

Strategies to promote the Reading Habits Among the Special Children: Futuristic Approach with Retrospective Insights

K.Anuradha¹ and Dr K.Ramasamy²

¹Research Scholar, Mother Teresa Women's University, Kodaikanal & College Librarian, LRG Government Arts College for Women, Tirupur, Tamilnadu.

Mail: Lrggacw@lrggac.in

ORCID : <https://orcid.org/1361-1369-1361-1369>

²Research Supervisor, Mother Teresa Women's University, Kodaikanal & College Librarian, M.V Muthiah Government Arts College for Women, Dindigul, Tamilnadu. Mail: ramasamy1975@gmail.com

<https://orcid.org/1361-1369-1361-1369>

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ABSTRACT:

Special children beyond their disabilities, possess unique skill sets which may not be explicit, but when consistently honed, helps them excel. The Literacy skills like reading, writing, speaking and listening are indispensable for all including the special children to succeed in life endeavours. As inclusivity is mandatory for the progress of any country, it's the duty of the government to provide all amenities and educate them. Special children have the fundamental right to learn to read. Reading is the primary process of gaining knowledge which needs to be taught to all, beyond their capacities. The special children can be categorized mainly into three groups depending on the impairment viz Sensory, Physical or Mental or Intellectual Disability. This paper explores the strategies and techniques to promote reading among the special children by analyzing the previous research and evaluating with the help of a study conducted in a special school with the strategies. Finding of the study showed a mild improvement in the attitude towards reading among the special children. Moreover, Assistive and Accessible Technologies are utilized at its best with Artificial Intelligence, IoT, Robotics and ML for transforming the special children to readers/learners effectively and efficiently.

Keywords: Special Children, Reading, Reading Strategies Reading Habits, Technology and Literacy.

Introduction

The special children need to be equipped with reading skill and life-long learning which is dependent on the individualized or customized teaching methods. Developing reading habits in children with disabilities are essential for confidence, creativity, academic pursuits and social inclusion, Wang (2024).

Several reviews indicate that literacy instruction for children with disabilities has been least emphasised than social or functional goals, despite the evidences that effective reading interventions can be rendered across disability groups, Alquraini and Rao (2020) National Reading Panel of US conducted a study on Literature of Reading and its implications;

NICHD or the National Institute of Child Health and Human Development has not mentioned explicitly the reading status of disabled children in the population of interest. This obviously portrays that the reading habits of the special children is of least concern. It's the duty of the government, parents, teachers and the citizens to treat the special children inclusive in the society as the special children's progress influence the nations progress and development. The teachers need to be updated with the latest technology as it goes hand in hand to impart the skills effectively. Audio books, Braille, Speech to Text(STT) and tactile objects are the things of past and recently AI has taken a pivotal role in designing gadgets for the special children.

Americal Library Association (ALA) has endorsed the Right to Read Act which ensure the Low-Income, Minority and Children with disabilities are not disproportionately enrolled in schools that lack good library. The bill protects the access to linguistically and developmentally appropriate evidence-based reading instruction through school and public Libraries. Reading material availability at home and Libraries which are culturally diverse and Inclusive.

Objectives

- To Analyse the reading habits of the special children through retrospective insights
- To formulate strategies for promoting the reading habits of special children in a futuristic approach
- To conduct a survey and infer the impact of strategies on the special children

Research Methodology

- A Comprehensive Review study
- Interview with the teachers, care-takers/ parents
- Observation and Comparison of special children before and after implementation of the strategies.

Comprehensive Literature Review

Reading Intervention programs

Reyes and Uychoco (2025) analysed the reading Intervention and material

frameworks for enhancing the reading skill among students with learning disabilities. SCOPUS, ERIC, Google Scholar and SpringerLink database were searched with relevant key words to find the reading intervention research studies conducted for k-12 students from 2015 to 2025, Out of 312 papers gathered only 8 were selected using PRISMA 2020 flow chart. The eight papers were analysed for their effective classroom implementation, contextual and cultural consideration, Equity Implications and Measurable Learning Outcomes. Reading Intervention depends on the structural Framework, Context sensitive Implementation, Multi layered scaffolded designs with incorporated technology and foundation skill development was found fruitful. The Reading Intervention improves the proficiency, comprehension, confidence and motivation.

Rastogi and Srivastava (2024) studied the impact of different interventions on Literacy and reading skill among the visually impaired patients. Interventions Like Braille education, Audio books, Text to speech software, tactile graphics and multi -sensory approaches were assessed. Myopia students were tested for the effect of Reading Interventions like reading training, vision therapy, use of specialized devices on their reading comprehension, Impact of Intervention program on the quality of life by analysing the employment opportunities, social life engagement and emotional well- being is done. Reading Interventions long term benefits and the need for individualized program for successful reading outcomes. Accessibility and Inclusivity must be ensured to identify the potential barriers and valuable Insights.

Research studies by Day et al (2024) on the accessibility initiatives for technical services and addition of Braille Books in Academic Libraries states that Academic Libraries must be enhanced to be inclusive in providing services. Braille Book addition must be mandated. The library must align with Disability Service Office to provide disabled persons with assistive technologies and the books must be accompanied with VPAT(Voluntary Product Accessibility Template). Other Interventions

include Audio Books and screen reader program, screen magnifier.

Mogan and Yasin (2022) analysed the skill and knowledge of the special education teacher who teach the reading skills. Three special education teachers were surveyed and the questions were about the Learning style of the reading, Teaching strategies like Group Mentoring, Interactive Multimedia and Multi-sensory strategies deployed, involved senses of vision, audio, kinesthetic and tactile senses and the Impact of the strategies on the learning of the reading skills. The results show that choosing the right strategy and implementing the same has good impact on the differently abled patrons.

Upgradation of Library Resources and Services

Gerd Berget (2024) found that the public libraries were not stocked with adapted books for the differently abled and the use of public libraries by intellectual disabled depends on the care givers. The patrons with Intellectual disability rarely visit public Libraries and only a few had the reading h as hobby. Author suggests change in the reform of the public libraries by providing adapted hi-tech resources and services for the Intellectually challenged patrons and also promoting the services provided for the differently abled through media to serve the community with Inclusivity.

Chauhan (2024) reiterated that the AI based Assistive technology services provided through Libraries are of immense support for the differently abled students and opens the door to knowledge thereby enhancing their socio-economic life. The AI enabled assistive technologies improves the accessibility, utility and Innovation along with Inclusivity of the Libraries. A survey was conducted to obtain the opinion of the patrons with special need using a questionnaire and qualitative research was done by conducting interviews with the Librarians and Accessibility experts to gauge the services provided by the Libraries.

Jagmohan Meena (2022) brought out the history of the libraries efforts to be inclusive in providing resources and services to the

differently-abled with the help of available technologies. From being inaccessible and restricted to providing access to the knowledge the special patrons had a long way to the implementation of Legislative Laws for equal-access, at various time period in the United States. Assistive Technologies, Accessibility Technologies, Universal Design and Inclusivity are defined and discussed. Though the Libraries are readily adopting the latest technology to serve the Differently abled, the challenge lies in the high-cost incurrence and the training and support provision to the personnel in implementing the technologies.

Ramadayanthi (2026) found that effective inclusive method is used for promotional transformation of Libraries which involves the use of social media for the inclusion of vulnerable population or the special patrons. By providing accessibility facilities, developing audio format as multi Lingual collections, Text to Speech (TTS) facilities and need based digital literacy awareness, the Library is enhanced to sustainable social Inclusive services with higher visitation and participation.

Utilization of State-of- Art Technology

Sumardi (2019) confirmed that the Dyslexic student's reading habits can be promoted with ICT facilities as Dyslexia is just difficulty in reading and not motor or sensory condition and so it can be dealt effectively. A sample of 20 children belonging to 1361-1369 disability Educational Institutions of Jember in Indonesia were observed and data collected through discussing with dyslexic and questionnaire was distributed to the Institutions to analyse the methods used . Results confirm that use of ICT Tools definitely promotes the reading intention and thus increased reading and Library usage.

Study of Asma Nadia et al (2025) suggested that the Institutional Inclusivity of the special students by devising strategies and means of improving the information Literacy through a team including Librarians, faculties, Principal and administrator of the Institution and set guidelines which mandates the Inclusion of Library Services

to special children with the help of latest technologies like AI thus improving the reading habits of the Special children.

Hoskin et al (2024) tested the efficiency of the technology use in the Braille system to help the Visually impaired gain the reading skill. Although it's a well-known fact that Braille system is the first tactile product with just six raised dots to educate the visually challenged. Braille Literacy Education through technology was analysed. Assistive technology used for Braille were found to be helpful to a little extent. 176 participants learning Braille were surveyed and the results found that technology integration with Braille was not up to the mark, more intense and standardized technology integration is required along with real-time tactile feedback.

Alonzo and Hassan (2025) analysed the research on Human Computer Interaction and other technologies that were deployed to support the people with disabilities. 101 publications of the period 2000 to 2024 were selected for analysis on research methods, technology, type of support and the coding for the community, the papers focussed mainly on dyslexia, Blind and Hearing Impaired and Cognitive disabilities. Artifact development and short term lab based evaluations with common technologies including augmentation, text modification, simplification to improve the readability and comprehension. Longitudinal evaluation was not done in any of the study which would have given good directions and in-depth analysis of the Reading ability enhancement through technologies.

Ganesan et al (2022) stated that the technology supports the visually challenged and those with different degrees of visual impairment with its latest tools. The pattern-based display or Braille is substituted with wearables and built-in

devices by Assistive technologies but they lag in the comprehension part of reading and this study demonstrates a novel Deep Learning Approach. DL approach illustrates the images and text in voice-based form with great precision as a measure of immense inclusivity.

Gupta and Kaul (2024) noted in their study that the AIED or the Artificial Intelligence in Education sector has four groups. 1. Adaptive Learning and Personalized Tutoring 2. Intelligent Assessment and Management 3. Profiling and Predictions and 4. New AI driven Educational Products. The most sought and utilized is the Adaptive Learning and Personalized tutoring AI based systems which recommends resources as per the strength, weakness and prior knowledge and delivers content as per the learner's understanding, performance and speed.

Anshu (2025) suggested the utilization of IoT or Internet of Things applications for the special students to help them navigate the reading or Learning phase with ease. The use of sensors which could help differently abled patrons to use the Library, Learning centre effectively. A few IOT based models have been designed and tested.

Strategies for Promoting Reading Habits

Strategies are the systematic plan with task, techniques and time slot for a stipulated period, designed to achieve an objective. Special children cannot be treated alike as they differ in their capacities and are dependent on the care takers. Individualized or customized planning for each and every special child, depending on the possibilities and challenge, must be followed to achieve the results. The results of the strategies must be checked frequently to assess the effects on the special child and progress in acquiring the reading habits.

Strategy adopted for enhancing the Reading among Special Children

Strategy Adopted	Type of special children	Benefits accrued	Supporting Evidence
Individualized reading plans	Mixed disabilities	Better fit to needs and confidence	Studies of Wang (2024) and Safitri et al (2025) have proved the effectiveness of the Individualized Reading plan
Multisensory and interactive media	Learning disabilities, autism	Greater attention and participation	The research work of Mogan and Yasin (2022) and Ahmad et al (2022) research proved that media helps build reading skill
Shared storybook reading	Young children with disabilities	Higher engagement and emergent literacy	Justice and Kaderavek (2002) and steed et al (2025) found that shared book reading helpful in regularity and sustained interest for Autism and cognitive disabilities
Repeated reading	Dyslexia, intellectual disability	Improved fluency, speed, and comprehension	Lestari et al (2025), Chen(2023) and Azzahra et al (2023) unanimously found a positive impact with behavioral support for structure familiarity contributing to the fluency and comprehension
Guided reading with supports	Hearing impairment	Significant reading skill improvement	Shah (2026) studies proved that children with hearing impairment on a eight week intervention of guided reading are highly beneficial in reading

Strategy Adopted	Type of special children	Benefits accrued	Supporting Evidence
Incorporating children's favourite characters in the content	All kinds of disabilities	Sustained Interest in reading and participatory reading. Enhanced attitude and fluency	Conner (2023) studies showed a steady improvement in reading attitude with a familiar character in reading
Customized Reading Portal by Libraries in Tie-up with the giant tech services like Amazon, Google, Azure and Watson services for the disabled.	BLV, DHH, Physical and mental or Intellectual disabilities	Gesture and sign language recognition through real time human pose estimation. Real time transcription for slow learners and cognitive services	One stop solution for all kind of special children to read/listen and sustain the interest.
Libraries and Home with good Ambience	All kinds of special children	Suggestopedia approach of George Lozanov (1970) suggest the ease of learning/reading with good ambience	Studies of Harsh et al (2022) confirmed that good ambience renders good reading.
Adoption of AI Tools, ML, Robotics and IoT	All kind of special children	Assistive and Accessibility technologies are upgraded and provide state of Art facilities for sustaining the reading habits among all kind of special children	Chauhan (2024) studies stated the benefits of AI-integrated assistive Technologies for the Visually Handicapped and the AI tools provide assistance to deaf, muted and physically disabled students.

Table 1: Strategies for promoting Reading Habits among special Children with with Research Evidence

Survey at a Special School

A Survey of the Special Children at Sai Kirupa Special School, Velampalayam, Tirupur, Tamilnadu was conducted among the special children with Learning disabilities. The Observation and Interview methods were

adopted to study the effect of strategies to promote the reading on the special children.

Around 7 children were selected who can respond to the strategies. By the request of the parents the names were anonymized.

For a period of two weeks, 5 Strategies were adopted

1. Guided repeated reading
Shared Reading Aloud

2.

3. Exposure multimedia content
4.Suggestopedia Approach 5. Utilization of AI tools

Data Analysis of the Survey

Participant code	Age (Approx)	Disability Type	Strategy adopted	Change Observed after 2 weeks	Parents/Teachers Views/opinion
X1	9	Dyslexia: Difficulty in Reading	Guided Repeated Reading	Improved Interest in reading comics	Teacher observed the child's excitement to read
X2	9	Dyslexia: Difficulty in reading	Shared reading with parents	Frequent request to parents/Teachers to read with them.	Parent accepted the change in the child's attitude towards reading
X3	10	ADHD Attention Deficit Hyper Active	Reading content Visualizations through AI Tools	Increased Interest to read and watch the visualization	Parents observed change in the Attitude towards reading
X4	11	Dyscalculia Difficulty in learning numbers and symbols	Repeated Reading and AI tools	Recognized numbers and symbols better	Identified some numbers and symbols
X5	11	Mild Autism: Behavioural and Attention Issues	Game based AI Tools	Enjoyed reading with games	Parents recognized change in reading behaviour
X6	10	ADHD	AI Assistive Tools for reading with multi media videos	Eager for the reading time.	mild modifications in the behaviour
X7	9	Mild Autism	Repeated reading and Suggestopedia Approach	Repetition of the reading content	exhibited interest in listening to reading and watching in an enjoyable ambience.

Table : 2 ; Data Analysis of the survey done in a Special School

Findings

- A notable change was found in the attitude towards reading after the two- week strategy implementation.

- Behavioural change was observed by the parents of X6 and X3 children affected by ADHD.
- Parents requested the school administration to continue with the strategies.

- X1 and X2; Dyslexic students exhibited a mild enthusiasm for reading.
- Students who followed the strategies felt easy, convenient and wanted to continue with the strategies.
- Teachers also showed a positive outlook towards the strategies adoption.
- Individualized strategies were the real factor behind the successful implementation and mild modifications shown by the students.

Conclusion

The special children are unique and every child differs from other in some aspects. Individualization should be the important ingredient for every strategy devised. The teacher

or the parent need to thoroughly analyse the special child's challenges and potential before planning to propose a strategy. The pre-test and post-test comparison showed a mild change in the attitude of reading and learning. Reading and Learning must become the second nature of any special child to excel in social life. The assistive Technology and accessibility technology empowered with AI tools, Robotics and IoT are of immense support for inculcating and sustaining the reading habits of the special children.

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