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METHODOLOGY FOR IMPROVING DIDACTIC SUPPORT OF LABORATORY WORKSHOPS BASED ON THE USE OF DIGITAL EDUCATIONAL TOOLS

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Abstract
This article discusses the current state of didactic support in physiology laboratory classes in pedagogical higher education institutions, the extent to which new educational resources being created in the formation of this didactic support can help increase students' knowledge, and the extent to which the use of digital educational tools can help increase the effectiveness of laboratory classes.

Keywords: Digital education, laboratory, physiology, biology, virtual laboratory, active, passive.

Introduction

The high potential of modern society, the rapid growth of digital technologies in human life, and the increasing need for digital educational resources require the education system to increase biological literacy of the younger generation based on the development of 21st century skills. As a result of these changes, the critical use of digital technologies and content, the combination of creative experience with practice, the creation of open educational resources, and the improvement of biology laboratory software by increasing the immersiveness of the educational process are of urgent importance.

Extensive research is being conducted in the world to develop students' digital skills, ICT competence and information and media literacy, and to organize programming activities based on the principles of digital pedagogy in biology education. In particular, it requires the formation of a natural and scientific picture of the world in the minds of students, the widespread use of digital resources in

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laboratory exercises, the improvement of methodological capabilities for the scientific study of biological objects, and the expansion of students' opportunities to study the internal structure of biological objects using immersive technologies.

Result and Discussion

In our country, comprehensive measures are being implemented to actively develop the digital economy, widely introduce modern information and communication technologies in all sectors and areas, primarily in public administration, education, healthcare and agriculture. At present, it is impossible to abandon digitalization and not adapt information technologies in the field of education to global trends in informatization and digitalization. In this regard, special attention is paid in our republic to "encouraging the acquisition of modern knowledge in the field of digital technologies, improving the foreign language skills of young personnel working in this area, and training in professions that are in high demand in the labor market in the field of IT services export."

The Concept for the Development of the Higher Education System until 2030 sets out such priority tasks as “individualization of educational processes based on digital technologies, development of distance learning services, widespread implementation of webinar, online, “blended learning”, “flipped classroom” technologies; gradual increase in the share of electronic resources in the educational process, creation of electronic educational literature, creation of a system for posting information about electronic resources in libraries using QR codes for downloading them to mobile devices”.

Digital laboratory equipment is universal, can be incorporated into various experimental devices, performs measurements in field conditions, saves time for students and teachers, encourages students to be creative, and allows easy change of measurement parameters.

A virtual laboratory is a software package designed to conduct experiments using virtual devices.

When laboratory classes in physiology are organized in a traditional way, students' activity and independent movement are often limited, as the teacher provides the main activity and the student performs the main activity. The

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educational materials provided by the teacher are perceived as the main source of knowledge, and no one doubts the correctness of the knowledge being given. This leads to students being limited only to the information provided by the teacher, and being passive participants in the laboratory class, they are able to remember only a certain amount of information.

When developing laboratory exercises, students are asked a problem question, the planned results and the necessary equipment are shown. Each development contains instructions for conducting laboratory work. Before performing laboratory work, it is necessary to familiarize students with the requirements for their design, safety rules for performing laboratory work, and the rules for drawing natural objects.

Conclusion

It provides students with the opportunity to organize and conduct laboratory exercises in a modern digital educational environment using software tools and computer technologies, independently conduct various experiments and research, conduct observations and analyze the data obtained.

One of the main advantages of digital laboratories is the ability to increase students' interest in studying biology. Instead of passively absorbing information, they actively participate in the learning process, which helps to better assimilate the material and develop critical thinking.

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