

Benefits and Use of Technology in Instructional Process

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Abstract: *The use of technology in the classroom has made learning easier and more pleasurable for the students. Teachers and educational institutions use AR/VR technologies, AI-based applications, and devices to fully immerse students in the learning process. Web 2.0 technologies provide an assortment of opportunities for social interaction and collaboration amongst professionals, subject matter experts, educators, students, and many others throughout the globe. Education is greatly impacted by technology, which includes computers, media, machines, and communication. The ways that technology is being used in education are always evolving and include web-based education, cloud-based education, blended learning, online learning, multimedia in the classroom, and e-learning.*

Keywords: Teaching-Learning Process, Technology in Education, Use of Technology, Web 2.0 Technologies

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Introduction

There are several benefits to use technology in the classroom. Everyone involved in the industry benefits from it, including students, schools, and education providers. Students' learning has become more enjoyable and easy to the usage of technology in the classroom. To immerse students in learning, educators and educational institutions are utilizing AR/VR technologies, AI-based tools, and devices. The lessons and homework are becoming more interesting to the students. Their grades and academic performance are undoubtedly improved accordingly.

To put it succinctly, technology is steadily transforming education for the better. It is mixing with traditional classroom methods of instruction, not completely replacing them, to better prepare pupils for the fast-paced world of technology.

One of the tools of education is teaching, and one of its unique purposes is to transfer knowledge and skills. Encouraging meaningful and successful learning is the primary goal of teaching. Teaching would result in the completion of the learning process; therefore, there is a close relationship between teaching and learning.

The act of educating or teaching another person is known as teaching. Offering directions to students both inside and outside of the classroom is seen as teaching. The process of teaching and learning is an integral element of the educational system. The goals and objectives of the teaching and learning process influence the entire educational system.

Nevertheless, technology plays an immense role in schooling. It is made up of communication, media, machines, and computer networks. The use of ICT in education has led to the evolution of new pedagogies. The ways that technology is being used in education are always changing and include e-learning, online learning, blended learning, and multimedia in the classroom, web-based education, and cloud-based education.

The use of computer-aided instruction to support teaching and learning emerged with the advancement of computers. To educate a particular target demographic, specially designed learning materials were utilized. We may produce instructional content using information technologies and disseminate it using communication technologies.

Teaching-Learning Process

The literal meaning of the teaching-learning process, also known as the education process, is a methodical, planned sequence of events that both the instructor and the student follow in order to achieve the objectives of teaching and learning.

To accomplish the educational goals and objectives, the curriculum, the teacher, and the learner are arranged methodically throughout the teaching-learning process. In contrast to a performance, which is a witnessed behavior, response, or action, learning is an inferred process. Both childrearing and school learning involve the application of learning concepts.

Role and Significance of Technology in Education

The role of technology in education is vital as well as it is significantly inevitable in the present scenario. In a Gallup study titled "Education Technology Use in Schools," over 65% of participants said they regularly use digital teaching resources. It is impossible to ignore how quickly technology is advancing in education since it is happening all across the world.

Technology is changing how organizations and businesses function across all industries. Technology has shown to be advantageous and transformative, especially in educational contexts. Three key functions of technology in education are better teamwork and communication, individualized learning, and interesting content.

Students' learning experiences are improved by technology because it gives them the materials and tools they need to be successful. Technology gives pupils the tools they need to succeed in the classroom and beyond, from interactive learning experiences that keep them interested to online resources that assist explain difficult topics.

Thus, these are just a few of the elements that make technology so important to education. They include improved cooperation, more immediate feedback for teachers, and support for various learning styles, more engaged students, and future readiness.

Technology in education has a promising and exciting future. Artificial intelligence, machine learning, virtual and augmented reality—technology is rapidly advancing, and there is yet a long way to go. With the ability for students to fully engage in interactive learning, virtual and augmented reality will soon become essential components of the educational process. Stronger tech skills, more enriched cooperation, more pleasurable learning experiences, stronger relationships, greater feedback, and lower costs are some advantages of using technology in the classroom.

Another significant factor will be artificial intelligence, with chatbots and AI-powered instructors giving pupils immediate feedback and assistance. Additionally, machine learning will contribute to the personalization of the learning process, increasing its efficacy and efficiency.

In overall, technology has greatly impacted education and changed the way we learn. It has facilitated personalized learning, enhanced teamwork and communication, created new opportunities for creativity and innovation, and equipped students for the future. It will be interesting to watch how technology develops further and how it shapes and enhances the education system.

The Use of Audio-Visual-Technological Aids

Mr. Asokan Pichai, Senior Vice-President, Learning & Development in employee training company, TalentSprint, Hyderabad says, "Today technological aids are being used widely for teaching learners of all ages. For adult learning focused on employability and experiential learning programs, technical aids are indispensable!" (as cited by Kumar, P. and Durga, S.S, 2018)

The teaching-learning process makes use of a wide range of audio-visual-technological aids and instruments in addition to traditional teaching aids. In classes, seminars, or conferences, the utilization of gadgets and technology (TV, LCD/Film Projector, Film Strips, Tablet, or Computer) creates a productive and comfortable environment for both teachers and students. Due to the frenetic nature of modern life, the majority of students utilize mobile (smart) phones to learn a variety of subjects and communication skills. To facilitate this process, internet-connected mobile apps are employed for teaching and learning. (Kumar, P. and Durga, S.S, 2018)

Web 2.0 Technologies for the Process of Teaching and Learning

Students are encouraged to develop new information and remix and reuse existing resources by the Web 2.0 culture. Rather than merely absorbing knowledge from lecturers, students actively participate in their

education. It could result in more dynamic and effective learning settings where students take on the roles of knowledge producers, editors, assessors, and creators. It is also defined as the progression of the online learning application from a tool for consuming content, where instruction is provided, to a tool for creating content, where instruction is produced.

Furthermore, Web 2.0 technologies offer an abundance of chances for social engagement and cooperation amongst students, instructors, professionals, subject matter experts, and many others worldwide. Teachers, students, and others are encouraged and made possible to exchange ideas and work together in creative ways.

“Web 2.0 offers increasing opportunities for students to find and join communities of practice where they can acquire both deep knowledge about a subject (learning about) and the ability to participate in the practice of a field through productive inquiry and peer-based learning (learning to be)” (Brown and Adler ,2008).

Moreover, Web 2.0 technologies make it possible to create personalized learning environments, which are made up of a collection of applications that work together and support learning across a variety of contexts, such as formal education, the workplace, and informal learning. People can take charge of their education, manage it themselves, communicate and work with others to learn, and reuse and remix content to suit their own needs and interests in personal learning environments. Thus, the web 2.0 technologies can be effectively used for instruction and learning.

Benefits of Technology Used in Education

Although there are countless advantages to using technology in the classroom, the following is a brief list of reasons that could consider incorporating more digital technology into your knowledge:

- A greater range of educational resources
- An enjoyable and captivating educational experience for students
- Automation as well as robotics
- Creativity and inventiveness
- Develops the Potential for Distance Education
- Educates pupils about potential futures
- Enables learners to improve their mental health
- Encourages cooperation
- Enhanced effectiveness and output
- Enhanced health care
- Enhances adherence and motivation
- Enhances students' communication abilities
- Gaining Knowledge and Developing New Skills
- Improved instruction
- Improves the efficiency and ease of teaching
- Keeps pupils informed about the most recent developments in technology
- Provides teachers with instant feedback
- Quicker information availability and communication
- Simplifies instructional strategies
- Supports for a variety of learning approaches
- Supports students in gaining new information and abilities and so on.

Conclusion

The transfer of knowledge and skills is one of the unique goals of teaching and one of the instruments of education. There is a close association between teaching and learning since teaching would lead to the completion of the learning process. Web 2.0 technologies offer an abundance of chances for social engagement and cooperation amongst students, instructors, professionals, subject matter experts, and many others worldwide. Thus, technology plays an immense role in schooling. It is made up of communication, media, machines, and computer networks. The ways that technology is being used in education are always changing and include e-learning, online learning, blended learning, and multimedia in the classroom, web-based education, and cloud-based education.

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