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ICT: A game changer in modern education

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Abstract
Information and Communication Technology (ICT) is a boon to prevailing education systems. ICT is a very wide topic. Education sector is facing many challenges the most alarming one is the continuous increase in population. Every year more and more students are seeking admissions in educational institutes all over the world and optimum use of ICT in this situation can help a county not only in educating its people but also in meeting increased population demands. ICTs can be used as tools for training and support of teachers, the use of technology for teacher training has at least three major advantages: it reduces travel costs, avoids disrupting classroom routines, and familiarizes the teachers with the technology. Introduction of ICTs for educational purposes has the potential to bring positive changes to teaching practices.

Keywords: ICT, education, teaching, learning

Introduction
ICT in modern education
ICT not only refer to the latest computer and the internet –based technologies, but also refer to the simple audio- visual aids such as slides, cassette, video recorder, radio, television and various set of applications. ICT include both old and new tools. Old ICT tools mainly include radio, TV and telephone. New ICT tools mainly include computers, satellite, wireless technology and internet. ICT as technology advanced communication in technologies likes Networking, Internet technologist were embedded with IT which made possible to have facilities online banking, online libraries, Massive Open online Courses. Web 2.0 social networking such as blogs and Wiki, YouTube, iTunes are influencing a new trend higher education. The emergence of smartphones such as the iPhone and other intelligent devices has enhanced learning. These technologies create new channels for content delivery, online video and podcasting

Major ICT Learning Categories
In view of ICT, education can be classified into three main categories as follows.
1. **E-learning:** E-learning Also known as electronic- learning and is commonly associated with the field of advanced learning technology, it deals with both the technologies and associated methodologies in learning using networked multimedia technologies.
2. **Blended Learning:** It is a combination of multiple approaches to learning. It is usually used to define a situation where different delivery methods are combined together to deliver a particular course. These methods may include a mixture of face-to-face learning, self-paced learning and online classrooms.
3. **Distance Learning:** It is a type of Education, where students work on their own at home or at office and communicate with the faculty and other students through e-mail., electronic forums video conferencing It is also known as open learning.

Strengths of ICT (information and communication technology)
Individualization of learning is one of the advantages of ICT, people learn as individuals not as homogenous groups, ICT may offer flexibility to each individual to relate to the medium and its contents. ICT is distance and climate insensitive, teaching and learning could be taken out of the conventional educational system. Other advantages are economical, higher speed of delivery and wider reach.

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With increase in number of learners, the unit overhead cost comes down even though when the initial investment may be higher.

ICT has also become integral to the teaching-learning interaction, through such approaches as replacing chalkboards with interactive digital whiteboards, using students' own smartphones or other devices for learning during class time, and the "flipped classroom" model where students watch lectures at home on the computer and use classroom time for more interactive exercises.(UNESCO).

Teachers need specific professional development opportunities in order to increase their ability to use ICT for formative learning assessments, individualized instruction, accessing online resources, and for fostering student interaction and collaboration (UNESCO).

Role of ICT in Modern Education: A Literature Review
Haddad *et al.* (2007) discussed that ICTs can be used as tools for training and support of teachers, regardless of their geographical dispersion. The use of technology for teacher training has at least three major advantages: it reduces travel costs, avoids disrupting classroom routines, and familiarizes the teachers with the technology. The Internet has myriad Websites to help teachers develop or improve lesson plans, exchange ideas, obtain information, and find free animations and simulations to enliven their lessons. Most Internet-based collaborative learning projects include teacher support and training, and conference proceedings are published regularly on the Web. Chat rooms or forums may become a laboratory for new ideas research indicates that the introduction of ICTs for educational purposes has the potential to bring positive changes to teaching practices.

Despite this potential for training and support, ICTs have not been accepted easily among teachers. Some complain that scripted lessons take away their ability to address students' individual differences and improve their own teaching strategies. Others fear that technologies will reduce the role of teachers in defining curriculum and educational strategies, or totally replace them.

Casal and Carlos Rodriguez (2007) [2] discussed that when going into the key areas of ICT applications, education is the first and best possibility to influence in development. Training can also be supported by ICTs. It is increasingly frequent to use these technologies for education of professionals using digital content and remote connections or interactive applications when students cannot go to the training center. In particular, distance learning can support the training of professionals in the health sector, providing access to best practices and directions to improve skills.

Ahmadi *et al.* (2011) discussed that Rapid progress of information and communication technologies is considered as one of the key factors of change in humankind society. The main impact of ICT in education can be seen in improving the capabilities of instructors, changing the educational structure, creating opportunities for greater and more comprehensive learning, enhancing educational quality and improving teaching skills. (Noor-Ul-Amin and S. (2013) [5] discussed that information and communication technologies (ICT) have become commonplace entities in all aspects of life. Education is a very socially oriented activity and quality education has traditionally been associated with strong teachers having high degrees of personal contact with learners. The use of ICT in education lends itself to more student-centred learning settings. But with the world moving rapidly into digital media and information, the role of ICT in education is becoming more and more important and this importance will continue to grow and develop in the 21st century.

Ciroma and Z. I. (2014) [4] discussed the field of education has been affected by ICTs, which have undoubtedly affected teaching, learning and research. ICTs have the potential to accelerate, enrich, and deepen skills, to motivate and engage students, to help relate school experience to work practices, create economic viability for tomorrow's workers, as well as strengthening teaching and helping schools change. In a rapidly changing world, basic education is essential for an individual be able to access and apply information. Such ability must find include ICTs in the global village.

Delic-Zimic *et al.* (2017) [6] described that in today's education system new techniques are being used, as well as modern methods and means of work. ICT takes an important a place in the educational process, as the application of modern media in the lower and higher grades of primary school. The use of ICT provides opportunities for every student to be more active and better and to have greater motivation. Teaching process is more interesting and clearer and is of high quality for any subject. A special place occupies application of Microsoft tools which are important for many projects in the teaching/entire teaching process. ICT provides a great advantage in the preparation and organization of teaching classes, as well as teaching the students, relatively using the modern technology in class, and demands constant education of teachers by attending many seminars. The use of ICT provides a greater performance, visual observation, better perception and faster learning. Students are prepared with the help of parents at home through creative work, they explore interesting topics on the Internet. In the teaching process, teachers as assistants are instructing students while they are doing their tasks. There is a possibility of good interaction between teacher and student. Students have the opportunity to prepare presentation or projects with the use of the Internet, as well as to prepare school quizzes. They have the opportunity to communicate with each other by e-mail, Facebook, Sky Drive, GeoGebra, Geometric Scatch Pade, Mindomo, interactive games . Today's teaching process in the classroom is unimaginable without the use of ICT in all primary schools.

Ratheeswari and K. (2018) [7] described Information communication technologies (ICT) at present are influencing every aspect of human life. They are playing salient roles in work places, business, education, and entertainment. Moreover, many people recognize ICTs as catalysts for change; change in working conditions, handling and exchanging information, teaching methods, learning approaches, scientific research, and in accessing information communication technologies. In this digital era, ICT use in the classroom is important for giving students opportunities to learn and apply the required 21st century skills. ICT improves teaching and learning and its importance for teachers in performing their role of creators of pedagogical environments. ICT helps of a teacher to present his teaching attractively and able to learn for the learners at any level of educational programmes. Today in India teaching training programmes making useful and attractive by the term of ICT. Information and Communication Technologies (ICTs) exemplified by the internet and interactive multimedia are obviously an important focus for future education and need to be effectively integrated into formal teaching and learning – especially in a teacher education institution.

Phutela *et al.* (2019) [3] stated that ICT brought waves of industry transformations, which is also visible in education industry. With the changing environment and the industry

demand, student's perspective towards learning is also changing at a fast pace. Gone are the days when teachers used to merely teach through blackboards in a lecture hall. The scenario is no more visible these days. ICT in education is being used to enhance creativity, interaction and knowledge sharing apart from student learning.

Zokirovna and O. D. (2020) [9] stated that electronic educational resources and the new information and educational environment formed on their basis have considerable potential for improving the quality of education. However, it will be fully implemented only if training is built with an orientation towards an innovative model, the most important characteristics of which are a personality-oriented orientation, an orientation towards the development of the creative abilities of students. In the search for an answer to the questions upon educational achievements or gaps in knowledge, skills, and abilities, ICT based controls can play a significant role in the incoming information and educational environment.

Conclusion

All world is facing pandemic situation. All fields are affected due to Covid -19 pandemic including education. But ICT is very much helpful to teachers and students. Due to these Information and Communication (ICT) tools teaching-learning process become easier. In education, ICT play vital roles in facilitating teaching and learning. ICTs have transformed classroom communication methods and modified instruction facilities. Also, ICTs have made teaching and learning interactive and collaborative instead of the conventional -teacher talking and students listening approach. ICT enables the use of innovative educational resources and the renewal of learning methods, establishing a more active collaboration of students and the simultaneous acquisition of technological knowledge. The development of ICT has great scope for meeting the educational needs of lifelong learners growing population.

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