

INTERACTIVE TECHNOLOGIES FOR INDIVIDUAL STUDENT ACTIVITY

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ABSTRACT

This article discusses the increasing emphasis on interactive technologies in modern higher education, highlighting their role in individualizing the learning experience and fostering crucial skills such as creative thinking, analytical abilities, and independence. It outlines various interactive tools, including interactive whiteboards, virtual laboratories, online learning platforms, educational gaming technologies, and personalized adaptive programs, all of which contribute to enriching students' engagement and accommodating diverse learning styles.

Introduction. In the modern educational process, the emphasis is shifting towards the use of innovative teaching methods, among which interactive technologies deserve special attention. They provide unique opportunities for individualizing the educational experience of each student, creating personalized environments that promote the development of creative thinking, analytical skills, and independence. In this context, individualization becomes a key element of learning, and interactive technologies become an effective tool for actively engaging students in the educational process. In this text, we will examine how these technologies contribute to the development of individual student activity and what practical applications they have in the modern educational paradigm.

In higher education, modern interactive technologies have a significant impact on students' individual activities, enriching their learning experience. One of the most widely used tools are interactive whiteboards, which allow teachers and students to actively interact with lesson content, create dynamic presentations, and solve problems as a group.

Virtual laboratories and simulators are also an important element, providing students with the opportunity to conduct experiments and analyze results in a virtual environment. This is especially relevant for students studying sciences where access to real laboratories may be limited.

Online platforms for learning and information exchange are also an integral part of modern university education. They provide students with access to extensive knowledge and enable them to communicate and collaborate in real time, which contributes to the development of individual research skills.

Gaming technologies in education are also finding their place, stimulating the learning process through elements of competition, interaction, and creativity development. Personalized educational programs based on adaptive technologies allow students to study materials at their own pace, taking into account their individual needs and level of preparation.

Thus, interactive technologies in higher education create unique opportunities for individualizing learning, supporting diverse student learning styles and stimulating the development of their individual skills and interests.

Literature and methodology. In the 17th century, J. A. Comenius put forward the principle of clarity in teaching, emphasizing the importance of presenting material in such a way that it can be perceived by the senses. Nowadays, with the development of technologies such as television, computers, and mobile phones, this principle has become particularly relevant. Using modern devices such as computers, tablets, and interactive whiteboards, teachers can make the learning process more interesting and relevant to the psychological characteristics of the current generation of students.

The current generation of students, known as the “network generation,” is characterized by its daily use of digital devices, constant viewing of television programs, and free access to the Internet. These factors have made them more receptive to visual information, preferring images to text and showing a tendency toward inductive and visual thinking. As a result, traditional teaching methods based on a verbal approach have become less effective.

The introduction of computers into the learning process has significantly expanded the possibilities for using visual aids. In lectures and practical classes, teachers can successfully use computers to explain material, demonstrate examples, and assess students' knowledge. This is especially useful when teaching subjects not related to computer science.

Thus, the use of modern technologies in the educational process, such as computers and interactive whiteboards, helps to make learning more attractive and relevant to the needs of today's students.

Visual and conditionally graphic materials, such as tables, diagrams, drawings, graphs and diagrams, play a key role in activating students' mental activity when studying educational material. In modern computerization conditions, these computer-reproduced materials have greater attractiveness and brightness, and can also be easily adapted to the needs of the teacher, allowing them to adjust their quantity, order, size, and even the way they are presented.

The advantages of using a computer to create illustrative materials include the ability to visually and effectively present abstract or complex concepts, which can be difficult to perceive with traditional teaching methods. In addition, the use of visual materials can enhance the interest of students and contribute to a better assimilation of educational material.

Discussion. Today, many teachers realize the importance of using computers and video projectors in lectures. Many of them develop presentations that contain not only textual, but also visual material designed for students to better understand the information presented.

However, in addition to the advantages, teachers face some difficulties, such as misalignment of students' perception of audio and visual components of information. In

particular, students prefer to familiarize themselves with the visual material first before listening carefully to the teacher's comments. This feature of students' behavior can be effectively overcome using electronic tablets or interactive whiteboards.

The interactive whiteboard is a touchscreen connected to a computer and a projector. This allows the teacher to stay in the spotlight, interact with the audience, control the presentation process, and make changes to materials directly during class. This approach not only eliminates the mismatch between audio and visual components, but also makes learning more interactive and attractive for students.

The interactive whiteboard provides two modes of operation: a simple projection, where the contents of the monitor screen are displayed, and a mode of operation in the interactive whiteboard program, where you can create your own documents. When the program starts, an empty page and toolbar are displayed. To switch to the simple projection mode, you need to stay in the program and use the PC Screen tool.

After navigating to the desktop, the contents of the computer desktop and a limited toolbar are displayed. In this mode, working on an interactive whiteboard (tablet) is similar to working on a computer screen.

In the simple projection mode, it is convenient to work with text documents, highlighting individual fragments such as definitions, formulas, drawings and diagrams. To attract the audience's attention, you can use tools such as a magnifying glass and an opaque screen, which are pre-selected from the program menu.

The term "virtual laboratory" refers to a set of computer information that can replace the actual conduct of laboratory work on a real laboratory installation during the educational process. At the same time, an important condition is the preservation of high-quality assimilation of educational material by students.

Conclusion. Modern information technologies ensure the simplicity and convenience of transferring various types of educational and methodological information to students in electronic format. This includes training manuals, methodological materials, high-quality photographs of laboratory equipment, videos demonstrating laboratory work, databases with measurement results, samples of accounting documentation, as well as examples of test tasks.

This approach allows students to effectively use electronic resources for learning, and also makes the learning process more interactive and accessible.

Information is now not limited to viewing on ordinary computers and laptops, but can be played back on modern DVD players and high-resolution digital televisions, as well as on mini-screens of mobile devices such as phones, smartphones, cameras and communicators. It is noted that students often prefer educational materials in photographic formats (JPG, BMP, etc.) than regular text files in editors.

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