METHODOLOGY OF USING ELECTRONIC INFORMATION EDUCATIONAL RESOURCES IN BIOLOGY EDUCATION

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Annotation
In order to effectively organize educational processes in our country, the use of advanced technologies, creation of electronic information educational resources, electronic textbooks, general requirefments for their creation, advantages and differences of electronic textbooks from traditional textbooks are highlighted in the article.

Keywords: electronic information educational resources, educational process, electronic textbook, video, animation, video lessons, electronic control tests.

МЕТОДОЛОГИЯ ИСПОЛЬЗОВАНИЯ ЭЛЕКТРОННО-ИНФОРМАЦИОННЫХ ОБРАЗОВАТЕЛЬНЫХ РЕСУРСОВ В БИОЛОГИЧЕСКОМ ОБРАЗОВАНИИ

Аннотация
В целях эффективной организации образовательных процессов в нашей стране в статье выделены использование передовых технологий, создание электронных информационных образовательных ресурсов, электронных учебников, общие требования к их созданию, преимущества и отличия электронных учебников от традиционных учебников.

Ключевые слова: электронные информационные образовательные ресурсы, учебный процесс, электронный учебник, видео, анимация, видеоуроки, электронные контрольные работы.

BIOLOGIYA TA'LIMIDA ELEKTRON AXBOROT TA'LIM RESURSIDAN FOYDALANISH METODIKASI

Annotatsiya
Maqolada mamlakatimizda ta'lim jarayonlarini samarali tashkil etish maqsadida ilg'or texnologiyalardan foydalanish, elektron axborot ta'lim resurslarini yaratish, elektron darslik, ularni yaratishga qo'yiladigan umumiy talablar, elektron darsliklarning an'anaviy darslikdan farqli hamda afzallik tomonlari yoriitilgan.

Tayanch so‘zlar: elektron axborot ta’lim resurslari, o‘quv jarayoni, elektron darslik, video, animatsiya, videodarslar, elektron nazorat testlari.

Today's education system is recognized as the main factor that ensures sustainable development on a global scale, and in the new concept of education until 2030, "creating an opportunity to receive quality education throughout life" is defined as an urgent task [1]. In the framework of this conceptual approach, the professional skills of students are increased due to the use of modern educational and innovative technologies, the use of advanced foreign experiences, and the wide application of information and communication technologies in the educational process of biology education in pedagogical institutions of higher education. and the task of regularly improving the competences of quality organization of educational and methodological activities is also of urgent importance.

The Decree of the President of the Republic of Uzbekistan dated January 28, 2022 "On the Development Strategy of New Uzbekistan for 2022-2026" No. PF-60 [2] educational programs until 2026 and fully revising textbooks based on advanced foreign experience and implementing them (goal 47), in particular, 699 new textbooks and exercise books by 2026, including 296 new textbooks in 2022 based on the national curriculum , teaching methodology books and creation of mobile applications are identified as urgent tasks.

Therefore, it is becoming a requirement of the time to organize the activities organized in the field of biology, as well as all subjects, with the help of electronic educational resources and to create targeted electronic educational resources. Among the electronic educational resources developed and used in educational processes today, electronic textbooks are of great importance. Because e-textbooks help students to increase their level of learning, retain information in their long-term memories, and increase their information literacy.

An electronic textbook is created by a creative team consisting of a programmer, a designer, a stylist and a textbook author, based on the current DTS, curriculum and programs, and approved textbooks [3].

Unlike traditional textbooks, electronic textbooks contain not only text, but also resources such as pictures, drawings, graphics, formulas, multimedia, animation, video, control questions and tasks, games, tests, puzzles. The electronic textbook has a certain structure, it contains functions such as searching for the necessary information, quick opening, repetition. Features of electronic textbooks, such as fading, highlighting, underlining, and sound, have a strong influence on students' mastery of subject materials. In order to solve these problems, it is necessary to improve the quality of the provided information and create a number of opportunities in the electronic textbook, with the help of which it is possible to change many parameters. [4].

Electronic textbooks can be used directly in the educational process and for independent education outside of class. When electronic textbooks are used in biology classes, students will have the following positive opportunities:

- availability of a list of questions at the end of each topic;
- simple and easy to use;
- the program is structured in a communicative form;
- enriched with video and audio information;
- the text part is created automatically;
- the presence of a department for monitoring students' knowledge;
- that the rules for using the electronic textbook are covered.

E-textbooks are educational literature based on the use of computer-based learning methods and the comprehensive and effective mastering of educational material related to science, and they can be applied to one of the following four levels.

Level 1: an electronic textbook that presents educational material only in verbal (text) form;

Level 2: an electronic textbook that presents educational material in verbal (text) and graphic (picture) form;

Level 3: a multimedia textbook, i.e. a multimedia electronic textbook in which information is presented in three-dimensional graphic form, sound, video, animation, and partially verbal (text);

Level 4: the material is not only audio and three-dimensional, but is presented through tactile (perceptible) information, allowing the learner to enter the real world depicted in a stereoscopic "screen world" and the objects in it. an electronic textbook that creates an image of movement in relation to objects [5].

According to researchers, electronic textbooks are distinguished by the following main features [7]:

– to ensure high-quality education and training;

– creation of the possibility of independent education and independent evaluation of acquired knowledge;

– combination of lecture and practical training;

– existence of the possibility of development and rapid updating of information-educational resources;

– presentation of text and other information materials through special navigation (hypertext) and illustration (multimedia tools, pictures, diagrams and tables).

Speaking of modern e-learning resources, here we will briefly touch on video lessons. As we know, a video lesson is a short-term clip created to explain a certain formula or process. The format is similar to a TV show. For such video lessons, a perfect and thorough script is

prepared in advance. When taking a video lesson, every sentence spoken and elements shown in the frame are planned in advance.

The general requirements for creating a video tutorial are as follows:

1) Scientific - the scientific basis, correctness, depth and latest scientific innovations of educational materials;

2) Conformity to the age and psychophysiological characteristics of students, that it is explained at an average speed in a fluent language that is understandable to the student;

3) Visibility - to achieve a good reception of the educational material covered by the video lesson by students;

4) To guide and encourage students to study independently;

5) Systematic - i.e. there should be a bridge for deepening the topic to be covered and moving on to the next topic by reminding the previously covered topic;

6) To enable solid mastering of the subject;

7) Adaptive - adapting to the pace of the student's acceptance of the learning material;

8) Interactive - using methods that activate the student within the scope of the possibility.

9) Observance of copyright, that is, when using video lessons from the Internet and other sources, note the author, translate or obtain permission for use within the scope of the possibility;

10) Observance of ethical rules in covering the video lesson.

In conclusion, it can be said that the organization of biology education on the basis of electronic information educational resources, rapid updating of educational materials based on the latest achievements of science, and similar advantages, that electronic from traditional means the superiority of the resource is evident in its "intellectual" power, as well as its ability to provide information at the right time and in the right place.

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