

Inclusive Classroom and the Use of I.C.T.

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ABSTRACT

Education for all is the phrase we have been hearing for a long time. Just like world peace, education for all is a dream too. Education has been the most important topic since the 19th century itself but as the days pass by the importance, need and ways of education are changing daily. Inclusive education is the most used phrase and the most important topic in school education nowadays. Since inclusion is introduced the challenges for the teachers have increased, but as the phrase says EDUCATION FOR ALL, we can never discriminate based on any disability, caste, creed, etc. As the need for inclusion is increasing day by day technology has been helping teachers in every case, in whatever means it can, E-inclusion can be the right term in this case as the technology is getting better every day. The mainstream schools are changing into inclusive schools for the better tomorrow, to make education for all come true, and to make this a success ICT is working hard to make things work. In this paper. Advanced technology and an increase in the use of different digital resources are important parts of education like teaching, feedback, evaluation, and learning become easier and faster, and not like traditional approaches. Specialized apps are being introduced for students with special needs, and it is not hard to get used to these apps. These are easily available and are easier to use. This paper focuses on how Mainstream schools are changing into inclusive schools and how technology is helping these schools, teachers, and students at every step of their teaching-learning process.

Keywords: Education, Inclusive Education, E-inclusion, special needs, disability, Mainstream schools, ICT

Schools are the most important part of our lives. Schools have been the second home for all of us but now the meaning of school is changing. The Mainstream schools are now turning into inclusive schools. Students who used to study with their normal classmates now have classmates who have special needs and are special. Information and Communication Technologies tools or resources which can be used for better communication, for creating, storing, or managing info. Some examples of these technologies are radios, televisions, mobiles, or any gadgets. ICT is that type of tool which is very easily available and can be used any time anywhere, it helps learners in every case at any stage. The idea of an inclusive classroom is old and unique, nobody thought of it as special student needs special classrooms and special teachers' special curriculum and this was not easy. Inclusive Education might

sound interesting and fun but it is more of a challenge for the teachers because as a student sitting in a classroom and learning something might be easy but as a teacher standing in front of a whole class and teaching students, might be difficult as there is inclusion and every child is different. Some might have vision impairment, some might have learning disabilities, some might have hearing impairment, etc. All these students, regardless of their disabilities, have the right to education. In this era of turning mainstream schools into inclusive schools, ICT has worked immensely

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hard to make it a success. At this time when every child is aware of how to use technology, it is a good way to teach them. As it is easily available and easier to use. Special education involves a series of stages, in which different ways were explored to help respond to special children and to learners who have learning disabilities. The Government of India has enacted a law for people with Disabilities (Equal opportunities and Full Participation) Act, 1955 (PWD ACT), which helps in providing free education in a required environment for all learners with learning disabilities till the learner turns 18 years old. Inclusive education meant that all children should learn together in schools that recognize and responds to the needs of students, ensures quality education for all through appropriate curricula, strategies, resources (UNESCO, 1994), and overcome the barriers to the presence, achievement, and participation of students in general education classes (UNESCO, 2017). Universal design learning design (L) is a framework of the curriculum which supports the development of curricula that consider learner diversity (CAST, 2011) and encourage inclusion. It is based on universal design i.e. for all users, regardless of disability, age, gender, size, culture, and other factors (Connell *et al.* 1997; CEN 2003). It uses universal design principles of learning with a focus on the three important pedagogical issues of inclusive education representing information, expressing knowledge, and engagement in learning (Rose and Meyer, 2002).



(Source: <https://www.apd-india.org/programs/inclusive-education>)

Fig. 1: Special Students

Inclusive Education: A better tomorrow

Inclusive Education is the most debatable topic for the education department and the parents. The exact reason for inclusive education is that normal

and special students can sit together in the same class, can share the same tables and chairs, and can study together in the same room. Schools didn't use to give much attention to special students as they were not given the equality they deserved. Even if the schools were giving admission to the special students they weren't allowed to sit in the same classroom with the normal students, Integration took place in a lot of ways and a lot of schools but inclusion took place after a lot of hard work and patience. Teachers who were teaching only normal students at the same speed now teach normal and special students together. Fully inclusive allows students with disabilities to sit in the classrooms with their peers without any discrimination or skill demonstration. Individuals who support inclusive education know that these children deserve the same amount of love and respect as others do. Inclusive education does not believe in the idea of separating normal students and children with special needs and works on the concept of equity. Importance is given to those in need and the right to education act. Inclusion accepts the child the way they are and provides them with the resources and support that they need. Dr. Aruna Kuldeep Singh, and Mangi Lal (2006) in their paper "Inclusive Education in India" have written that around 10% of the population of this whole world is suffering from some disability. This is not just about the countries which are not very well developed but also includes well-developed countries. The three basic components the researchers talked about are segregation, integration, and inclusion.



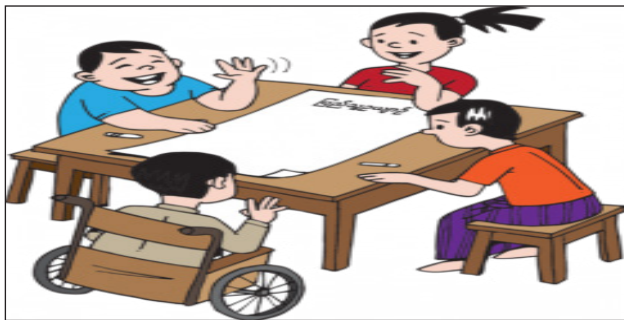
(Source: <https://sites.google.com/site/lcb005inclusiveedu/home/importance-of-inclusive-education>)

Fig. 2: Importance of inclusive education

Is inclusion important?

Feelings about inclusion are still a little dicey as parents are not sure about sending their kids to a school where normal students are studying as they are not aware of the fact how the students will react because a little teasing can hurt their special kid in

such a way that it might affect their overall growth. Learning by doing is the oldest method of teaching and by time has been proved that this is one of the best methods to teach students, as students learn more while doing, students tend to learn more with their friends. Inclusion can be the best way to teach special students as normal students can help their peers in learning. Education for all is the right for all and special children also come under that category in otoieeve this education for all and inclusion is important. Inclusion can help in the overall growth of a child, a child can learn different skills, the child can be free to share his or her views, and inclusion can help in the cognitive development of the child as well. A child with a group of friends learns to grow faster than the students who sit alone and quiet all the time. The feeling of being a part of a group is the most amazing and the most important feeling a child can feel. If we'll make a special child sit in a different classroom and alone might struggle with his confidence and he might also have image issues that could hurt them for their whole life. All this can lead to interpersonal issues and problems related to day-to-day life.



(Source: <https://sites.google.com/site/lcb005inclusiveedu/home/importance-of-inclusive-education>): <https://avazapp.com/blog/inclusive-education-how-does-it-impact-our-children/>

Fig. 3: Inclusion is important?

ICT and inclusive education go hand in hand

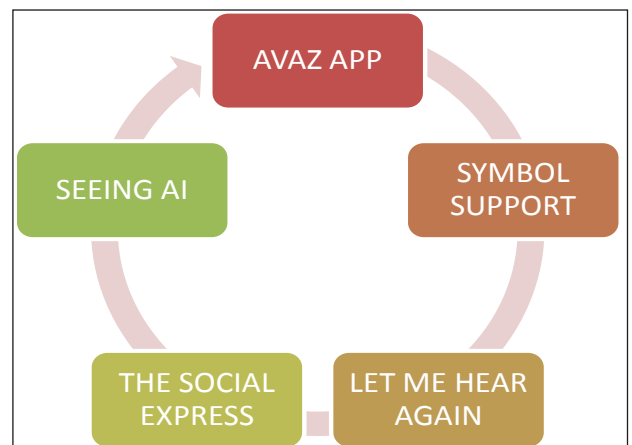
ICT has proved itself to be the most useful resource, teachers are very well aware of the potential, and its uses, and it is feasible and very effective when applied to education. It makes learning much more interesting and effective and also makes it more Accessible. ICT is not just time effective it's cost-effective too. The teachers are getting trained so that they can connect with the process of using ICT in a manner that can help students in every way. Not





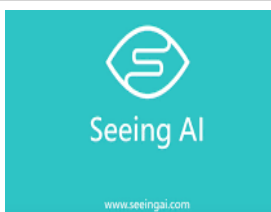
just the normal students ICT is helping teachers and special students in coping up with their day-to-day activities. These apps are easily available in the app store helping parents, students, and teachers too. Learning is getting easier with the help of ICT, teachers don't have to find different ways to make it possible for special children to learn and grow but these apps are working in such a way that parents are also getting used to it and are helping their students in overall growth. A teacher should be aware of the ways to eliminate the biases and all the problems a child could face. Apps are helping in a lot of ways but some of the major advantages of ICT in inclusive education are:

- Apps are easily available and accessible
- Apps use voices in different languages
- It can be easily used by the parents too
- apps can now translate words into speech
- Normal texts can be translated into pictures
- Online flashcards are available
- Provides different social skills situations
- Helps in filling up the communication gap
- Makes a child independent
- Using apps makes a child confident and boosts their self-esteem
- Phone calls can easily be converted into texts

Various Dynamic Educational Apps in the Field of Inclusive Education

There are many apps that are available for disabled sets. Apps that helps these students in every way they can. Apps are making their life easier making them independent and smart. Some examples of these apps are:



 <p>avaz aac</p>	<ul style="list-style-type: none"> ○ Children with speech disabilities ○ uses voices, symbols, and pictures ○ uses regional languages like Telugu, Hindi, Malayalam, Kannada, Tamil <p>AVAZ APP</p>
	<ul style="list-style-type: none"> ○ For children with reading disabilities ○ Translates words into pictures ○ translate documents into pictures <p>SYMBOL SUPPORT</p>
	<ul style="list-style-type: none"> ○ App for the hearing impaired ○ enables the impaired to hear 71 different languages ○ converts phone calls to text <p>LET ME HEAR AGAIN</p>
	<ul style="list-style-type: none"> ○ App for the autistic children ○ provides lessons for communication ○ initiates social learning in autistic children <p>THE SOCIAL EXPRESS</p>
 <p>Seeing AI</p> <p>www.seeingai.com</p>	<ul style="list-style-type: none"> ○ app for blind students ○ reads different types of text ○ also reads handwritten texts <p>SEEING AI</p>



(Source: <https://giftabled.org/inclusive-education/>)

Fig. 4: Inclusive child using computer

These are some of the examples of Technology helping in the teaching-learning process of children with special needs. These apps are easily available in the app store helping parents, students, and teachers too. Learning is getting easier with the help of ICT, teachers don't have to find different ways to make it possible for special children to learn and grow but these apps are working in such a way that parents are also getting used to it and are helping their students in overall growth.

Innovative Ways of Teaching and Learning in Inclusive Classrooms

Technology has helped students and teachers in a lot of ways. It covers a wide range of syllabi in a very small amount of time. Students who have special needs are getting help from technology as it is giving them a chance to keep up with their peers and helps them in their development. For example, a child who is struggling with a speech disability normally struggles with reading, technology could help that child by providing audio, and visuals that help a child in pronouncing the difficult words and also help him/her in reading different words. Many technologies can be used in inclusive education, some of them are:

1. Digital textbooks, eBooks, and Audio-books

Digital textbooks give access to the exact content at different levels of difficulty. In today's time where everybody is way too updated about the technology and how it can be used, textbooks are now available online which can easily be downloaded, it is easily accessible. Audiobooks offer various features which include pronunciation guides, changes from text to speech, and support vocabulary, which allows students to hear the text.



2. Digital posters

Display posters display all the images, audio, videos, and drawings with text. This is basically for the students who are gifted or have a creative mind which gives them creative freedom.



3. Voice Thread

Voice Thread is a platform in which students react to any topic using texts, videos, audio, or images. All these options help the child with learning disabilities in maintaining and contributing in any way they can. They also have options to record their oral responses, which helps them in composing their thought process.



4. Digital Story

Digital storytelling is a project in which students are allowed to tell fictional stories based on their interests.



Each student is asked to draw on his background which provides the content for the story. It can be created in a form of image slideshows, pure videos, pure audio, or images with voiceovers.

5. Voice Diary

Voice diary is an electronic organizer mostly for visually and hearing-impaired students which makes it available for them to use applications such as calculators, addresses, and telephone books through voice messaging.



Inclusive Education and NEP 2020

Inclusive Education as we know is the most emerging topic, it is not just the education system but a system that is growing faster regularly, it is the need of the hour. The RPwD act also affirmed the provision of free education for the child with disability up to the age of 18 years in an adequate condition (Banga, 2015). The government of India understands the importance and need of strengthening inclusive education and taking it to another level. The government Of India has proved again and again that they are aware of the problems that the students with disabilities are facing and that is why inclusive education has taken a special place in New Education Policy 2020. NEP 2020 aims at providing the world with educational opportunities which include curriculum, pedagogy, and other opportunities. NEP 2020 does not believe in the concept of segregation but believes in inclusion. NEP 2020 has also included the inclusion of social skills to make the student independent so that they can be independent. Special daytime boarding school "Bal-Bhavans" will be established at different locations to motivate students to take part in new skills like art, dance, playing, etc.

Benefits of ICT for Inclusive Classrooms

Writing about the benefits of ICT won't serve the justice to what ICT has done for the inclusive classrooms, technology is making life easier that too in some clicks. ICT is useful to all students but is not exactly accessible for those with specific disabilities. Using ICT has many benefits but sometimes it also has some serious drawbacks like sometimes students find it hard to use gadgets or technologies as they are not financially well to afford separate phones for their studies. Sometimes using these apps leaves many encountered problems unresolved. It limits the educational opportunities which results in exclusion. Teachers must be well trained to use the gadgets and apps as these are going to help the disabled students, also teachers should be trained enough to know which app should be used with which disability. If ICT is for disabled students we have to make sure that it is used by them only. There should not be any biasness. Accessible ICTs unleashes hidden talent for those with communication problems.

- Makes students independent in accessing computers
- Children with special needs can work at their speed.
- Sighted peers can help their visually impaired peers in accessing the internet.
- Students with learning disabilities can be helped in communicating easily.
- Students who use different apps can be helped in voice modulation, and overall development.
- Teachers use ICT in communicating with students.
- Teachers now don't have to look for different methods of teaching as ICT can help them in finding such methods.
- Improves understanding of different disabilities and ways to deal with the situation.
- Works on enhancing professional development.
- Using computers can motivate students in learning new things as they know that computers are non-judgemental and unbiased.
- Content provided on the internet is easy to understand.



(Source: <https://www.headnepal.org/ict-training-for-children/>)

Fig. 7: Computer training for disabled children

CONCLUSION

Inclusive Education is a process that is growing faster and is going to last a little longer, it may require a little hard work and patience even after many challenges, all the appropriate measures are being taken to make this a success. Inclusive education is surely helping special students and is responsible for changing the viewpoint and lives of these people. Inclusive education was said to be the most challenging step in our education system as the integration was taking place at higher rates, but the main point was inclusion. As students want to be included, they don't want to sit in a different classroom and study alone as a child learns faster with the help of peers rather than sitting alone. ICT has worked day and night to provide these inclusive classrooms with a better way of teaching which is both cost-efficient, requires less time, and is easily available everywhere. Inclusion requires much more effort, time, consistency, and competency. It is important to have the basic knowledge and skills about the content which is being delivered to the students. The teacher should know the ways to remove the basic barriers which may arise due to different disabilities, and differences in cultural, physical, and economic nature. The teachers make sure that there should not be any biasness and that the class should be fully inclusive. This paper has thrown light on how Inclusive education is helpful and how ICT is helping inclusive education in every way it can.



(Source: <https://hercircle.in/engage/work/career/the-importance-of-inclusive-education-in-classrooms-834.html>)

Fig. 8: Inclusion

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