Research of Modern Technology in Education and ICT Effects on Learning Environment

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Abstract

Almost every aspect of our life has been significantly impacted by technology, and education is no exception. One could reasonably assume that there hasn't been much of an evolution in schooling over the years. Photographs of classrooms from many decades ago may look somewhat familiar to you since they are so similar to schools in use today. The pupils are sat in the back of the room, their books open, while the instructor lectures from the podium. Some may be conversing to one another, some may be staring at the teacher, and some may be on the verge of dozing off. Classes are very much the same now. However, one of the most significant differences is that the pages of hardcover books have been replaced by the screens of numerous contemporary devices. There are numerous additional areas where technology has had an impact in addition to this one. Let's examine the various ways that technology has affected our lives.

Key Words: Education, Modern, Technology, Teaching etc.

Introduction

The twenty-first century is commonly referred to as the "technological era." Our daily existence would be nearly impossible without the advancements made possible by modern technology.

It is regarded as the cornerstone that might support economic expansion. An economy that does not adapt to the rapid advancements in technology would inevitably remain stagnant in today's high-tech environment. This is because technology has increased productivity while also making our chores easier to complete. Technology's influence may be seen in a wide range of fields, including education. This field is only one example. Daily technological breakthroughs are revolutionizing how people work, play, and communicate. It should therefore not be surprising that the educational landscape is undergoing major changes as a result of recent developments in digital technology.

Using contemporary technology in the classroom

It has been shown in recent studies that pupils enjoy using technology and that it improves learning. This finding is pertinent given the research's focus on student learning and engagement. Children find it more engaging and inviting to participate when technology is used. This directly leads to the simplification, facilitation, and efficiency of information circulation. This is a positive development since technology speeds up our brains' ability to process information in many areas of life, including schooling. Students now know how to rely on modern technology that makes life easier and more enjoyable. Even at academic establishments like colleges, universities, and schools, this is true. Students in today's environment may use technology in a variety of ways, some of which are listed below:

- **Internet connection and round the clock connectivity**

Over the past ten years, the internet's significance has increased at an exponential rate. The significance it has in the academic community can no longer be understated. Students benefit much from having access to the internet, even though there are risks of fraud and other drawbacks. Nowadays, the internet has a significant impact on almost every aspect of our life and is ingrained in our daily routines. Our phones, game consoles, television sets, and other electronic devices are all somehow connected to the internet. Because the internet is so widely available, students can easily access a wide range of resources, such as walkthroughs and other extra materials, which helps them improve their academic performance and progress.

- **Using projectors and visuals**

When you want to make someone feel something, pictures are always more powerful than words. Giving students projectors and other visual tools to help them with their schoolwork is another amazing way that technology is used. Some of the world's best colleges now use dynamic PowerPoint presentations and projections to keep students interested in what they are learning. In educational settings like schools and colleges, using projectors might get students more interested, motivated, and involved. Students are more willing to learn new things when they can see what they are reading instead of just reading words. Better technology has also made the process of learning easier.

- **Digital footprint in the education sector**

Digital technologies are being used more frequently than ever before in classroom instruction. A growing number of students are using online forums and communities to get 24/7 help with their homework and other obligations. As a result of the digital age's limitless potential, an increasing number of applications are being created to support students' learning and growth.

- **Online degrees with the use of technology**

These days, it's not unusual to see students completing their degrees completely online. In order to advance their education or obtain professional certifications, many people are thinking about taking online courses. Many online programs are currently offered by the best universities in the world, and they can all be conveniently accessed through a variety of web-based and mobile platforms. When more people become aware of and support this idea, the numbers will continue to rise. Online degree programs are popular among students who work full-time because of the flexibility they provide.

Benefits of Technology in Education

The integration of technology in the classroom has a number of advantages. The following is a list of many.

- **Creates a more engaging learning environment**

Without technology, students could be less likely to speak up in class. In contrast to traditional classroom settings where they must interact with their peers face-to-face, online learning environments may allow some students to speak up more easily. Many courses have online

discussion forums that could be useful to students who would rather write down their ideas than discuss them in person. Furthermore, when the lessons are delivered in a style that is both participative and interesting, children will learn far more easily. Additionally, it could help students interact with one another. Some people might feel better at ease asking for help from their coworkers online rather than in person.

- **Improves collaboration**

Teachers said that when technology is used in the classroom, students are more inclined to collaborate. Compared to lecture-based classrooms where students sit passively and wait for the teacher to distribute the information for them, students are more likely to collaborate when technology is introduced into the classroom, and more content is retained.

- **Incorporated different learning styles**

There will never be two pupils who are exactly alike. Everybody learns in a different way. This makes it difficult for teachers to create a lesson plan that appeals to all students. Thanks to technical improvements, this is now possible. In the classroom, students who learn best by listening to lectures on videos or podcasts are served; those who learn best visually are served by the use of pictures; and those who learn best independently are served by online learning. Teachers can experiment with new teaching methods when they employ technology.

- **Boosts student motivation to learn**

We'll want to do it more if we're enjoying it. That's all there is to it. As a result of technology's beneficial benefits, students will be more motivated to learn. Today's students have grown up with electronic media in one way or another. They find it quite helpful and don't have any problems with it. While technology encourages students who are not interested in learning to find a way to make studying more fun or doable, it also helps students who are really interested in learning stay that way.

- **Makes self-paced learning possible**

Nonetheless, students must follow rigorous school procedures. However, technology is assisting in the relaxation of these limitations. Students can create their own study schedules with the use of contemporary resources. Self-paced learning has made education accessible to

a large number of people worldwide. Self-paced online learning has made it possible for many people who would like to pursue degrees like online MBAs but lack the time and resources to attend college.

Technology is also helping teachers customize their lessons to meet the unique needs of their students.

Impact of ICT on education

ICT has the potential to enhance education's effectiveness and quality while also broadening its reach. Tinio (2002) asserts that teachers and students alike gain from the development of...

- **Active learning**: Information and communication technology (ICT) makes it easier to compute and analyze exam results and create performance reports for pupils. Students who have access to digital learning materials demonstrate a considerable increase in interest and participation when compared to those who are taught using more traditional methods like memory or drill and practice.

- **Collaborative and Cooperative learning**: Thanks to improvements in information and communication technology (ICT), distance learning is no longer an issue for students and teachers who want to work together and talk to each other. Students learn important intercultural conversation and worldview skills when they work in groups with people from different cultures. When ICT is used in and out of the classroom, both teachers and students are more likely to follow through on talks. People learn more about themselves, respect others, and how to take responsibility for their work when they work together.

- **Creative Learning:** Technology for information and communication (ICT) can change something real into something new, or it can change a set of knowledge into something new that can be used to help teach.

- **Integrative learning**: ICT removes the artificial wall between theory and practice, which leads to a more integrated way of teaching and learning than the standard classroom, which focuses on just one thing at a time.

- **Evaluative learning:** Through a range of interactive components, ICT is employed in education in a student-centered, participative manner that offers insightful feedback.

Students may utilize ICT to conduct their own research and learn in ways that align with constructivist pedagogical paradigms, as opposed to depending solely on memorization, drill, and practice.

Positive impact

1. **Enhanced Teaching and Learning**:
   - To help students understand ideas, teachers can use a range of tech tools, such as computers, mind-training software, Power Point presentations, digital cameras, and 3D visualization tools.
   - Keep in mind that when topics are presented graphically, kids are more open to learning. Students can engage in more active participation in the classroom, and teachers can make their lessons more engaging while doing so.

2. **Globalization:**
   - Video conferencing enables students from across the state to interact in the classroom.
   - To assist students in learning a second language, certain programs, such as www.glovico.com, match them with a tutor in another nation.

3. **No Geographical Limitations:**
   - Attending classes in person is no longer necessary with the introduction of online degree programs. An increasing number of universities, including those worldwide, are offering students the choice to complete their degrees totally online.In today's educational system, remote and online learning are becoming more and more important.

   Conclusion

A vast array of instruments used to encourage student participation and information retention in the classroom are referred to as educational technology. In the classroom, teachers can utilize technology to make interactive digital textbooks, gamify their classes to keep students engaged, monitor attendance, assign homework, and administer tests and quizzes that provide them instant feedback on how well their lessons are being retained. The development of educational technology, which enables students to learn using portable devices like smartphones and

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tablets, is "challenging traditional methods of instruction." Both positive and negative effects of technology on the classroom are possible. In order to overcome the barriers preventing so many children and schools from realizing their full potential, educators and students should seize this chance. All nations will therefore need to incorporate more advanced technology into their educational institutions in the not-too-distant future.

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