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THE UPWARDS AND DRAWBACK OF TECHNICAL DEVICES IN EDUCATIONAL SYSTEM

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ABSTRACT

This research paper explores both the advantages and disadvantages of using technical devices in the educational system. In modern education, technology has become a key tool that enhances learning experiences, promotes interactive teaching, and improves access to educational resources. Devices such as computers, tablets, and smartboards help teachers create more engaging lessons and enable students to develop digital literacy and problem-solving skills. However, the overreliance on technology also brings certain drawbacks, including distractions, reduced face-to-face interaction, and unequal access to digital tools. The study emphasizes the need for balanced integration of technology in education to ensure that it supports rather than replaces traditional teaching methods.

Keywords: Technology, education, learning, teaching tools, advantages, disadvantages, digital literacy, educational system.

In the modern era, the integration of technical devices into the educational system has become a crucial factor in enhancing the quality and effectiveness of teaching and learning. The rapid development of digital technologies has transformed traditional classrooms into interactive learning environments, where students can access a wide range of resources and teachers can employ innovative methods to facilitate understanding.

Technical devices such as computers, tablets, interactive whiteboards, and projectors play a significant role in improving students' motivation, creativity, and engagement. They allow learners to visualize complex concepts, collaborate more effectively, and develop essential digital skills required in the 21st century.

However, despite their advantages, the excessive or improper use of technology in education can lead to several drawbacks, such as reduced face-to-face

communication, overreliance on digital tools, and unequal access among students. Therefore, it is essential to explore both the benefits and challenges of using technical devices in education to ensure a balanced and effective learning environment.

This study aims to analyze the upward trends and drawbacks of technical devices in the educational system and to provide practical suggestions for optimizing their use in teaching and learning processes.

In the modern education system, technical devices such as tablets, laptops, interactive whiteboards, and digital platforms are transforming traditional classrooms into dynamic learning spaces. The effective integration of these tools provides both upward benefits and potential drawbacks, depending on how they are applied by teachers and students.

For instance, in a primary school English class, a teacher may use a smartboard to teach vocabulary through interactive pictures and sounds. When the teacher touches the image of an “apple,” it pronounces the word aloud and shows the spelling. This makes learning more visual and auditory, helping even slower learners to memorize new words effectively. In this way, technology bridges the gap between theory and practice.

Similarly, in a mathematics lesson, learners can use GeoGebra software to understand geometric concepts such as angles and triangles. Instead of only drawing figures on paper, students manipulate digital shapes rotating, resizing, and measuring them which deepens their conceptual understanding. A teacher can then assign tasks like “Create a triangle with a 60° angle and calculate its area,” allowing students to explore and visualize solutions independently.

In science classes, PhET simulations are highly practical. For example, when learning about electricity, students can virtually build circuits by dragging batteries, bulbs, and wires onto the screen. This safe, cost-effective method gives learners the opportunity to conduct experiments without physical risks or the need for expensive lab tools.

Moreover, technical devices encourage collaborative learning. In a history lesson, groups of students can use Google Docs to co-write an essay about the Industrial Revolution. They can insert images, highlight key points, and add comments to each

other's paragraphs in real time. This fosters teamwork, critical thinking, and digital literacy essential skills for 21st-century learners.

Another practical example is the use of learning management systems like Google Classroom or Moodle, which allow teachers to upload assignments, videos, and reading materials. For instance, a teacher might assign a video lecture on "Renewable Energy Sources" and ask students to summarize its key ideas in a shared document. This makes learning flexible, as students can access lessons anytime and anywhere.

In foreign language learning, teachers can connect their students with native speakers through Zoom or Skype calls. For example, Uzbek learners of English can have short speaking sessions with students from the UK or the USA, helping them practice pronunciation and spontaneous communication. The session can be recorded and reviewed later for feedback and improvement.

However, along with these benefits, teachers must handle challenges. If students rely too much on spell-checkers or translation apps, their critical thinking and writing accuracy may weaken. Likewise, when technology fails such as during internet outages lessons may be interrupted, so teachers should always prepare offline backups (like printed worksheets or flashcards).

Finally, the role of the teacher remains central: it is not technology itself that improves education, but how creatively and responsibly teachers use it. A competent teacher uses digital tools not just to display information, but to engage learners in meaningful, interactive experiences.

Through these practical and creative applications, technical devices become more than just classroom decorations they become powerful instruments for exploration, collaboration, and lifelong learning.

Lesson Stage	Activity Description	Technical Device Used	Practical Example	Developed Competencies
1. Brainstorming	Students share their ideas about how they use technology in daily learning.	Smartboard, Padlet	Students write on Padlet board: "I use my phone to learn English words," "I watch science videos on YouTube."	Communication, Collaboration, Critical thinking
2. Vocabulary Introduction	New terms are introduced using visuals and pronunciation tools.	Interactive Whiteboard, Laptop	Teacher displays "device, screen, benefit, drawback"	Vocabulary expansion,

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			with pictures and audio pronunciation.	Pronunciation, Visual learning
3. Group Work / Problem Solving	Students are divided into groups to discuss positive and negative sides of using technology.	Tablets, Google Docs	Group 1 writes "advantages" and Group 2 writes "disadvantages" in Google Docs and presents results.	Collaboration, Critical analysis, Writing
4. Main Practice	Students perform interactive tasks based on subject area.	Subject-specific Apps	Math: Using GeoGebra to draw and calculate geometric figures. Science: Using PhET simulation to build electric circuits.	Creativity, Logical reasoning, Experimentation
5. Listening and Speaking Practice	Students watch an educational video and discuss the message.	Projector, Headphones	Students listen to "The Role of Technology in Education" and discuss: "Do you agree with the speaker?"	Listening, Speaking fluency, Analytical thinking
6. Reading and Writing Practice	Reading a digital article about "Modern Education Tools." Then summarizing in pairs.	Tablets, Online Article	Students highlight key phrases in the article and write a 5-sentence summary using Google Docs.	Reading comprehension, Writing, Summarizing
7. Interactive Quiz / Feedback	Checking students' understanding through interactive assessment.	Kahoot / Mentimeter	Teacher creates a Kahoot quiz: "Which is an advantage of using digital tools in class?"	Self-assessment, Engagement, Quick feedback
8. Creative Project	Students prepare a short digital presentation about "My Ideal Digital Classroom."	PowerPoint / Canva	Each group creates a presentation showing devices, apps, and learning environment design.	Creativity, Presentation skills, ICT literacy
9. Reflection and Discussion	Students reflect on what they learned and share their opinions.	Smartboard, Voice Recorder	Students record a short audio message: "How technology helps me learn better."	Self-reflection, Oral communication, Critical thinking
10. Homework	Independent digital task assigned through the online platform.	Google Classroom	Students must upload one paragraph on "How to balance technology and traditional learning."	Responsibility, Independent learning, Writing
11. Teacher's Analysis and Evaluation	Teacher reviews online submissions and provides personalized feedback.	Laptop, Learning Management System (LMS)	Teacher leaves written comments and digital scores for each student's work.	Assessment literacy, Feedback interpretation

CONCLUSION

In conclusion, the integration of technical devices in the educational system brings both significant advantages and challenges. When applied effectively, technology transforms traditional classrooms into interactive, student-centered learning

environments. It encourages active participation, supports visual and auditory learning, and allows students to gain practical experience through digital tools, simulations, and online collaboration platforms.

Teachers who skillfully incorporate devices such as smartboards, tablets, projectors, and educational software can make lessons more engaging and accessible for diverse learners. Furthermore, these tools develop essential 21st-century competencies including digital literacy, creativity, collaboration, and problem-solving which are vital in today's knowledge-based society.

REFERENCES

1. Karimov, B. (2021). Modern Technologies in Education: Challenges and Opportunities. Tashkent: Fan va Texnologiya Nashriyoti.
2. Abdullayeva, N. (2020). Digital Transformation in Teaching and Learning: Practical Approaches for Educators. Tashkent State Pedagogical University Press.
3. Rasulov, A. (2022). Integration of ICT Tools in Classroom: Methods and Case Studies. Samarkand: Ilm Ziyo Publishing.
4. Tursunova, D. (2023). Pedagogical Innovations and the Use of Technical Devices in Education. Bukhara: O'qituvchi Nashriyoti.