

How ICT Colossally Influenced the Education System

Dr Nandita Tripathi,

Assistant Professor, School of Education, Shobhit Institute of Engineering and Technology,
Meerut.

Chandreswar Prasad,

Research Scholar, Shobhit Institute of Engineering and Technology, Meerut.

Abstract

Currently, information and communication technology (ICT) impact every element of human existence. They are prominent in the workplace, business, education, and entertainment. Furthermore, many individuals see ICTs as change agents, bringing about changes in working circumstances, information management and exchange, instructional techniques, learning approaches, scientific research, and access to information and communication technology. In this digital age, using ICT in the classroom is critical for providing students with the opportunity to acquire and apply the necessary 21st-century skills. Furthermore, ICT helps teaching and learning, and its value for teachers in their position as designers of instructional settings cannot be overstated. ICT enables a teacher to communicate his lessons in an appealing and easy-to-understand manner to students at all educational programs. Today, teaching training programs in India are making ICT relevant and attractive. ICTs, as illustrated by the Internet and interactive multimedia, are a key emphasis for future education and must be successfully integrated into formal teaching and learning - particularly in a teacher education institution.

Keywords: Information & Communication Technology (ICT), Education Sector, Modern Technologies, E-Learning, Educational Reforms.

Introduction

Teachers' education has seen several transformations in recent years. Social expectations about the job of the teacher and the shifting world in which the contemporary individual participates both play a role in these changes. Change offers opportunities for those preparing for professional roles, but it also creates the possibility of establishing a reality in which improvements are implemented but have only a marginal impact on the lives of a select few. Many changes have occurred in India's educational system as a result of the country's changing political structure and the growing body of knowledge in the field of child and adolescent psychology. There has been a shift from post figurative to prefigurative culture, a shift in individual expectations toward a consumer-based system of values, or a shift in the balance of power in families, which has necessitated changes in education systems.

Education has become increasingly dependent on information and communication technology (ICT), a term that covers computers and the Internet as well as electronic delivery devices such as projectors. According to Kent and Facer (2004), school is an

essential setting in which kids engage in a wide variety of computer activities, while the home serves as a supplementary location for regular involvement in a limited range of computer activities. Instruction, learning, and assessment are all benefiting from the increasing use of ICT. The use of ICT in education is often seen as a potent force for good. Studies have proven that the proper use of ICT may improve educational quality and relate learning to real-world scenarios (Lowther et al., 2008; Weert and Tatnall 2005). Students' expectations vary as they seek more information, which is a departure from previous ways, according to Weert and Tatnall (2005). New information will be required of them as time passes, and they must be ready to seek it out. Therefore, ICT proficiency will be essential for these students.

The use of information and communication technologies (ICTs) has the potential to widen educational opportunities for more people. Learning may take place at any time or place with the help of modern technology. It is possible to access online course materials, for example, throughout the clock, seven days a week. Classrooms that use teleconferencing make it possible for both students and teachers to communicate at the same time in a comfortable and convenient manner. Learning and education are no longer just reliant on printed materials because of ICT. The Internet has a wealth of materials, including video clips, audio sounds, graphic presentations, and so on, which may be used to learn about a wide range of topics. According to recent studies, ICT can help a classroom become more student-centered (Castro Sánchez and Aleman 2011). Students in ICT classrooms are given the authority to make decisions and plans by the instructor since they are actively engaged in the learning process (Lu, Hou, and Huang 2010). As a result, both students and educators benefit from the expanded educational options made possible by modern information and communication technologies. Some of the unique advantages of integrating ICT into the classroom are detailed below.

Discussion

All communication technologies, such as the Internet, cell phones, computers, software, middleware, videoconferencing, social networking, and other media applications that allow users to access and manipulate information in a digital form are referred to as Information Technology (IT). It is a more comprehensive term for IT.

An educational method that uses IT in order to assist, enhance, and optimize information delivery is known as Information and Communication Technology (ICT). Many studies have indicated that integrating ICT into the classroom can enhance student learning and lead to more effective teaching approaches. It is prominent that incorporating technology into the curriculum has a large and favorable influence on student success, according to research from Japan's National Institute of Multimedia Education. Students that are constantly exposed to technology in school have superior 'knowledge,' presenting skills, inventive capacities and are more willing to put in the effort to study than their peers.

A unified system of cabling (including signal distribution and management) or link system is sometimes referred to as ICTs when referring to the convergence of media technologies such as audio-visual and telephone networks with computer networks. The concepts,

techniques, and tools associated with ICTs are constantly growing on a near-daily basis; hence there is no commonly acknowledged definition.

How ICT Influences Us Everyday

We don't even leave our rooms to realize how ICT has permeated our daily life. A computer, plasma TV, or cell phone is something that almost everyone has in their possession. Consumers of information and communications technology (ICT) nowadays share a common goal: the desire for a more connected way of life. Thus, for the majority of people, ICT is a way of life. It is also influencing the way we communicate, the rate at which we shop, and the way we receive information. (Sherringham, Dec 2008/Jan 2009). Many elements of our lives have been invaded and modified by ICT, to the point that we now live in a consumer-driven technological world (Semenov, 2005). Our lives are incomplete without it, and no matter how we feel about it, it is here to stay.

ICT's Role In The Education Sector

Technology is the backbone of everything in today's global competitive society. When ICT was introduced into the school system, it was found to be far more effective than in the past. It has been demonstrated by researchers, academics, and industry experts that ICT provides educational possibilities for everyone. Curriculum integration has been widely regarded by educational planners all over the globe as having a major and highly productive influence on students' success when it comes to greater exposure to educational ICTs. They gained a tremendous deal of information, comprehension, practical skills, presenting skills, and inventive talents as a result of their exposure to this material. Students and instructors both benefit from increased ability, adaptability, knowledge, and resiliency as a result of this initiative. Faculty and students alike benefited from its use as an educational tool. It improved the way professors convey knowledge and benefits students, as well as the way educational institutions are run. It allowed students to grasp and learn at their own speed and gave them access to a wide choice of current educational resources. It aids students in acquiring and retaining knowledge, as well as increasing their academic production. As a result, countries are able to improve their educational systems beyond the classroom and reach out to all segments of society. An excellent role is being played by designing, modifying, and carrying out social, economic, political, and educational policies and increasing possibilities for students, teachers as well as industry, and the needy.

Education's use of information and communication technology (ICT) is minimal when compared to other fields. Many factors, both explicit and tacit, have contributed to this. Inadequate money for technology adoption and upgradation, inadequate teacher training, a lack of enthusiasm, a lack of time, a shortage of instructors with training, and a lack of infrastructure in remote areas are among the most evident issues. However, as competition and market demand in the education sector grow, educational institutions are increasingly integrating ICTs into classrooms and learning environments in order to improve efficiency and flexibility in the delivery of information and to support the development of personalized educational programs that cater to the specific needs of individual students.

Almost every institution now relies on the Internet and www as a primary means of exchanging information.

Benefits of Using ICT in Education

Here are the benefitting factors of ICT in Modern-day education:

Assists students in efficiently and effectively obtaining digital information

Brush, Glazewski, and Hew (2008) have claimed that ICT is utilized in the classroom to assist students in discovering learning subjects, solving issues, and proposing solutions to learning difficulties. The use case of ICT in the classroom helps students better understand and apply the principles they are learning.

Ensures that students are able to take control of their own education.

A growing number of students are actively utilizing computers in their classrooms for academic purposes. It is via this process that they get fresh insights and understandings of the world in which they live. Students are better equipped to use information and data from a variety of sources and critically evaluate the quality of the learning materials when they study using ICT.

Creates a learning atmosphere that fosters innovation.

It is through the use of technology that students gain a fresh perspective on their subject matter (Chai, Koh, and Tsai 2010). Different forms of learning queries may be addressed more creatively with the use of information and communication technology (ICT). E-books, for example, are frequently utilized in reading aloud exercises in a reading class. Personal digital assistants (PDAs) and iPads may be used by students of all ages and abilities to access a wide range of literature. With these e-books, various reading apps could be included to help students learn to read, as well as games that help them improve their reading comprehension. Consequently, ICT includes applications that are specifically developed to address a wide range of educational demands in new and creative ways.

Distance education is made more collaborative by emphasizing teamwork.

Using ICT allows students to interact, exchange, and collaborate anywhere and at any time, according to Koc (2005). Students from all around the world could participate in a class discussion via teleconferencing, for example. They may be given the opportunity to think critically about issues and come up with new solutions. ICT learning solutions might be further evaluated by them. For the purpose of self-expression and self-reflection, students not only learn together but also share their different learning experiences.

Provides additional opportunities for students to develop higher-order thinking abilities (critical thinking).

ICT encourages pupils to concentrate on higher-level topics rather than more mundane duties (Levin and Wadmany 2006). Students that use ICT in their studies are more likely to develop critical thinking abilities, according to McMahon's (2009) research findings. Higher

critical thinking abilities may be developed by more time spent in an ICT setting. As a result, schools are strongly recommended to use technology in all of their classrooms and at all levels of education. As long as this is done, students can use technology to improve their cognitive abilities in a variety of educational settings.

Enhances the standard of instruction and learning

Autonomy, capacity, and creativity are three essential traits needed to build high-quality teaching and learning with ICT, according to Lowther et al. (2008). Using technology to take charge of their own education is what we mean when we say that kids are autonomous. Consequently, they are better equipped to operate independently and in teams. Students might also be given permission by their teachers to work in groups or with their classmates on particular projects. Students have the confidence to take chances and learn from their failures by working together in groups and using educational technology in this way. ICT allows instructors to produce their own material, therefore giving them more control over course content than is available in a traditional classroom environment, as argued by Serhan (2009). When students are more confident in their abilities to study, they can improve their ability to apply and transfer information while employing new technologies more effectively. As an example, students in an ESL class may be asked to use an online audio dictionary to improve their pronunciation. Besides learning the local pronunciation, they must also acquire new vocabulary terms and examples from a dictionary. Afterward, they must record their own pronunciation of the new term and give examples of how it is used in a certain context. Prior to commencing this job, kids must know how to utilize a web browser in order to choose a good online audio dictionary. They'll have to go through a number of different online dictionaries before they can choose the one that best suits their purposes. Another requirement for these students is the acquisition of high-quality software for recording their voices. As a result, the entire educational process helps pupils improve their learning abilities and widen their scope of knowledge. Students' creativity can be enhanced by using ICT. Games (Gee 2007, 2011), CDs, and television may open their eyes to new multimedia tools and inspire them to make their own. The use of ICT may increase the quality of both teaching and learning if students have the skill, capability, and imagination to use it.

Ensures that students have easy access to course materials

Technology integration may be facilitated by instructors, according to Watts-Taffe et al. (2003). For instructors, creating an ICT class will be a lot easier if their institutions provide them with the support, equipment, and resources they need. It is the job of these professors' technology-learning experts or assistants to arrange the computer lab, as well as to change the course style create and explain new tasks.

According to Reid (2002), ICT provides students with extra time to go beyond the mechanics of course content, helping them to better grasp topics. Using ICT also alters the connection between teachers and students. When it comes to the use of internet and technology, instructors indicated that the connection between teacher and student might be inverted on occasion. When students are able to assist teachers with technological challenges in the classroom, they feel more confident in their abilities. As a result, the

conventional teacher-centered method is disrupted by ICT, which forces educators to be more creative in tailoring their own lessons.

Disadvantages of ICT in Education

Changing learners into inefficient learners

It is difficult to locate the term "diligent" among today's learners because most of their teachings are freely accessible to them online through various websites on their computers, making them inattentive in classes or causing them to regularly skip school.

Relying solely on computers fosters bad study habits. Many students continue to browse websites in order to discover the quickest approach to answer problems in Mathematics rather than doing them in a conventional way, which really helps them obtain an in-depth understanding of the topics. Spell-checkers hinder kids from learning the right spelling, resulting in an unending number of spelling errors on paper.

Extensive expenditures

The days of pupils relying on paper and pen are long gone. This is a sophisticated technological period in which devices like computers have replaced the use of paper with their hi-tech characteristics, and to maintain them, schools and colleges must spend huge money that could otherwise be spent on purchasing vital materials. Furthermore, you must invest thousands of dollars in upgrading out-of-date software that is incompatible with current technologies.

Misled by the wrong information

With the rapid advancement of technology, website owners are under pressure to rank their pages higher in search results; thus, they focus solely on rankings rather than the information that they offer. Many websites include incorrect material that has been copy-pasted from other sites without being verified. As a result, the learners are misled by incorrect information available on websites. These things may become significant impediments to their development.

Teaching methods are insufficient.

Teachers are not evenly trained in the right use of mechanization as it advances. As a result, rather than learning information from technology, students just use it. Using applied science to attain adequate education is a fantastic thing, but transforming it into an active set of abilities takes time.

Inquiry-based learning is the ideal technique to teach students since it allows them to conduct an independent study on a variety of topics. As a result, technology should be combined with this technique of teaching in order to keep the learner's brain active rather than being completely dependent on them.

Waste of precious time

It is the human being who produced technology, not the other way around. Because people are not error-free, neither is technology. There are several issues, like server errors and network issues, that take a long time to resolve, so impeding the learning process, which may be frustrating for both learners and educators. Wasting time on trivial matters is not recommended at schools or other learning institutions because every second counts for the students.

Making it easy to cheat

The mechanical world makes you more and more lethargic by offering you the ability to control everything with the click of a mouse. Cheating is an unlawful crime, but with its strong wings, technology has made it more potent and simpler to utilize. Controlling this behavior has become quite difficult, particularly in the examination setting. Smartphones are available with all of their advanced capabilities and rapid internet access, enticing them to utilize them without hesitation.

Source of distractions

According to one study, about 60% of schools in the United States of America distribute laptops and tablets. As you are aware, social networking sites are basically ruling the world with their appealing innovations in this generation, so students and learners are preoccupied with checking their posts and notifications, counting the number of likes, checking that they or any of their close ones have updated, commenting on social sites, and so on. All of these activities create a huge spacing among them and their education.

Conclusion

According to the report, the thirst for knowledge has dramatically improved as a result of ICT, and the globe has shrunk to the size of a tiny hamlet with higher living standards. Only via collaborative, coordinated, and multi-level efforts can teaching using educational ICT improve students' active learning. Rapid technological advancements indicate that the importance of educational ICT in education will expand dramatically in the future. Thus, educational technology holds the key to the future of education, and we must support, coordinate, and integrate our efforts to develop a progressive techno civilization. The majority of responders are utilizing Emerging Technologies to offer high-quality teaching and learning. Because Emerging Technologies are more contextual, flexible, evolving, ubiquitous, disruptive, innovative, complementary, and generate a degree of uncertainty and interaction, ICT plays a vital role in the areas of expertise that will improve critical thinking, problem-solving, collaborative work approach, and creative thinking.

Recommendation

Even if the epidemic is over, the use of Emerging Technologies in Education is critical and will benefit our society greatly. It is strongly advised to continue using these new platforms for teaching and learning. If you want to rescue the country, you must first educate the people. As a result, the nation's growth is dependent on the quality of education programs

available to its population. Keeping the national interest in mind, the report suggests that educational institutions utilize technology for communal progress but that its implementation follows a scholarly method. It must concentrate on training teachers in advanced skills and introducing creative and innovative pedagogies, developing ICT infrastructure and establishing the institutional network, improving collective educational standards by closing the digital divide, and improving educational quality between rural and urban populations. It must be consistent with national goals and teaching and research initiatives. Technology investment is a recurrent expenditure because when devices approach the end of their useful life, infrastructure equipment becomes obsolete and must be replaced or improved. As a result, the planner must consider technology an ongoing, line-item expense that must be aligned with learners' future expectations, and it must be regularly tested and evaluated in a variety of formats, as well as renewed and redesigned in accordance with recognized and familiar academic work procedures, data banks, student feedback, teacher feedback, and new research. ICT's objectivity must be to promote self-paced, self-assessed, and self-directed learning, as well as to design future-oriented policies for academic advancement and social equality. Education is comprehensive in nature and necessitates leadership, and in order to achieve it, collaborative efforts must be implemented.

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