

Role of ICT in Teaching Learning Process

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Abstract

The education sector is facing many challenges nowadays. We live in a world where frequent changes occur in all sectors. The biggest instance is the corona pandemic. Who knew that this could also happen? Covid-19 has changed the whole world. Due to lockdown, everyone is working from home online. Students, educators, and all are working hard so that learning continues. This pandemic has brought a new model of learning, which is online for people. Today, from the time we get up in the morning to the time we sleep, we are surrounded by media like newspapers, radio, TV, and computers. So, getting tech-savvy and using information and communication tools is very important in the changing society. If we use and adopt ICT in schools, our education system can prosper, and the country would become a knowledge superpower.

Key Words: educators, students, Information and Communication Technology (ICT)

Introduction

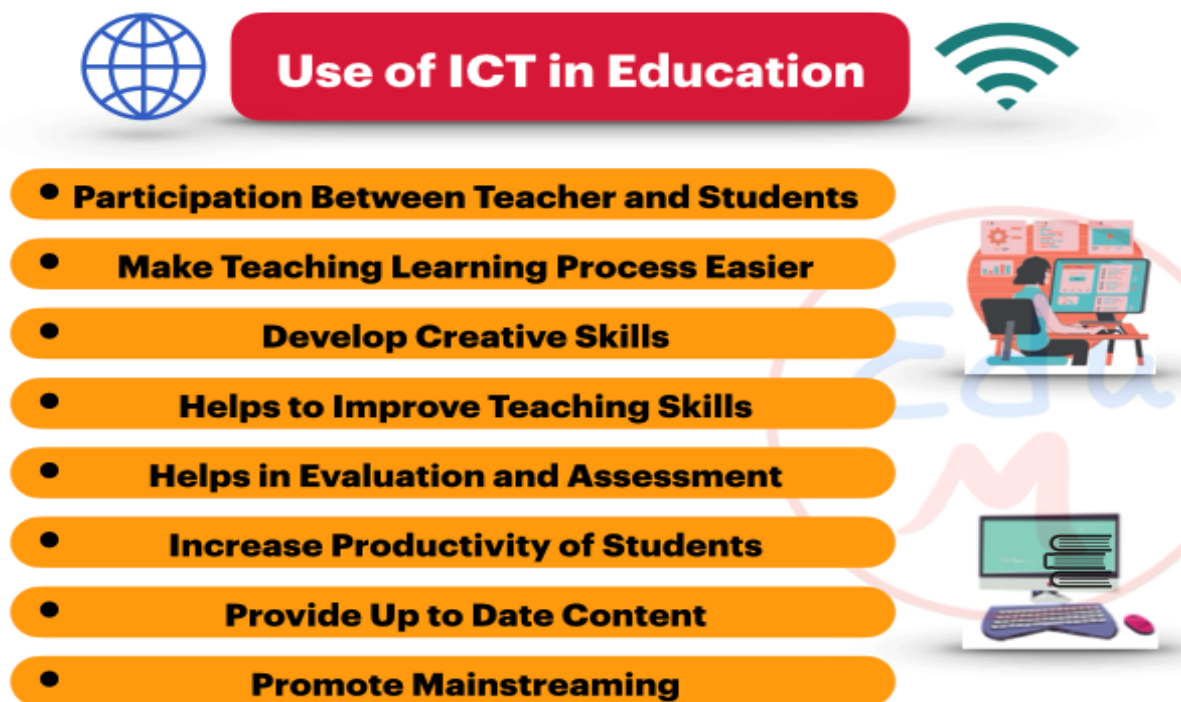
ICT stands for *Information and Communications Technology*. As the name suggests are tools that handle information and produce, store, and disseminate information. ICT comprises of both old and new tools. Old tools include radio, TV, Telephone. New tools comprise computers, satellites, the Internet, and wireless technology. It exists in multiple forms like audio, video, audio-visual, and texts. It refers to the latest technologies and a repository of simple audio-visual aids such as slides, radio, cassette, and film. According to Blurton, ICT is defined as “A diverse set of technologies, tools, and resources used to communicate, create, disseminate, store, and manage information.” These technologies include computers, the internet, radio, TV, etc. We can use information and communication technologies in the education for many reasons, but there are some practical problems in the implementation of ICT in primary education.

ICT in Education

Media sources find ways to get involved with the new technology, Internet. Due to the high demand for the new media called Internet, other sources of media such as newspapers and other TV channels started taking advantage of this source and- began to make their homepages on Internet sites. The difference between the Internet and other media sources is that Internet provides Information technology, such as digital recording system, voices, images and broadcasting media etc. all in one medium. The peculiarity of the emerging information society also is that both information and communication technologies such as telephone, computer, cable television and other media technologies are all merging together to form one entity working for the effective communication of information compressing time and space to almost nil. Digitization, convergence of technologies, and networking (all the specialties of postmodern technologies) lead to a transformation in the nature and expectations of mass media.

These technological advancements made mass media more interactive. For example SMS voting became popular in the present times and increased audience interactivity in the case of both print (such as newspaper) and broadcasting media (such as television and radio). The convergence of

media technologies and the digital forms of access and delivery offer even more ways for the audiences to engage with the media. The convergence of wireless form of communication allows the audience to a higher interactive platform. For example an IGNOU student sitting at the study Centre can engage in a discussion with the subject expert at the University centre also by viewing him on the TV screen. Another example is how some official web sites invite audience to vote and decide what is being broadcasted or a viewer can ask a question to the anchor of a programme while it is being broadcasted either in TV or radio. It is important to state that the convergence seems to be a condition of all contemporary media and the media technologies; all contemporary media can be associated with other media forms and the boundary between them are getting less clear as new technology developments enters the market. New technologies that allow convergence between televisions and computers have been developed. Experts even predict a total convergence of television and Internet where Internet is available through TV sets.



Use of ICT in school education is considered a key factor in improving quality at this educational level. UNESCO is promoting the use of ICT in learning processes through its eLearning Action Plan, one of the aims of which is “to improve the quality of learning by facilitating access to resources and services as well as remote exchange and collaboration” This report outlines several aspects to be observed and promoted, such as widespread access to broadband technologies, professional development support policies for teachers, more research into how people teach and learn using ICT, development of new high-quality online content and adaptation of current regulations to make the use of ICT at schools easier, as more recent UNESCO publications also highlight (UNESCO 2008).

The efforts of different governments and administrations have been focusing on providing the schools with good equipment. However, an analysis of the educational uses of ICT in the classroom has been lacking. This paper focuses on the need to develop appropriate strategies to face this new teaching role and, additionally, the students’ role when integrating ICT in the teaching and learning processes. The role and the perspective of teachers have become highly relevant, highlighting them as crucial players in this process. Particularly, teachers use technology depending on their perceptions

and their trust in the way it can contribute to the teacher and the learning process. Through knowing what they think, we will be closer to understanding what they do or what they might do with technology in their classrooms and in relation to their work.

ICT AND ITS INFLUENCE FOR QUALITY EDUCATION

Information communication technologies are influencing all aspects of life, in which the impacts of ICT is significant is education. ICTs help expand access to education, motivate to learn, facilitates the acquisition of basic skills, and can transform the learning environment thus help improving the quality of education. ICT has tremendous potential for education. ICT enables a teacher to reach out widely efficiently and effectively. It helps teachers and institutions to be more modern and dynamic. Eventually, the use of ICT will enhance the learning experiences of students. It also helps for building a successful career, in a technology savvy world.

ICT CHANGE THE VIEW OF TEACHING AND LEARNING

EDUSAT is used to share the available expertise through modular programs. It has done by networking institutions, creation of virtual laboratories, creation of database, access to expert lectures and technological development in organizations. In the field of education ICT is inevitable one at present context. Therefore every teacher should know the reality of ICT and its importance in the field of education and teaching learning process. The real teaching environment is required to obtaining the students attention through various information and communication technology devices are available in their institution itself. ICT in education change the view of learning from teacher centered to student centered learning system and the teacher are the facilitators, coaches and mentors were ICT support the learning environment to student. At this juncture, some of the supporting environments are Tele Education system, virtual Learning campus (VLC), Virtual libraries and digital learning, Distance learning and wireless connectivity.

ENSURING QUALITY EDUCATION THROUGH ICT

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Largely based on teacher opinion, of the potential of ICT to enhance educational quality; they also identified teachers with concerns about it leading to waste of student time and the encouragement of superficial work. This range of opinion reinforces that the educational impact of ICT depends largely on the use to which it is put. Where ICT is used to facilitate the students. It is likely to promote inter alia the development of analytical and information handling skills. While they are important life skills, they may not be reflected in curriculum and assessment system, student centered learning will tend to flourish on more fertile ground when there is harmony with such assessment systems.

ICT AND QUALITY TEACHING

ICT is an extended term for Information technology which is a technological source to make information available at the right time, right place in the right form to the right user. Earlier, one had to wait for the newspapers to get the information across the world. Now with the smarter technology, information can be accessed from anywhere using smart phones and gadgets. Technology at present occupies a crucial role for developing the teaching learning process at school environment.

Key issues to remember in relation to the importance of ICT in Education:

1. E-learning or Online Learning:

The presence of ICT in education allows for new ways of learning for students and teachers. E-learning or online learning is becoming increasingly popular and with various unprecedented events taking place in our lives, this does not only open opportunities for schools to ensure that students have access

to curriculum materials whilst in the classroom, but also allows them to ensure students outside the classroom such as at home or even in hospitals can learn.

2. **ICT brings inclusion:** The benefits of ICT in education is of such that students in the classroom can all learn from the curriculum material. Students with special needs are no longer at a disadvantage as they have access to essential material and special ICT tools can be used by students to make use of ICT for their own educational needs. Despite this, it opens up new issues related to the 'digital divide' and providing access to ICT tools and resources for those who are less fortunate.
3. **ICT promotes higher order thinking skills:** One of the key skills for the 21st century which includes evaluating, planning, monitoring, and reflecting to name a few. The effective use of ICT in education demands skills such as explaining and justifying the use of ICT in producing solutions to problems. Students need to discuss, test and conjecture the various strategies that they will use.
4. **ICT enhances subject learning:** It is well known these days that the use of ICT in education adds a lot of value to key learning areas like literacy and numeracy.
5. **ICT use develops ICT literacy and ICT Capability:** Both are 21st century skills which are best developed whilst ICT remains transparent in the background of subject learning. The best way to develop ICT capability is to provide them with meaningful activities, embedded in purposeful subject-related contexts.
6. **ICT use encourages collaboration:** You just have to put a laptop, iPad or computer in the classroom to understand how this works. ICT naturally brings children together where they can talk and discuss what they are doing for their work and this in turn, opens up avenues for communication thus leading to language development.
7. **ICT use motivates learning:** Society's demands for new technology has not left out children and their needs. Children are fascinated with technology and it encourages and motivates them to learn in the classroom.
8. **ICT in education improves engagement and knowledge retention:** When ICT is integrated into lessons, students become more engaged in their work. This is because technology provides different opportunities to make it more fun and enjoyable in terms of teaching the same things in different ways. As a consequence of this increased engagement, it is said that they will be able to retain knowledge more effectively and efficiently.
9. **ICT use allows for effective Differentiation Instruction with technology:** We learn differently at different rates and styles and technology provides opportunities for this to occur.
10. **ICT integration is a key part of the national curriculum:** The integration of digital technologies or ICT is a significant part of the Australian Curriculum for example, and this is a trend which many global governments are taking up as they begin to see the significance of ICT in education.
11. **We live in a "knowledge economy":** This is an economy where it is vital to have the ability to produce and use information effectively. It is a time when ICT is pervasive and permeates throughout all industries in the economy whether it may be health, education, environment or manufacturing

The three challenges that people face in using ICT tools are:

- i. Access
- ii. Equity
- iii. Quality

Now, schools are taking the benefits of ICT to deliver knowledge and information to children. ICT has become a core in the teaching-learning process. It has replaced blackboards with whiteboards and implemented the usage of a digital smart board for teaching.

When teachers become tech-savvy and properly trained to use these tools, they deliver enhanced knowledge with high order thinking skills.

Challenges of Introducing ICT in Education

Contemporary age is the age of information and communication technology. In this age teacher and learner must gain access to advanced technology for improving teaching learning outcomes and quality of education. Use of advanced technology in teaching learning environment can bring a rapid change in education system. But using ICT in teaching and learning some challenges are there which creates problem for implementing the ICT in teaching learning process. Lack of support from the community and school administration is a big challenge. For the effectiveness of ICT in teaching and learning process, administrators and heads of the institutes must be competent and qualitative and have a broad understanding of the technical, curricular, administrative, financial, and social dimensions of ICT use in education. Lack of time for professional development to learn about the advanced technologies and lack of time and effort to explore technologies such as the internet and social networking services were repeatedly reported by teachers as the significant challenge for using ICT in the teaching learning process. Teachers working in schools which are in rural areas were more likely to report lack of computers as a challenge and teachers in schools with high minority student populations were more likely to report out dated, unreliable computers as a big problem.

Almost large proportion of educational software produced in the world market is in English also. In most countries where English is not the first language this represents a serious barrier in integrating ICTs use in education system. This situation limits the information access for some people who has lack or no ability in English language. Balancing educational goals with economic realities is a big challenge for integration of ICT in teaching learning process because for integration of ICTs in education require large capital investments. According to Yelland, N (2001) integrating of ICTs in education requires establishment of infrastructural facilities, acquisition of technologies and their periodic updating, management and professional support services. Diversities of culture in different places in our country are also challenges in introducing ICT in education. In the words of (Tinio, 2002) said that one impeding factor of ICTs integration in education systems is the skill gap of people implementing it. The major promises of ICTs use in education systems of developing countries focus on training teachers in new skills and introducing innovative methods into the classrooms, investing on ICT infrastructure for schools and creating networks among educational institutes, improving overall standard of education by reducing the gap in quality of education between schools in rural areas, initiation of smart classrooms with objectives to foster self-paced, easy assessed and self-directed learning through the applications of ICTs, and developing ICT policy for education and training.

Conclusion

ICT has become an integral part of everyday life for many people. It increases its importance in people's lives and it is expected that this trend will continue, to the extent that ICT literacy will become a functional requirement for people's work, social, and personal lives. The use of ICT in education add value in teaching and learning, by enhancing the effectiveness of learning, or by adding a dimension to learning that was not previously available. ICT may also be a significant motivational factor in students' learning, and can support students' engagement with collaborative learning. The Mobile learning (m-learning) as a form of e-learning is a rising trend where the education has outgrown the physical constraints of the classrooms and acquired mobility. Students access information whenever and wherever they want, and institutions that provides such advanced technological terrains is rising in number day by day.

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