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THE USE OF INTERACTIVE EDUCATIONAL RESOURCES AND MULTIMEDIA TOOLS IN THE ORGANIZATION OF CLASSES "AGE PHYSIOLOGY AND HYGIENE"

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Abstract: This article analyzes the effectiveness of using interactive educational resources and multimedia tools in teaching the subject "physiology and hygiene of age", its importance for increasing students' interest in the subject, deeper assimilation of the content of the subject. In the educational process, it has been shown that digital technologies and visual effects make it easier to explain complex concepts related to physical and psychological development.

Keywords: interactive learning, multimedia tools, age physiology, hygiene, didactic materials, digital technologies, efficiency, innovative methods.

Introduction; the use of interactive methods and multimedia tools in the modern educational process increases pedagogical effectiveness. Especially in applied disciplines such as age physiology and hygiene, students benefit greatly from visual and audio materials in understanding and comprehending the subject [1, B.3]. On the other hand, interactive resources encourage students to actively participate and develop independent thinking skills.

Animated video tutorials are interactive learning tools based on visual and auditory material. They make the learning process for students fun, understandable, and effective. Especially when teaching biological and physiological processes, it is possible to explain complex topics in a simple, visual way using animation.

Thanks to these lessons, students will have the opportunity to:

- Exhibitionism: complex systems such as the organ system, blood circulation, and respiration are demonstrated in motion [2, B.8].
- Self-study: The student will have the opportunity to learn the lesson individually by watching it over and over again.
- Attention retention: Movement and color make it easier for students to keep their attention.

it plays an important role in control. They allow you to quickly and accurately verify the knowledge gained by students during the lesson.

Through such platforms:

• Students can complete test tasks anytime and anywhere, which develops their independent reading skills.

• The results are analyzed automatically, which saves the teacher time and ensures transparency in the assessment [3, B.27].

• An individual approach is possible: each student is provided with appropriate test options according to the level of difficulty.

Interactive presentations are a modern educational tool that allows you to visually and logically present a topic in the learning process, attracting students to actively participate in the lesson. Classes using interactive presentations attract the attention of students 1.5–2 times more than traditional slide presentations, and have a higher level of memorization of knowledge.

Through these presentations:

- Complex topics are revealed in stages, which makes it easier to master the topic.
- The teacher creates an interactive environment by combining graphics, animation, video, audio, and test elements.
- Students directly participate in activities such as questions and answers, button presses, and choosing the correct answer [4, B.17].

Modeling is an interactive educational tool based on virtual modeling of real processes and phenomena. Thanks to them, students have the opportunity to combine theoretical knowledge with practice.

Simulation technologies:

- Helps to safely and visually study physiological processes that are difficult to demonstrate in difficult or real-world conditions [2, B.21].
- Develops the student's observation and analytical skills by conducting experiments and laboratory work in a virtual environment.

• Allows you to interactively control the mechanism of functioning of body organs using a 3D model, providing deep understanding [4, B.26].

 Table 1. Advantages of using interactive resource

Interactive resource type	Advantages
Animated video lessons	Visually demonstrates body structure and functions
Online test platforms	Allows for monitoring and analysis
Interactive presentations	Allows you to master topics step by step
Simulations	Allows you to perform practical experiments virtually

The influence of multimedia tools on the learning process: with the help of multimedia tools, including graphic images, animations, interactive models, students achieve a visual

understanding of the functions of body organs and hygienic requirements. This is especially effective in teaching physiology to school-age children [3, B.18].

An analysis based on teacher feedback: The survey showed that 85% of teachers reported improved lesson effectiveness through interactive educational resources. The participation of children was especially high in online laboratory research [4, B.22].

Online laboratory work is an interactive form of learning that allows performing physiological processes and hygienic research in a virtual environment close to real life, remotely. They greatly help students combine theoretical knowledge with practice, develop observation and analysis skills.

Advantages:

1. **Experience in a safe environment:** for example, processes such as measuring blood pressure, monitoring heart rate, or studying breathing rhythm are performed virtually without risk.

2. **Realistic simulation:** using processes based on 3D models, it is possible to monitor the activity of the heart, lungs, and brain. This makes it easier to understand biological processes.

3. The possibility of conducting the experiment over and over again: the student can repeat the laboratory work at any time, analyze the errors.

4. Analysis of hygiene standards: students perform virtual tests to study the hygiene of water, air, food, and determine the degree of their contamination.

For example, completed online tasks:

- Simulation of measuring heart rate after physical activity.
- Interactive analysis to check the composition of food products.
- Comparison of the effects of personal care products.
- Monitoring changes in blood pressure and respiration in stressful situations.

Pedagogical significance: This type of laboratory work teaches students scientific thinking and independent research. It also forms the skills of using modern technologies [1, B.24].

Results

• Interactive and multimedia tools increase students' interest in the subject.

• When mastering a topic, the result is improved through visual presentations, simulations, and tests.

• Innovative methods are becoming the main tool in strengthening knowledge as the quality of education improves.

Conclusion: the use of interactive and multimedia tools in the lessons of "age-related physiology and hygiene" revitalizes the learning process, increases student engagement and promotes in-depth knowledge of the subject. Thanks to the use of modern technologies in education, not only the cognitive, but also the educational process is being improved.

Used literature:

1. Karimova G. "Innovative pedagogy", Tashkent: Uchitel, 2021. – 150 P.

2. Abdullayeva N. "Modern educational technologies", Samarkand, 2022. 128 P.

- 3. Kholmatov A. "Fundamentals of hygiene", Tashkent: nauka, 2020. 175 P.
- 4. Turakulov R. "The role of multimedia in education", Andijan, 2021. 90 p.