

Challenges in using ICT among the Challenged

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Abstract:

Educational reforms include successful designing and implementation of ICT in teaching learning process, which is the key to success. ICT stands for information and Communication, to create, disseminate, store and manage information. ICT in education helps in enhancing educational efficiency, effectiveness and productivity, diversifying teaching learning methods and practices and restructuring education system. ICT can support the learning of the challenged children in all the educational needs. It enables the challenged children to overcome barriers to learning by providing alternative or additional methods of communicating within the learning process. Most students with disabilities can and do benefit from technology in the classroom. Incorporating technology increases student's motivation to learn and personalizes lessons to a student's individual needs. Even the students with the most severe and profound disabilities can use assistive technology to join a classroom of typical students, and their potential can be reached in ways we didn't have before. Teachers in India need to be prepared to face the challenges of 21st century for imparting the new age education; hence education program in India should integrate ICT component in such a way that teachers are enabled to face the new demands in their profession. Thus, efforts must be made by the educationist to change the process of teaching- learning in order to prepare the students to adjust themselves to the society; this could definitely create a new learning environment and information rich society.

21st century is the age of Information and Communication Technology. All over the globe, there is a trend to use ICT in the teaching learning process. The Teacher and learner must gain access to technology for improving learning outcomes. Educational reforms include successful designing and implementation of ICT in teaching learning process, which is the key to success. ICT stands for information and communication technologies and are defined as a set of technological tools and resources used to communicate, to create, disseminate, store and manage information. These technologies include computers, the internet, broadcasting technologies and telephones. ICT in education helps in enhancing educational efficiency, effectiveness and productivity, diversifying teaching learning methods and practices and restructuring education system.

The use of technology in education plays a particularly vital role by enabling flexible curriculum development and assisting students with disabilities to participate as equal in the learning experience. It also helps to prepare them for life-long learning, recreating and work outside of school. The huge amount of information resources on accessible ICT that are in existence and available to teachers was also evident. Frustrations remain at the low levels of awareness and implementation of accessible ICT's for the purposes of including more students more effectively in mainstream classrooms. This is particularly poignant as most technologies in use in schools today have features that enable users to customize the look and feel of the interface to suit their individual accessibility requirement.

Personalized learning requires attention to the unique needs of all students of all abilities, acknowledging that each have different learning styles including students with mild, moderate or severe disabilities. ICT can support the learning of the challenged children in all the educational needs. It enables the challenged children to overcome barriers to learning by providing alternative or additional methods of communicating within the learning process. Moreover, it also helps teachers to create a supportive framework, which enable autonomous learning. ICT can enrich and ensure the teaching learning by motivating and engaging them in active learning.

Use of ICT in teaching learning environment can bring a rapid change in society. It has the potential to transform the nature of education i.e where and how learning takes place and role of learners and teacher in the process of learning. It is essential that teachers must have basic ICT skills and competencies. It is for the teacher to determine how ICT can best be used in the context of culture, needs and economic conditions. Good teaching is not simply adding technology of the existing teaching and content domain rather it should cause the representation of new concepts and requires developing sensitivity to the dynamic, transactional relationship between the three components of knowledge: Content, Technology and Pedagogy.

Integration of ICT in the Teaching learning process of the Challenges:

Technology Literacy: Basic digital literacy skills to use technology, ability to select and use appropriate software available including internet in computer laboratories or with limited classroom facilities to complement standard curriculum objectives, assessment approaches, lesson plans and didactic teaching methods, able to use ICT to manage classroom data and support their own professional development.

Knowledge Deepening: Ability to manage information, structure problem tasks, integrate open-ended software tools and subject specific applications with student centered teaching methods and collaborative methods and collaborative projects in support of students deep understanding of key concepts and their application to solve complex world real problems, use network resources to help students collaborate, access information, communicate with experts to analyze and solve their selected problems and use ICT to create and monitor individual group plans.

Knowledge Creation: Design ICT-based learning resources and environments. Using support students continuous reflective learning and create knowledge communities for students to the individual needs of the learner.

Impact in Classroom: Opportunities to deploy innovative teaching methodologies and to deploy more interesting material that create an interest in the students, enable better management of classroom and students thereby improving the productivity of the tutor as well as the taught, enables optimum utilization and sharing of resources among institutions thereby reducing the cost of implementing ICT and to find appropriate online resources that can be used offline.

Challenges faced by the teachers in using ICT:

1. **Losing control of the learning:** The majority of teachers first priority is to maintain order in the classroom and to have a controlled learning environment. Any suggestion of adopting very innovative teaching techniques such as using ICT is therefore seen as threatening this orderly pattern and therefore not desirable. There is a genuine fear amongst many teachers about ICT and skepticism of its value to their pupils.
2. **Inadequate resources:** There is often a difficulty for teachers who have had some training to be able to use ICT because there are insufficient ICT resources in the school or there is not

enough time to review then and plan lessons incorporating their use according to the needs of the challenged child.

3. **Difficulties in using software/hardware:** There is often a difficulty for teachers who have had some training to use ICT as the software and hardware versions keep getting updated and the teachers are not in the position to use the latest software in meeting the needs of the children as they would have undergone training in older software.
4. **Need more technical support:** In all the schools though the teachers are trained in ICT, the schools do not have technical support staff. There is a need for more technically qualified staffs they would be able to modify certain aspects according to the requirements of the children.
5. **Not enough time to use ICT:** As the teachers have to concentrate on the individual child with special needs separately, the teachers do not have sufficient time to use ICT resources. These resources have to be modified according to the needs of the special child, so there is a lack of time to prepare for these modifications.
6. **Too expensive to use regularly:** Some of the software and hardware are too expensive for a regular school to get accessibility. The schools do not have funds to invest in purchasing the latest software. As such the teachers do not use it regularly.
7. **Other challenges:** the teachers also feel that teaching through ICT makes lessons more difficult, reduces pupils' motivation, restricts the content of the lessons, impairs pupils' learning is not enjoyable for all and is counter-productive due to insufficient technical resources.

Assistive technology is not always just for students with disabilities; it can be used to help any student with motivation, academic skills, and social development. Here are some helpful resources for teachers looking for assistive technology for their students:

- ❖ **UNC's Center for Literacy and Disability studies:** Use technology in their mission to promote literacy and communication for individuals of all ages with disabilities. The center has developed a three-part video on reading assessment and assistive technology that explains evidence-based practices of improving literacy through technology. Additionally, the center has developed "alternative pencils" for students with disabilities who cannot hold a traditional pencil or see a page, including children with deaf-blindness. These technologies include alphabet eye gaze frames allowing children to 'Point' to letters with their eyes, onscreen keyboards that are controlled by switches, and electronic flipcharts.
- ❖ **Learn NC** offers an extensive set of resources to help teachers meet the needs of all learners. In addition, LEARN NC's technology integrated page provides links to web resources, lesson plans, articles, and online courses designed to help educators incorporate into their teaching.
- ❖ **Voice thread** is a free software programme that captures student voices and photos in order to collaborate on a topic. It is a technological substitute for written papers and allows students freedom to narrate their projects.
- ❖ **Sounding Board:** is an iPad/iPod touch app that lets a student turn their device into a story board communicator. Students with writing disabilities and communication disorders can use the symbols to create their own messages in the same way that traditional symbol work, but easily and with a limitless supply of symbols.

- ❖ TechMatrix offers consumer guides and links to software and assistive technology devices for students with disabilities. The site is sponsored by the National Center for Technology Innovation and the Center for Implementing Technology in Education. Tech Matrix gives information and links to resources for teaching science, math, reading and writing using technology with special education students.

Most students with disabilities can and do benefit from technology in the classroom. Incorporating technology increases students' motivation to learn and personalizes lessons to a student's individual needs. Even the students with the most severe and profound disabilities can use assistive technology to join a classroom of typical students and their potential can be reached in ways we didn't have before.

Emergence of information and communication technology has ushered a new era in our civilization in which digitalization has almost become a better alternative, because it has influenced every facet of human life including education. Transformation should take place in the way our teachers teach and students learn. The efforts of ICT is generally of sporadic nature in the education program. Teachers in India need to be prepared to face the challenges of 21st century for imparting the new age education; hence education program in India should integrate ICT component in such a way that teachers are enabled to face the new demands in their profession. Thus efforts must be made by the educationist to change the process of teaching-learning in order to prepare students to adjust themselves to the society; this could definitely create a new learning environment and information rich society.

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