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Effects and Outcomes of Information and Communication Technology in Teaching and Education Sector

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ABSTRACT

In today's modern era scenario, technology plays a vital role in the development of the education section, medical section, farming or agriculture section & so on. Here we talk about the role & impact and importance of technology in education. In the education section, ICT creates a new method of teaching & learning. ICT helps in extending educational opportunities and resulting in remarkable growth in the education world. The government is also spending a lot of money on ICT. ICT changes the education pattern by introducing video lectures, online research on the e-learning internet, etc. which improve the education level. Information and communication technology is a very broad term. ICT includes all tools & a technique for communication of information. There are many forms of ICT, which are broad cost information like radio, phone, computer, and many other ways. the world revolves around the information & communication technique, from earth to air, water to space everywhere technology is present. The main function that affects the adaptation of ICT in education is the mission of the goal of a particular system of teaching & learning strategies. ICT is very useful in the education system.

Keywords: Computer, technique, e-learning, pattern, mission, strategies.

1. INTRODUCTION

The role of information and communication technology in the education sector is the source of education that uses information and communication technology to support, enhance and optimize the delivery of worldwide information and has soon that ICT can lead to improved student learning and better teaching model and methods. in the 21st-century technology plays a role in every facet of education as student-teacher and administrators turn to their computers to use the information to create and express themselves in all fields. ICT is extinction, a term for information technology that stresses the role of unified communications and integration of telecommunication and computer as well as necessary telecommunications software middleware storage and audio-video systems that enable users to reach store transmitted and manipulated information.

2. GOVERNMENT'S PARTICIPATION IN EDUCATION THROUGH ICT

The government introduces new teaching and learning technologies in education. The Central Board of secondary education (CBSE) is a part of the government and introduced the concept of smart classes a few years ago in the education system. Smart classes are a class that studies through technology. It is a very interactive method of education. The IT in education aims at preparing youth to participate in creativity in the establishment, suspension, and growth of a knowledge society, leading to the all-around socio-economic development of

the nation and global competitiveness. The government provides and creates an environment for education by using technology. The government digitizes and makes available educational audio and video resources that exist in different languages, media standards, and formats on social media sites and other different platforms. There are lots of plans which run through the government, like IGNOU, NTPL, and NIOS. The government focuses on the education sector and increases the budget for education every year. In 2021, the Indian education budget is 93233 crore and in 2022 it increases to 104278 crores. They offer lots of vocational and educational courses at a low price or free of cost. One of the main programs of the government is SARVA SIKSHA ABHIYAAN, whose motto is education for all. This program govt open school and give education. But in recent years, they changed their education pattern and introduced technology in this field, like smart classes.

3. IMPACT OF LATEST TECHNOLOGY ON EDUCATION:

ICT may be a technological source to form information available at the proper time. Earlier, we newspaper to urge information across the planet. Now, with smarter technology, information is often accessed from anywhere using smartphones and gadgets. Information technology has influenced our lives in recent years within the fields of education, healthcare, and business. Going the additional mile, information and communication technology in schools has had a serious impact. Smart technology is the familiar terminology that's widely utilized in every being's life. Smartphones, tablets, gadgets, smart televisions, etc., are the products of smart technology that are made by humans and make human life smarter, easier, and more accessible. Smart technology has not only enhanced the way of living but also become an integrated part of everyone's life. Information and Communication Technology, to be precise, has become a drive behind the economic process and a development tool also.

ICT in schools is often used as a communication tool to enhance student learning and better teaching. With the advancement of technology in education, schools adopt school communication software to send, store, share, or exchange information. during this technological era, ICT in education has compelled many faculties to urge familiar with smart technology. the varsity communication software uses computers, the web, etc. because of the medium of communication.

Internet: Internet tools like e-mail, social networks, newsgroups, and video transmission have connected the world like never before. Students can now communicate using emails and social networking groups that give knowledge-based information. Distance learning and online learning are also enabled through the internet. Students can learn online and talk to experts online. Notes, readings, tutorials, and assignments can be received by students from anywhere. The Internet provides major information in texts, audio, videos, and graphics which can be accessed by the person. Online learning allows students to interact with teachers and vice-versa.

Classroom Education: With the introduction of ICT in education, classroom learning is one attribute that makes learning experiential and experimental for students. Students can listen to the instructor or teacher, receive visual cues through PowerPoint images, handouts, or whiteboard lists, and take part actively. This helps in immediate interaction and students have opportunities to ask questions in live discussions. This school communication software module further benefits building and maintaining personal and professional relationships as classrooms offer greater personal contact with other students and teachers.

Video Meetings: This is yet one more medium of communication wherein students can communicate with other students or instructors online. It enables students to become active participants in their own learning. Video Conferencing may be a powerful communication tool that has the potential to vary the way we deliver information to students. It is just one of today's integrative technologies that allow students to prepare for a better future.

4. THE GLOBAL PANDEMIC EFFECT ON EDUCATION

During a lockdown when schools & colleges were closed, education is highly affected. No classes were to take place offline, then the need for an online platform came into existence. The number of platforms for online education has a drastic increase some of them are Google Meet, Webex, Microsoft Teams, and Zoom. With the need for online education and time, both students & teachers have to adapt themselves to the current trend. In the initial phase, lots of problems have to be faced by the students & teachers, but then they get adapted accordingly. The education sector has been highly impacted by the Coronavirus pandemic from early 2020 to date. The education sector faces a sudden change when compared to the pre-pandemic era. Earlier, education used to take place in classrooms, but now it has moved on to a digital platform. Online education is a boon to the education system as a student can sit at one end of the world and can communicate with teachers at the other end. Thus, providing them with a quality education. The online world wide web contains a lot of knowledge when compared to offline education.

Case study

VIRTUAL LEARNING

Graduates who are less familiar with digital culture are increasingly at a disadvantage in the national and global economy. Digital literacy—the skills of

searching for, discerning, and producing information, as well as the critical use of new media for full participation in society—has thus become an important consideration for curriculum frameworks. Digital culture and digital literacy: Computer technologies and other aspects of digital culture have changed the ways people live, work, play, and learn, impacting the construction and distribution of knowledge and power around the world. In many countries, digital literacy is being built through the incorporation of information and communication technology (ICT) into schools. Some common educational applications of ICT include:

- **One laptop per child:** Less expensive laptops have been designed for use in school on a 1:1 basis with features like lower power consumption, a low-cost operating system, and special re-programming and mesh network functions. Despite efforts to cut costs, however, providing one laptop per child may be too costly for some developing countries.
- **Tablets:** Tablets are small personal computers with a touch screen, allowing input without a keyboard or mouse. Inexpensive learning software (“apps”) can be downloaded onto tablets, making it a versatile tool for learning. The most effective apps develop higher-order thinking skills and supply creative and individualized options for college kids to precise their understandings.
- **Interactive Smart Boards:** Interactive whiteboards allow projected computer images to be displayed, manipulated, dragged, clicked, or copied. Simultaneously, handwritten notes are often taken on the board and saved for later use. Interactive whiteboards are related to whole-class instruction instead of student-centered activities. Student engagement is usually higher when ICT is out there for student use throughout the classroom.
- **E-readers:** E-readers are electronic devices that can hold hundreds of books in digital form and they are increasingly used in the delivery of reading material. Students who have both skilled readers and reluctant readers had positive responses to the use of e-readers for independent reading. Features of e-readers that can be of positive use include their portability and long battery life, response to a text, and the ability to define unknown words. Additionally, many classic books are also in the form of e-books.
- **Flipped Classrooms:** The flipped classroom model, involving lectures and practice at home via computer-guided instruction and interactive learning activities in class, can allow for an expanded curriculum. There is little investigation into the scholarly learning outcomes of flipped classrooms. Student perceptions about flipped classrooms are mixed, but generally positive, as they prefer cooperative learning activities in class over lectures.

For example, now some companies like BYJUS are providing online education at some cost and it is doing great now among millions of users worldwide. In this, users are provided many lectures up to any standard online at a timetable with proper resources, so people can attend their lecture from their home without getting outside and they can repeat any some time without any hesitation due to the success of BYJUS other companies like the academy have joined the race by providing at a low cost with a great staff of teachers and providing then good monthly salary. Without any language limitations, as it is available in all languages, it has a bright future.

6. CONCLUSION

The result of this study shows that the use of technology in the education system is more useful in teaching and learning than in the normal way. But it is very challenging to see the innovation of new tools and techniques that better the quality of education. ICT creates an environment that provides the easiest mode of education. And govt. will also work in this field to make the education system better. The government opens computer labs and smart classes in public schools and colleges for better education. After the coming of ICT in education, there will be a new revolution in the way of studying. In the future, ITC will be much more involved in education than in today's scenario. And the future of Indian education is very brighter.

REFERENCES

1. “Ghavifekr, S. & Rosdy, W.A.W. (2015). Teaching and learning with technology: Effectiveness of ICT integration in schools. *International Journal of Research in Education and Science (IJRES)*, 1(2), 175-191
2. Chigonize Nnodim “How Technology Has Had a Positive Impact in the Classroom”, www.oneder.com. June 25, 2018.
3. Department for Education, “National curriculum in England: computing programmers of study”.
4. <https://www.indiatoday.in/business/budget-2022/story/union-budget-education-budget-2022-increases-by-11-86-major-areas-of-budget-allocation-education-schemes-education-plans-1907451-2022-02-01#:~:text=The%20education%20budget%202022%20has,estimate%20was%20Rs%2088%2C002%20crore.>
5. “National Policy on Information and Communication Technology (ICT) In School Education”, www.mhrd.gov.in. 23March 2012.
6. Mathur, Piyush (2017) *Technological Forms and Ecological Communication: A Theoretical Heuristic* (Lanham, Boulder, New York, London),pp.200-202.
7. <https://home.kpmg/in/en/home/insights/2021/10/nep-covid-19-school-education-assessments.html#:~:text=The%20pandemic%20caused%20further%20shocks,lockdown%20induced%20by%20COVID%2D19.>

8. <https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning/>
9. Gihan Wikramanayanke “Impact of Digital Technology on Education”, www.researchgate.net. Retrieved August 2005. 24th National information Technology Conference.