



# The Role of Information and Communication Technologies in Special Needs in Education

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## ABSTRACT

Awareness and growing importance in making “Education for All” a dream come true Twentieth-century classrooms have been transformed into all-inclusive in nature to teach children with different skills and different cultural, economic, and family backgrounds Under one roof and equal access to facilities and opportunities. To address such diversity reasonably, technology undoubtedly plays a significant role. It makes teachers better handle everyday classroom situations with ICT tools and equipment. Developed and provided sites to remove barriers (physical, technical, cultural, psychological, etc.). To facilitate the holistic development of children. Technological advances and increased use of Different digital resources, different aspects of teaching, learning, evaluation, and education Feedback are much easier and quicker than traditional approaches. With the arrival Specialized tools and a wide range of applications for children with disabilities or special needs, Software and services are easily accessible to different community sections. Currently, the paper reflects the integration of different technological tools. It approaches in our classrooms an all-encompassing environment in which a teacher can meet the individual educational needs of children. The ICT is committed to providing access to all learners, including special needs and skills. The approach to the general education curriculum is discussed in this paper. The purpose of the paper Let teachers know how ICD integration can best be done in classroom learning, Addressing students' problems to overcome their disability.

**Keywords:** Teacher Education, Inclusive environment, Special needs, ICT.

## Introduction

The current period of social development is characterized by the growing role of information and knowledge are becoming critical factors for the progress and prosperity of the community. The development of the Information Society has a growing impact on every aspect of people's lives. Information technology is becoming more and more accessible in everyday life. It transforms our society by bringing a new cultural environment where information is available in every field. Not only does the form of business that works or does change drastically but the approaches to study, skills and knowledge, Communicating with others.

There have been significant innovations in education provision in the last 20 years. Traditional text, sound, Graphics, and video are integrated into a single 'multimedia' document. The world is increasingly connected Via computer networks. Digital telecommunications systems replace analog. System settings, Phones, and television are further integrated. Different applications of information and communication technologies are open - will continue to open - homework, more and more possibilities for the Internet, new opportunities in banking, e-commerce, e-medicine, and (not least) education and training. The technology it quickly becomes obsolete and new skills and knowledge often need to be mastered. Adaptation is only possible based on a proper understanding of ICT concepts. The problem of ICT literacy has been actively developed in the modern times community. Many countries now consider understanding ICTs, mastering basic skills, and considering ICTs as concepts.

ICTs are technological tools and resources used to communicate, create, disseminate, store, and manage information. These technologies include computers, the Internet, broadcast technologies (radio and television), telephones, mobile phones, and other latest gadgets. ICT is defined as the sum of the hardware and software resources specifically used to share, store, and generate information using a variety of technological means. This is different from e-learning, which involves using these ICT tools to enhance the teaching-learning process. Therefore, we can say that ICT is a handy tool for education and has the potential to be greatly beneficial to learners in any situation. A wide variety of research has been conducted over the past decade to show the importance and applications of ICT in education and research. It also sheds light on how to use these to create more efficient learning.

Moving towards the concept of competent teaching, we learn that competent teaching is causally related to competent learning and calls for a democratic and all-encompassing environment in which all learners learn more or less attain those levels or learning standards without much difference. India is a land of diversity. Cultural, economic, linguistic, social, and even emotional criteria vary in different parts of India, and this diversity is also reflected in classrooms. Therefore, a teacher in an Indian classroom should be aware of how these differences can be overcome and filled, especially in the classroom, and assume the responsibility of removing various emotional, cultural, linguistic, social, and economic barriers. The purpose is to realize inclusion in its true nature.

A part of core education, including reading, writing, and arithmetic. Rely on experts to define the skills required in the modern communication world. Technologies available today and technologies coming out have the potential to change the education system. Today we find many new information technology-based methods and forms of education. Over the years, educational institutions have been taking in detail the educational content, structure, and methods to meet the demands of the industrial age. The vision of education has now changed to address the needs of the information age. New approaches to teaching and learning are called for with the corresponding change in the roles of all parties to the educational process. Easy access to global communications, including the Internet and the World Wide Web, as a result of the widespread use of computers and interactive multimedia means:

- ❖ Physical teaching and learning are becoming more and more independent of specific physical areas.
- ❖ The number of resources available to students outside the classroom has increased dramatically.
- ❖ The control location for starting educational meetings is now sent to the learner. The learner begins the process based on 'anytime - anywhere'.

The table below illustrates the new vision of learning and some of the changes brought about by the educational role of ICTs.

#### Progress of educational system impacted by ICT application

Variable	Traditional model	Emerging Model
<b>Teacher Role</b>	Expert Recall facts Safe on the stage	Collaborator Resource person Guide on the side
<b>Learning</b>	Focused on the teacher	Focused on the student
<b>Criterion for Success</b>	Demonstrate entire competition of data.	Construction or mental representation of meanings
<b>Type of Knowledge</b>	Acquisition, Accumulation, or reproduction of data	Construction or mental representation of meanings
<b>Assessment</b>	Based on test	Based on the student's performance of real tasks
<b>Instructional Paradigm</b>	Content – oriented Teacher – oriented	Processes – oriented Student – oriented
<b>Grouping</b>	Homogeneous	

		Heterogenous
<b>Student Activity</b>	Personal work	Group Work

### The Purpose of ICT in Enrolling in Classrooms

- ❖ A teacher must grow to bring inclusion into the classroom because he or she directly deals with diversity within the classroom. In an effort to achieve this goal, ICT has been introduced in teacher education programs. This can be done to serve the following purposes:
- ❖ To provide the basic capabilities of computers.
- ❖ To improve communication in learning.
- ❖ To foster self-learning.
- ❖ Teaching To help teachers who are constantly working on trending and new technologies update their knowledge base.
- ❖ Communication To remove barriers to communication, culture, and geography.
- ❖ Assisting and improving the evaluation, evaluation, and feedback mechanism.
- ❖ Teachers foster collaborative learning and group teaching through collaborative work with teachers.
- ❖ To make the teaching interactive phase more enjoyable.
- ❖ Teachers to assist teachers in their pre-active teaching phase.
- ❖ Distance To provide access to distance learning.

### ICT for inclusion

1. At the individual level
2. At the organizational/formal level

### ICT on a personal level

Technology Auxiliary technology (AT) is used to enhance, maintain, or enhance the functional capabilities of persons with disabilities whether any product, equipment, service, or product system is commercially purchased, modified, or customized on the shelf.

This can be a very complex and multifaceted field, but in some cases can be a relatively easy and creative problem-solving process.

Technology includes various technologies that enable people to develop their skills and participate as fully as possible in their homes, school, work, and community.

Devices Auxiliary devices

Del content distribution systems

Generation content creation and archiving

Education

Braille. Pictorial communication. Large print. Customized environment

Rehabilitation / Addition

Physiotherapy, beauty care, call center / office jobs, banking, court etc.

Communication

Command voice commands, descriptions, large print

Some gadgets are available

Vision disorder

Braille shorthand machine

Vision Telescopes

^ Hand held magnifiers

KNFB Portable Reader for the Blind

Alking speaking dictionary

Smart cane

Speech impairment

Lay Late Auditory Feedback (DAF)

Hearing loss

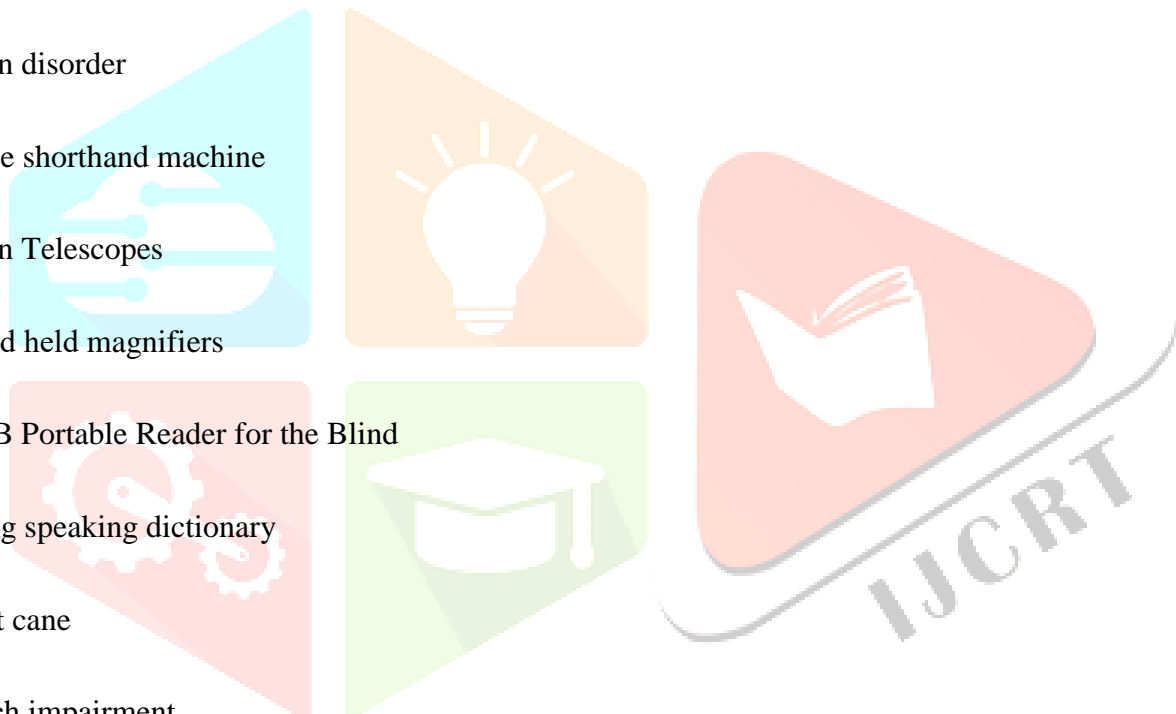
Digital Advanced digital speech audiometer

Earing hearing aid

Wireless FM help request system

Locomotor damage

Wheelchair powered by battery powered joystick



Aluminum crutch

Ankle brace for ankle support

St prosthetic limbs

Erv cervical immobile

Model baby model tricycle

Stick folding sticks and folding walkers

Mental retardation

Skill Basic Skill Wooden Puzzles

We Can (Daily Life Activities)

Calendar of Asons seasons

Rebirth

Sunyok

Switches

ICT - At the formal / organizational level

Learning Any tool or service that can help improve students' learning.

Education Improves the ability to explore applied scientific ideas, innovations and communications based on a testimonial derived from basic educational and psychological research.

AT for inclusion

Here are some examples of ATs to help PWDs in education:

Braille Duplicators and Writers

Group Hearing Assistance for Classrooms

& Conversion and Multiplication Communication Software / Devices

Multi-Sensory Systems

Act tactile mathematical devices

Ac tactile geological devices

Ac tactile scientific devices

Readers Screen readers and magnifiers

Assess appraisal and appraisal tool

Samples

Multimedia content

Development Content development software

Word banking and forecasting systems

Text-to-speech machines and speech recognition

Access Special access switches and mechanism

Such as sign language and Braille learning software.

^ Web-portal

எடுதாட

M-learning

Web-Templates

Online learning

Choose as needed

