15/2021 – URL: <http://sisupr.mrsu.ru/2011-1/PDF/Tareikina.pdf> (accessed: 12/15/2021).
6. Gotting V.V. Fundamentals of pedagogical software design: textbook.stipend. – Karaganda: publishing house of KarSTU, 2010. – 85c.
7. Zakharova I.G. Information technologies in education: textbook for students. institutions of higher Prof. education. – M.: Publishing center "Academy", 2013. – 208s.
8. Kovalev V.V. Information technologies in education// Issues of science and education. – 2020. – No. 18. – pp. 96-99.
9. Nasibullov I.R. The role of new information technologies in education// Bulletin of the Mari State University. - 2010. – No. 5. – pp. 26-30.
10. Nikulina T.V., Starichenko E.B. Informatization and digitalization of education: concepts, technologies, management// Pedagogical education in Russia. – 2018. – No. 8. – pp. 107- 113.
11. Pashchenko O. I. Information technologies in education: educational and methodical manual. – Nizhnevartovsk: Publishing House of Nizhnevartovsk State University, 2013. – 227 p.
12. Rychkov A.A. On the issue of basic information technologies in the education system // Science Time. – 2015. – № 12(24). – Pp. 383-387.
13. Fabrikantova E.V., Polyanskaya E.E. Modern information technologies in education: a textbook for students of pedagogical universities. – Orenburg: OGPU Publishing House, 2017. – 84 p.