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# DIGITAL TECHNOLOGY – WOMEN

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**Abstract**

Information and communication technologies (ICT) are influencing every discipline of the society, including education. It plays a very important role in the education sector especially in the process of empowering technology into the educational activities and is considered as one of the strongest ways to increase student's knowledge in the 21st century.

Usage of ICT in education augments value to teaching and learning, by enhancing the effectiveness of learning. In fact, it has added a new dimension to learning that was not previously available. After the commencement of ICT in schools, students find learning in a technology enhanced environment more stimulating and engaging than found in the traditional classroom environment.

**Keywords :** Digital, Technology, Empowering, Women

## Introduction

Digital technology is fast making place, people and time irrelevant for learning. As we move into a global classroom, rural and urban divide will fade away. With the schools interconnected digitally, expertise will matter first. Just like through telemedicine facilities, tertiary care is now being made available at primary healthcare centres. Similarly, expertise by specialists in big towns now quickly reaches the grass-root levels. Talent, whether in small towns or metros, is now able to get support at an equal scale. Even time constraints in learning will be removed soon and synchronisation—boundless and timeless education—will happen. Another aspect is that parents will also be enrolled into this digital highway and their contribution will be integral for the success of the students.

## Need and Role of Technology in Classroom

- If used appropriately, ICT devices and the applications they support will help prepare students for their future careers.
- Integrating technology into the class teaching is an effective way to teach all types of students.
- Provides opportunity to students to enhance the interaction with their classmates and the instructors by encouraging collaboration.

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- Using technology helps to develop student's digital citizenship skills. It is one thing to use technological devices but it is a completely different thing to know how to use them correctly and responsibly.
- Integrating technology in teaching helps students stay engaged. Most students today are more than happy to study via technology.
- Combining novel technologies like VR (virtual reality) with traditional classroom instruction is an example of how introduction of new technology can enhance learning experiences and create new opportunities.
- Since mobile technology is readily available, the students are able to access latest information faster and easier than ever before.
- The traditional mode of passive learning model of education is broken now. With the introduction of technology in the classroom the role of the teacher has changed to being, the encourager, adviser, and coach.
- Technology encourages students to be more responsible. Either having their own tech device or borrowing one from the school, provides students ample opportunity to improve their responsibility taking skills as well as taking ownership of a valuable (and often expensive) device. This needs to be channelized by proper social responsibility training to see the best results.
- Technology has transformed the learning experiences of students. They now have access to an incredible number of new opportunities. They gain multidimensional knowledge - from learning how to code to learning how to collaborate with teams and their instructors--technology empowers students to be more creative and more connected. New technology has super-charged how we learn and study today.

**Categories of E-Learning-**

The educationists classify e-learning basically into two types viz.

- **Computer-based e-learning**
- **Internet-based e-learning**.

This method of classification differentiates e-learning from online learning, however incorrect; the two are often interchangeably used. Certain types of e-learning like Computer Managed Learning and Computer Assisted Learning are not mandatory to take place online, yet they are also considered as one of the types of e - learning

**Computer Managed Learning (CML)**

In computer-managed learning (CML), also known as Computer Managed Instruction (CMI), computers are used to manage and assess the learning processes. The computer managed learning systems operate through information databases. These databases contain bits of information which the students have to learn, along with a number of ranking parameters which enables the system to be individualized according to the preferences and requirement of each student. As a result of two-way communication between the student and the computer, determinations can be made whether the students achieved their learning goals at a satisfactory level. If not, then the processes can be repeated until the students have achieved their desired learning goals.

The educational institutions also use computer-managed learning systems for information which aids them in their educational management. For example, various information like lecture information, training materials, grades, curriculum information, enrolment information among others.

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### ➢ Computer Assisted Instruction (CAI)

Computer Assisted Instruction (CAI), also referred to as computer-assisted learning (CAL), is another type of e-learning which uses computers together with traditional mode of teaching. Computer-assisted training methods use a combination of multimedia like text, graphics, sound, and video in order to enhance learning. The primary value of learning is interactivity i.e. it allows students to become active learners instead of being just passive learners, by utilizing various methods and techniques such as quizzes and other computer-assisted teaching and testing mechanisms.

Nowadays, most type of educational institutions, both online and traditional, use different variations of computer-assisted learning to facilitate development of skills and knowledge among their students.

### ➢ Synchronous Online Learning

Synchronous online learning enables students to participate in the learning activity - at the same time and from any place in the world. Real-time synchronous online learning involves both online chats and videoconferencing. These tools allow both the training participants and the instructors to ask and answer questions instantly while being able to communicate with other participants.

Rapid development of online learning technologies has assisted in community-oriented online learning. Synchronous e-learning is considered to be highly advantageous as it eliminates most of the common disadvantages of e-learning e.g. societal isolation, less cordial teacher-to-student and student-to-student relations. Currently, synchronous e-learning is one of the most popular and quickest growing types of e-learning.
*Learning from the sources of*:

- Virtual Classroom
- Audio and Video Conferencing
- Chat
- Webinars
- Application Sharing
- Messaging instantly

### ➢ Asynchronous Online Learning

In this type of online learning, groups of students study independently at different times and at different locations from each other, without real-time communication taking place. The Asynchronous type of e - Learning is a pause-and-resume kind of learning. Asynchronous e-learning methods are more student-centred than their synchronous counterparts, as they give students more flexibility.

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Asynchronous e-Learning use technologies like emails, eBooks, blogs, discussion forums, CDs, DVDs, etc. The learners have flexibility of time. They can download documents, and even chat with teachers and co-learners at their own pace and time. For these reasons, asynchronous e-learning is often preferred by students who do not have flexible schedules, as it allows them to do self-paced learning. They can set their own time schedule for learning, and are not required to learn at specific time intervals together with other students.

*Learning from the sources of*:

- Self-paced online courses
- Discussion forums & groups
- Message boards

### ➢ Fixed E-Learning

Here "Fixed" means that the contents used in the learning process does not change from its original state. All the participating students receive the same information throughout. The materials are predetermined by the teachers and they do not adapt to the student's preferences.

This type of learning has been standard in traditional classrooms since centuries but it's not ideal in e-learning environments since fixed e-learning does not utilize the treasured real-time data gained from student inputs. Examining each student individually through their data and making required changes to the materials according to this data leads to better learning outcomes for all students.

### ➢ Adaptive E-Learning

Adaptive e-learning is an innovative type of e-learning, which makes it possible to adapt and redesign learning materials according to each individual learner. Taking into account various parameters such as student performance, goals, abilities, skills, and characteristics into consideration, adaptive e-learning tools allow education to become more individualized and student-centred than ever before.

Today, we are now at a point in time where laboratory-based adaptive instructional techniques can be used for accurate sequencing of student data. When done appropriately, this could possibly mean a new era for educational science. While this type of e-learning can be more difficult to plan and accomplish than the traditional teaching methods, its potential value and effectiveness is often discreet.

### ➢ Linear E-Learning

When referring to the human-computer interaction, linear communication means information passes from sender to receiver, without exception. This becomes a limiting factor in case of e-learning, as it does not permit two-way communication between educators and pupils. This type of e-learning does have its place in education, although

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with time it's becoming less relevant. Sending study materials to students through television and radio programs are classic examples of linear e-learning.

- **Interactive Online Learning**

Interactive e-learning lets the senders to become receivers and vice versa, consequently allowing a two-way communication channel between the parties involved. From the messages sent and received, both the teachers and the students can make changes to their teaching and learning methods. For this reason interactive e-learning is noticeably more popular than linear, as it allows more freedom to teachers and students to connect with each other.

- **Individual Online Learning**

Individual learning refers to the number of students participating in achieving the learning goals, rather than the student-centeredness of the material. This type of learning has always been the norm in traditional classrooms for years. When practicing individual learning, the students study the learning materials individually, and are expected to meet their learning goals on their own.

This type of learning is deterrent in developing communicational skills and teamwork abilities in students because it largely focuses on students independent learning, without having any communication with other students.

- **Collaborative Online Learning**

The Collaborative e-learning is a modern type of learning method, through which multiple students learn and achieve their learning objectives together as a group. The students have to work together as a team in order to achieve their common learning objectives.

This is done through the formation of effective groups, where each individual student has to take into account the strengths and weaknesses of each of the participating students. This boosts the communicational skills and team work abilities of the students. Collaborative e-learning expands on the basic idea that knowledge is best developed within a group of individuals where they can interact and learn from each other.

While this type of learning is more often used in the traditional classrooms than in online courses but it is still a valid type of e-learning which can be highly effective if done correctly.

**Technological skill development**

Developing technological skills in teachers and students is an urgent demand of the present times. The positive impact of ICT can be felt only after the reorientation of the education system at all levels.

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Skill – 1 – *Learning and Innovative Skills*

It involves critical thinking and problem solving, communication, creativity, innovation, collaboration and team work

Skill – 1 – *Information, Media and Technological Skills*

This incorporates access, evaluation, use and managing information; analyse and create media and application of technology effectively

Skill – 1 – *Life and Career Skills*

This comprises flexibility and adaptability, initiative and self- direction, social and cross-cultural skills, productivity and accountability, leadership and responsibility.

**Role of Digital education for women Empowerment**

The technological innovation in the globalized era is providing exclusive opportunity to restructure our world into one that prioritizes women empowerment. By leveraging the power of technology, a more inclusive and diverse society is being developed where everyone has the opportunity to thrive and grow. Providing opportunities to women will facilitate in giving up traditional norms and break down barriers that is the need of the hour. It is crucial to provide women with the precise tools and resources so that they forge their own paths of success. Providing right classroom opportunities for digital education will ensure that women are able to march ahead in their future endeavours

The digital technology is set to provide added opportunities for women to join with flexible schedules and with better geographical movability including work from home. This will help women to amalgamate work and family duties. This change of digitalized era will continue to evolve with the nature and content of professions making progression with changes in essential skills. The rise of digitalization is one of the driving forces that is playing a vital role in the empowerment of women. Digital transformation has provided new avenues for the economic empowerment of women and helped contribute to greater growth and progress.

From the rise of virtual learning and remote work to the use of AI-powered tools, technology is empowering women in ways that were previously unimaginable.

**Technological Education to Bridge Gender Gap**

Technology is a powerful tool that can serve as a catalyst for promoting and achieving gender equality in our society. The technological growth is one of the substantial factors that is helping to bridge the gender gap in workplaces. This line of action has sought for strategies and measures that will compensate for women's major social disadvantages. The digital revolution is providing new directions for the economic empowerment of women. It is a unique opportunity to expand the scope of flexible work environment for women that suits their requirement.

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Digitalization has helped women to upskill in their own fields. They now have a chance to work remotely, look after their household and at the same time excel in their fields of expertise. In today's times, technology has played a pivotal role in bringing women at par with men. With greater progressions and access to digital technology, women are gradually becoming more cognizant and familiar of digital platforms to educate and upskill themselves strongly. Today they can connect globally with anyone through digital platforms and participate in online knowledge-sharing sessions. Technological transformation provides new avenues for the economic empowerment of women and can help contribute to greater gender equality in the professional world.

With the introduction of advanced Artificial Intelligence software, the coming years are going to witness some major changes in technology and it's the right opportunity for women in the workforce to learn, grow and outshine.

Through technology, it is becoming easier for women to access education, find jobs, and start businesses while breaking down traditional gender roles and stereotypes. The access to education and healthcare, the openings to pursue financial and economic independence, and the technological progressions have the power to pull down the barriers that obstruct the progress of women and enable them to wholly participate in the economy.

**Conclusion**

It is remarkable to observe how far technology has come. It is imperative to recognize that students are growing up in a technologically advanced world and providing them with exclusive opportunities to access and experience these developments is an important requirement. Learners, particularly women learners should be given plentiful opportunities to use available technology so that they can stay up-to-date and contribute globally towards growth as competently as possible.

In the coming years, it is anticipated that the advances in artificial intelligence, machine learning, cloud computing, and other digital technologies will enable women of all backgrounds to increase their reach out to capitals, tools, and networks that will benefit them to develop as entrepreneurs/independent entities.
Yet, there are still efforts that needs to be put in to ensure that the technology is inclusively and equally used. Thereby, women and girls from smaller cities will not be left behind in the digital revolution. It is the responsibility of all of us to collaborate together to harness the power of technology and generate a more gender-equal world.

**REFERENCES**

1. Barocas, S., & Selbst, A. D. (2016). Big data's disparate impact. California Law Review, 104(3), 671-732.
2. Buolamwini, J., & Gebru, T. (2018). Gender shades: Intersectional accuracy disparities in commercial gender classification. Proceedings of the 1st Conference on Fairness, Accountability and Transparency, 77- 91.
3. Chouldechova, A., & Roth, A. (2018). The frontiers of fairness in machine learning. ACM Conference on Fairness, Accountability, and Transparency, 117-122.
4. Eubanks, V. (2018). Automating inequality: How high-tech tools profile, police, and punish the poor. St. Martin's Press.

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5. Friedler, S. A., Scheidegger, C., Venkatasubramanian, S., Choudhary, S., Hamilton, E. P., & Roth, D. (2019). A comparative study of fairness-enhancing interventions in machine learning. Proceedings of the Conference on Fairness, Accountability, and Transparency, 329-338.
6. Gender Equality in the Age of AI. (2021). UNESCO. Retrieved from https://en.unesco.org/genderequalityai
7. Gray, M. L., Sweeney, L., & Yablon, Y. B. (2021). Can AI help achieve gender equality? American Economic Review: Insights, 3(2), 241-54.
8. Hutton, L., & Henderson, K. (2019). Towards a feminist AI: Interrogating gender stereotypes in AI assistants. Proceedings of the 2019 AAAI/ACM Conference on AI, Ethics, and Society, 205-211.
9. Kannan, S., Allen, K., Mishra, S., & Patel, J. (2021). Gender classification and intersectional bias in AI: Review, challenges, and mitigation strategies. Frontiers in Big Data, 4, 33.
10. O'Neil, C. (2016). Weapons of math destruction: How big data increases inequality and threatens democracy. Broadway Books.