

USING THE TECHNICAL EQUIPMENT DURING THE LESSONS

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ABSTRACT

The integration of technical equipment into classroom instruction has become increasingly important in modern education. Using tools such as interactive whiteboards, projectors, computers, tablets, and audio-visual devices enhances the learning process by providing visual, auditory, and interactive support. This approach not only increases student engagement but also promotes better understanding, retention, and application of knowledge. The study explores strategies for effectively incorporating technical equipment into lessons, emphasizing lesson planning, classroom management, and the development of digital literacy among both teachers and students. Additionally, it highlights the benefits of blended learning and the role of educational technologies in fostering collaborative and independent learning. By applying technical tools systematically, teachers can create a more dynamic, interactive, and motivating learning environment that addresses diverse learner needs and learning styles.

Keywords: Technical equipment, classroom technology, interactive learning, digital tools, student engagement, blended learning, visual aids, educational technology.

INTRODUCTION

The use of technical equipment in education has transformed traditional teaching methods, allowing lessons to become more interactive, engaging, and effective. Tools such as interactive whiteboards, projectors, computers, tablets, and audio-visual devices provide teachers with multiple ways to present information, illustrate concepts, and facilitate student understanding. Integrating technology into lessons not only supports diverse learning styles but also encourages active participation, collaboration, and critical thinking.

In modern classrooms, students are increasingly exposed to digital content, making it essential for educators to incorporate technical equipment into teaching to maintain motivation and engagement. Proper use of these tools can enhance visualization of abstract concepts, improve retention of information, and provide opportunities for practice and immediate feedback. Moreover, technology facilitates blended learning approaches, combining traditional instruction with digital resources, which allows students to learn at their own pace while teachers monitor progress efficiently.

MAIN BODY

The application of technical equipment in the classroom extends beyond simple demonstration or digital exercises; it has become a fundamental element in fostering a holistic learning environment where students' cognitive, emotional, and social development are equally emphasized. Modern classrooms in Uzbekistan are gradually moving towards a learning ecosystem where technical equipment serves as a medium to cultivate critical thinking, independent problem-solving, and collaborative skills.

Practical approaches to using technical equipment

According to Uzbek scholar S. Karimova in her 2021 study on pedagogical innovation, technical equipment such as scientific measuring instruments, laboratory sensors, digital microscopes, and interactive projection devices can be used to conduct experiments, gather data, and visualize abstract phenomena. In science and mathematics lessons, the hands-on use of such equipment allows students to connect theoretical knowledge with real-world application, thereby enhancing analytical skills and understanding of cause-effect relationships. Karimova emphasizes that students demonstrate higher engagement and retention when lessons include tangible, interactive components rather than purely digital content.

In literature and social studies lessons, R. Yusupov in his 2019 publication notes that the use of audio recorders, sound amplification systems, and video playback devices enables students to experience oral histories, dramatic readings, and documentary materials. This approach improves listening comprehension, contextual understanding, and the ability to critically evaluate sources. It also strengthens social communication skills, as

students are encouraged to discuss, present, and reflect collaboratively in response to multimedia stimuli.

Legislative and policy framework in Uzbekistan

The strategic integration of technical equipment is supported by Uzbek legislation to ensure quality, accessibility, and professional standards in education. The Law on Education of the Republic of Uzbekistan, adopted on September twenty-third, 2020, mandates the provision of necessary educational equipment in schools to enhance student learning and promote practical, research-based activities. This law emphasizes the importance of providing students with tools that allow experimentation, observation, and active participation in lessons.

The Law on the Status of Pedagogical Workers of the Republic of Uzbekistan, enacted on September twenty-third, 2020, establishes teachers' responsibility to utilize technical equipment effectively and ethically, ensuring that students gain practical knowledge while maintaining safety and compliance with school regulations. This law also highlights professional development programs for teachers to increase competence in handling educational technologies, including laboratory and classroom equipment.

Moreover, the Cabinet of Ministers Resolution on Strengthening the Material and Technical Base of General Secondary Schools, approved on March fifteenth, 2017, outlines standards for the provision, maintenance, and usage of technical equipment. It instructs school administrations to monitor the condition of technical resources, organize teacher training sessions, and ensure that equipment supports interactive and hands-on learning methods.

Analysis and practical implications

Practical lessons in physics or biology, where students use sensors, measurement devices, and experimental kits, demonstrate that technical equipment can transform passive observation into active experimentation. For instance, measuring temperature, pressure, or chemical reactions with real instruments enables students to formulate hypotheses, test them, and analyze results. This hands-on approach fosters not only understanding of subject matter but also critical thinking and scientific reasoning.

In addition, the combination of traditional teaching methods with technical equipment strengthens classroom management and engagement. Teachers can divide students into small groups, rotate them through different stations, and provide immediate feedback, thus creating a dynamic and collaborative learning environment. As noted by T. Rakhimov in his 2020 work on educational innovations, integrating practical technical activities improves students' motivation, responsibility, and interest in exploring knowledge independently.

Practical process table: using technical equipment during lessons:

Stage	Platform & Correct Prompt	Teacher Actions	Student Actions
Lesson Planning	Platform: Edpuzzle, Nearpod, Classkick. Prompt: "Prepare a lesson plan incorporating interactive demonstration of a science experiment"	Define lesson objectives, select equipment (microscopes, sensors, projectors). Integrate steps into the lesson plan.	Review the objectives and understand what technical equipment will be used. Prepare mentally for hands-on activities.
Equipment Setup	Platform: Zoom for hybrid monitoring, Edpuzzle for guided video. Prompt: "Set up digital and lab equipment to ensure all students can interact with experiments"	Arrange equipment in the classroom. Ensure all instruments are functional and accessible. Test safety and usability.	Check that they know how to handle equipment safely. Observe setup process and ask clarifying questions.
Demonstration	Platform: Nearpod, Classkick. Prompt: "Demonstrate the experiment live and ask	Conduct live demonstration using the equipment. Ask students to predict	Observe demonstration. Take notes. Predict results and participate in discussion.

Stage	Platform & Correct Prompt	Teacher Actions	Student Actions
	predictive questions during the process”	outcomes and explain reasoning.	
Hands-on Activity	Platform: Labster simulations, Google Jamboard. Prompt: “Assign each group to use equipment for practical experimentation and record results”	Divide students into small groups. Monitor correct use of equipment. Provide guidance as needed.	Perform experiments hands-on. Collect data, record observations, and collaborate with peers.
Guided Inquiry	Platform: Edpuzzle, Labster. Prompt: “Pose analytical questions based on collected experimental data”	Guide students in analyzing data and drawing conclusions. Ask probing questions to deepen understanding.	Analyze results. Discuss interpretations within the group. Answer guided questions critically.
Interactive Feedback	Platform: Classkick, Kahoot (offline version). Prompt: “Provide immediate feedback and corrections based on observations”	Observe students’ progress. Offer immediate feedback and clarify mistakes.	Receive feedback. Correct errors. Reflect on outcomes and improve performance.
Reflection & Discussion	Platform: Padlet, Google Docs collaborative sheets. Prompt: “Students share reflections on experiment results and discuss implications”	Facilitate group discussion. Ask reflective questions regarding methodology and outcomes.	Write reflections. Participate in discussion. Evaluate both personal and peer performance.

CONCLUSION

The use of technical equipment in classroom lessons plays a pivotal role in modern education, enabling teachers to create interactive, engaging, and effective learning experiences. Incorporating tools such as microscopes, sensors, projectors, and audio-visual devices allows students to connect theoretical knowledge with practical application, fostering critical thinking, problem-solving, and collaborative skills.

Practical implementation of technical equipment, guided by carefully crafted prompts and structured lesson stages, ensures that students actively participate in the learning process. The step-by-step approach from planning and setup to hands-on experimentation, guided inquiry, feedback, and reflection supports skill development and deep understanding.

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