

Role of Information and Communication Technology in Education

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ABSTRACT

Today, ICT affects all aspects of human life. It plays an important role in human life like their business, education and entertainment etc. but in today's age it has major impact on the field of education. Education is a very social activity, and effective education has always been associated with strong teachers who have many personalized time with students. ICT use in the classroom is giving pupils the best chance to acquire and employ the skills necessary for the twenty-first century in this digital age. This paper's goal is to examine the benefits of using information and communication technology (ICT) in the classroom. Its quantitative research approach yielded findings that indicated successful ICT implementation is a crucial way to enhance the teaching and learning process. It focuses on the advantages and effects of ICT in the classroom.

INTRODUCTION

The benefit of using ICT as a tool for education can be seen in many different ways. Learners can access and process new information more easily and quickly; they are more motivated and more independent. Also, using ICT in education creates an effective teaching learning process. A new strategy needs to be designed with the conclusion of the effectiveness of ICT use in the classroom. The modernizing of schools and the development of education is important for both the present and the future of teaching and learning and also for developing the individual capital. Now the role of ICT in education stands for that we've reached a stage that it became a real fast and widely integrated tool for retrieving and producing information. The use of ICT in the classroom varies as it enables educators to present information in text, images, videos, and simulations that cater to diverse learning styles. Students can access knowledge from around the world, conduct research, collaborate with peers, and engage in self-paced learning.

In the field of education, information and communication technology (ICT) plays an essential role by incorporating digital resources into the learning setting, thereby enhancing both teaching and learning experiences. Whether through multimedia presentations, educational applications, or electronic textbooks, utilizing ICT in education involves harnessing technology to improve educational delivery and effectiveness. These technologies comprise computers, the Internet, email, web-enabled PCs, mobile phones, wireless devices, projectors, interactive boards, broadcasting technologies (such as television), and various interactive boards. Therefore, ICT can be defined as a system that collects diverse information or data for communication across distances using modern technology. The incorporation of ICT into education is viewed as having the potential to revolutionize the educational landscape through new technological systems. ICT is not only fundamental to the Information Age, but it also serves as a significant motivator and instrument for driving educational reforms that transition our students into effective knowledge workers.

CONCEPT OF ICT

ICT (Information and Communications Technology) is a generic term referring to various technological tools and resources, which are being used for creating, collecting, storing, editing, distributing and managing information in various forms. The digital technologies use communication media in order to provide required information at the right

time at right place. ICT comprises of IT (information Technology) and CT (Communication Technology). Information Technology is defined as the study or use of any electronic equipment or interconnected system for acquisition, storage manipulation, management transmission or reception of data or information. Communication Technology is defined as the study or use of any electronic systems for sending, receiving and exchanging information between individuals or groups. It facilitates communication between individuals or groups despite of not physically present at the same location.

NEED OF ICT

- To enable learning 'anywhere, anywhere and anyhow'.
- To generate new digital skills.
- To improve quality of learning.
- To create knowledge society.
- To increase productivity of students.
- To support sharing information with others.
- To break literacy barriers in communication.
- To promote technology literacy among society.

ADVANTAGES OF ICT IN EDUCATION

Individualized Learning

No student is the same; their learning speed can vary from others, which can present challenges to the educators in a traditional classroom environment. Technology in education enables children to learn at their own pace. Students that require more time to understand subjects and ideas are given full freedom to do so.

- **Improves knowledge retention**

ICT improves knowledge retention by making learning more interactive, effective, and engaging, providing access to a wider range of learning materials, and fostering personalized learning experiences. ICT can be used to create adaptive and personalized learning experiences, tailoring the pace and content to each student's individual needs, promoting deeper understanding and retention.

- **Boosts student involvement**

When technology is integrated into lessons, students tend to show greater interest in the subjects they are studying. Technology offers various opportunities to make learning more enjoyable, interactive, and exciting by presenting the same material in different ways. For example, teaching can be enhanced through games, virtual field trips, and other online educational tools. Technology can promote more active participation from students in the learning process, which may be challenging to achieve in a conventional lecture setting.

- **Collaborative Learning**

ICT-enhanced education promotes engaging experiences and collaboration among students, educators, and specialists, irrespective of their locations. In addition to face-to-face interactions, ICT-enhanced education offers the chance to collaborate with students from various cultures, which aids in improving learners' teamwork and communication abilities, as well as their awareness of global issues. It exemplifies lifelong learning by broadening the pace of education to involve not only classmates but also mentors and experts from various disciplines.

- **Upgraded classroom**
With the help of ICT teachers can built the classroom more dynamic and make the lessons more enjoyable for the students. Now the concept of smart classroom is gaining popularity.
- **Enables teachers to differentiate their teaching**
ICT ensures that educators are given the tools to focus specific resources and delivery systems to cater individual learning level. No longer are students constrained to the finite pages of a book, but are allowed to soar into an almost infinite learning area, expanding knowledge and creativity. These technologies are forever being updated and expanded upon, meaning lessons should never feel dull.
- **Global Exposure:**
With the help of ICT, global advancements become easier to learn as it equips individuals with the necessary skills to thrive in their chosen fields wherever needed. It allows students to connect with educators and peers worldwide, making education more accessible to all demographics. “The purpose of education is to encourage deep and critical thinking.” With this international exposure, raising awareness of cultural identity and sharing cultural knowledge becomes simpler, as does fostering a global understanding of various situations and challenges.

CONCLUSION:

The integration of information and communication technology is transforming the way in which students acquire knowledge. It is enhancing the learning process for both students and educators, making it more effective and efficient. ICT tools in the educational sector facilitate teachers in employing optimal strategies that help maximize students' understanding. Additionally, it allows schools to deliver education in the most effective manner possible. Furthermore, technology enables the seamless management of all administrative and management tasks. Therefore, it is unmistakably a significant advantage to the education sector. In summary, the role of ICT in education has changed the dynamics of learning and teaching. It provides students with unmatched access to resources, encourages interactive and collaborative learning environments, and supplies educators with tools to improve their instructional methods.

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KEYWORDS

ICT, Computers, Education, Teaching-Learning