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ROLE OF TECHNOLOGY IN SPECIAL EDUCATION IN THE LIGHT OF NEP2020

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ABSTRACT

The role of technology in special education has become increasingly important in recent years, as it provides innovative solutions to enhance learning experiences and support the diverse needs of students with disabilities. In the context of the New Education Policy 2020, technology plays a pivotal role in promoting inclusive education and creating a more equitable and accessible learning environment for all students. The New Education Policy 2020 emphasizes the importance of leveraging technology to improve the quality, accessibility, and efficiency of education. In the area of special education, technology serves as a powerful tool to address the diverse learning needs of students with disabilities, facilitate personalized learning experiences, and support the development of essential skills. Advancements in assistive technology, such as screen readers, speech-to-text software, adaptive learning platforms, and communication devices, have transformed the way students with disabilities access information, communicate, and engage in learning activities. These technological tools help overcome barriers to learning and enable students to participate more fully in educational experiences. The intersection of technology and special education in the context of the New Education Policy 2020 represents a transformative opportunity to foster inclusive education, empower students with disabilities, and promote equity in the education system. By including innovative technologies and adopting inclusive practices, education stakeholders can work towards creating a more inclusive and accessible learning environment, that ensures the success and well-being of all students, regardless of their abilities or challenges. The New Education Policy 2020 underscores the significance of integrating technology into teacher training programs and classroom instruction to enhance pedagogical practices and improve learning outcomes. By equipping educators with the necessary skills and resources to effectively incorporate technology into their teaching strategies, schools can create inclusive and supportive learning environments that meet the diverse needs of all students, including those with disabilities.

Keywords: Special need children, Special Education, New Education policy, Innovative technologies, Inclusive Education.

1. INTRODUCTION:

Children with special needs may have been born with a syndrome, terminal illness, profound cognitive impairment, or serious psychiatric problems. Other children may have special needs that involve struggling with learning disabilities, food allergies, developmental delays, or panic attacks.

Across almost every grade and learning ability, educators find that their students are interested and excited by new technology tools. In the special education classroom, some teachers are using this love of technology to engage students in the learning experience.

Special education in India has been a topic of increasing focus and importance in recent years. The Indian government has taken several steps to improve the education and inclusion of students with disabilities in mainstream schools.

- The Rights of Persons with Disabilities Act, 2016, ensures that children with disabilities have the right to free and compulsory education. The Act provides for inclusive education and reasonable accommodations for students with disabilities.
- The government has made efforts to promote inclusive education by encouraging the enrolment of students with disabilities in regular schools. Special educators and support staff are being trained to provide inclusive education to students with diverse needs.
- There are various training programs and courses available for special educators and teachers to equip them with the necessary skills to support students with disabilities. These programs focus on areas such as understanding different disabilities, creating inclusive classrooms, and using assistive technology.
- Assistive technology tools and devices are being increasingly used to support students with disabilities in their learning. This includes specialized software, apps, and devices that can help students access the curriculum and participate in classroom activities.

2. PREVIOUS DISCUSSION:

Darren Crist a special education teacher in California, debuted a 3D printer in his classroom midway through the year. The students were thrilled that they were able to use technology that no one else in the school

had. Crist saw many of his students take initiative to learn how the printer works and how it can be used. The implementation of the 3D printer has been so successful that Crist has introduced his students to other advanced technologies, like robotics, artificial intelligence, and coding. By tapping into a fascination and love of technology, Crist's students were eager to learn – because every lesson advances their ability to use these tools.

Maurya, H. K. (2021), investigated the special educator's awareness and attitude towards use of assistive technology.

Hiramani, P. (2017), has been made to study the educational condition of the Children with Special Needs and to analyse their condition and development under the Sarva Shiksha Abhiyan in Barpeta District of Assam.

3. CURRENT DISCUSSION:

In 1884, a Roman Catholic mission started the **first school for the deaf** at Mazgaon, in the then Bombay Presidency. Establishment of **The Calcutta Deaf and Dumb School** followed in 1893, and later a **school for the deaf came up in 1896 in Palayamkottah in southern India** (Disability Status India, 2003). There were twenty-four schools for the deaf founded and operational during the pre-independence time (before 1947). **The first school for the blind came up in Amritsar in 1887.**

The number of special needs schools has increased over the years. **There are over 2000 special needs schools in India today**, according to the data available on the Department of Education. However, most of these schools cater to the urban population, neglecting many children with special needs from the rural sector.

Despite the progress in special education in India, there are still challenges that need to be addressed. These include a lack of awareness and understanding of disabilities, inadequate support services and resources and a shortage of trained special educators.

As per the 2011 census, the population of people with disabilities in India is estimated to be around 26.8 million, which accounts for 2.21% of total population. Out of this population, 2.4 million are children. However, the education system in India is not equipped to meet the needs of these students, and many of them do not have access to quality education. Therefore, special education classrooms in India are an essential need that must be addressed to ensure inclusive and equitable education for all. Data of 2021-2022 shows that India had nearly 1 lakh schools with 26.52 Crore children (pre-primary to higher secondary).

and 25.57 Crore children (primary to higher secondary) in schools across the country. Of these 22.67 lakh (pre-primary to higher secondary) and 22.40 lakh were students with disabilities (SwDs). The percentage of functional toilets for SwDs was 25.7% and ramp with handrails was available only in 49.72% of schools.

3.1. SPECIAL NEEDS CHILDREN AND TECHNOLOGIES:

Technology plays a crucial role in enhancing the learning experience of children with special needs. Special education and technology are closely interlinked, as technology can play a significant role in enhancing the learning experiences and educational outcomes of students with special needs. Here are some ways in which technology can be used in special education



Fig. 1. Technologies for Special needs children

Personalized Learning: Technology can provide personalized learning opportunities for children with special needs. Adaptive learning platforms

can cater to individual learning styles, preferences, and abilities, helping students progress at their own pace.

Assistive Technologies: Technology tools and devices can improve accessibility for children with disabilities. For example, screen readers, text-to-speech software, and alternative input devices can help children with visual or motor impairments access educational materials and participate in learning activities.

Accessibility Features: Technology can provide accessibility features such as closed captioning, subtitles, and adjustable text size to make educational content more accessible to students with disabilities.

Engaging Activities: Interactive and multimedia resources can make learning more engaging and enjoyable for special needs children. Educational apps, games, and simulations can help reinforce concepts, improve memory retention, and enhance overall learning outcomes.

Communication and Social Skills: Technology tools like social media platforms, video conferencing software, and communication apps can help students with special needs build communication and social skills, connect with peers, and engage in collaborative learning activities. Augmentative and alternative communication (AAC) devices, social skills apps, and video conferencing platforms can facilitate communication and interaction with peers and educators.

Independent Learning: Technology can empower special needs children to become more independent learners. Learning management systems, digital textbooks, and online resources enable students to access information, complete assignments, and track their progress on their own.

Online Learning Platforms: Online learning platforms and educational apps can be used to deliver instruction, practice skills, and provide feedback to students with special needs, allowing for greater flexibility and individualized pacing.

Assessment and Monitoring: Technology tools such as assessment software and data analytics can help educators track the progress of special needs children, identify areas for improvement, and adjust teaching strategies accordingly. This data-driven approach can support more effective educational interventions.

Overall, technology has the potential to revolutionize the education of special needs children by providing personalized, accessible, engaging, and empowering learning experiences. It is essential for educators, parents, and policymakers to leverage technology effectively to support the holistic development of children with special needs and ensure their success in education and beyond.

3.2. INDIAN EDUCATION POLICIES AND INCLUSIVITY:

In 1966, the Kothari Commission had highlighted the importance of educating children with disabilities in regular schools.

The government of India launched the Integrated Education for Disabled Children (IEDC) program in 1974. This was the first formal step towards inclusion. The Centre sponsored scheme sponsored aimed at providing educational opportunities to children with special needs in regular schools. It also hoped to facilitate their achievement and retention.

Inclusive Education for CWSN has been one of the major interventions of the Sarva Shiksha Abhiyan (SSA) RTE and RMSA (Rashtrye Madhyamik Shiksha Abhiyan) schemes.

The National Policy on Education (NPE) of 1986 was a landmark policy document that laid down the framework and goals for education in India. While the NPE 1986 did not specifically focus on special needs children, it did include provisions for the education of children with disabilities and special needs within the broader framework of inclusive education.

- The NPE 1986 emphasized the importance of inclusive education and the integration of children with disabilities and special needs into mainstream schools. It emphasized the need to create a supportive and inclusive learning environment that caters to the needs of all children.
- The NPE 1986 recognized the importance of special education for children with disabilities and special needs. It highlighted the need for specialized educational programs, services, and facilities to support the learning and development of children with special needs.
- The policy emphasized the need for teacher training programs to equip educators with the knowledge and skills to effectively teach and support children with disabilities. It called for special training programs for teachers working with children with special needs.
- The NPE 1986 advocated for equal educational opportunities for all children, including those with disabilities and special needs. It emphasized the need to provide appropriate support and resources to ensure that children with special needs have access to quality education.

While the NPE 1986 did not have a dedicated focus on special needs children, it did pave the way for inclusive education and the acknowledgment of the educational needs of children with disabilities. The policy laid the foundation for future initiatives and policies that would

focus more specifically on the education and well-being of children with special needs in India.

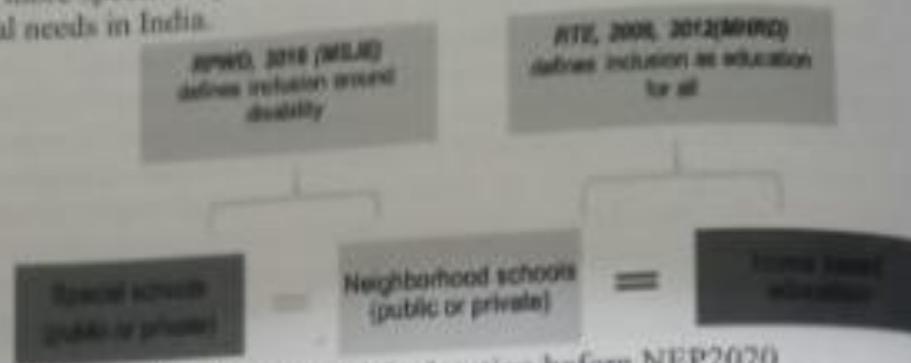


Fig.2. Structure of special education before NEP2020

From the year 2018-19, Samagr Siksha Abhyan lays emphasis on improving the quality of education for all students, including CWSN. It provides support for various student-oriented activities which include identification and assessment of CWSN, provision of aids, appliances, corrective surgeries, Braille books, large print books and uniforms, therapeutic services. Development of teaching-learning material (TLM), assistive devices & equipment, environment building and orientation programme to create positive attitude and awareness about nature and needs of CWSN are part of this initiative. It also addresses purchase/development of instructional materials, in-service training of special educators and general teachers on curriculum adaptation, stipend for girls with special needs, etc.

The National Education Policy (NEP) 2020 in India aims to transform the education system and make it more inclusive, flexible, multidisciplinary, and holistic. The policy recognizes the importance of special education and the need to provide equal educational opportunities for all children, including those with special needs. The NEP 2020 emphasizes the importance of inclusive education and the integration of students with disabilities and special needs into mainstream schools. It highlights the need to create a barrier-free and inclusive learning environment for all children. The policy focuses on ensuring universal access to education for children with disabilities and special needs. It emphasizes early identification of learning disabilities and interventions to provide support and assistance to students at an early age. The NEP 2020 emphasizes the need for teacher training programs to equip educators with the knowledge and skills to support students with special needs effectively. It calls for a focus on inclusive education in teacher education programs. The policy recognizes the role of assistive technology in supporting students with

all children by grade 3 – setting up a national mission to reach this target by 2025.

The National Council of Educational Research and Training (NCERT) in India have developed a set of norms and guidelines for the education of children with special needs. These guidelines aim to ensure that students with disabilities have access to quality education that meets their diverse learning needs and promotes their overall development. NCERT recommends the development of Individualized Education Plans (IEPs) for students with special needs. An IEP is a personalized plan that outlines specific learning goals, instructional strategies, and support services tailored to meet the unique needs of each student with a disability. NCERT emphasizes the importance of providing support services to students with special needs, such as assistive technology, adaptive learning materials, and specialized instructional support. These services aim to enhance the learning experiences and academic achievements of students with disabilities. NCERT provides training programs and resources for teachers to develop the knowledge and skills necessary to effectively support students with special needs. These programs focus on inclusive teaching practices, differentiated instruction, and strategies for creating inclusive classroom environments. NCERT promotes the use of universal design principles to create accessible learning environments that cater to the diverse needs of all students, including those with disabilities. This includes ensuring physical accessibility, providing alternative formats of instructional materials, and incorporating assistive technologies.

4. CONCLUSION:

Overall, the integration of technology in special education can help to support and enhance the learning experiences of students with special needs, promote inclusivity, and improve educational outcomes. It is essential for educators, parents, and other stakeholders to collaborate in leveraging technology effectively to meet the diverse learning needs of students with special needs. Special education in India is evolving, with a focus on inclusive education and supporting the diverse needs of students with disabilities. Continued efforts are needed to ensure that all students have access to quality education and the support they need to succeed. The NEP 2020 emphasizes the importance of inclusive education and the integration of students with disabilities and special needs into mainstream schools. It highlights the need of technology in the learning of special needs children. The policy focuses on ensuring universal access to education for children with disabilities and special needs with the help of technology. The norms and guidelines by NCERT are designed to create a mission

inclusive and equitable education system that ensures all students, including those with special needs, have access to quality education and opportunities for academic and social growth.

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