TechnoLEARN: An International Journal of Educational Technology
TechnoLEARN: **14**(01): 01-15, June 2025
DOI: 10.30954/2231-4105.01.2025.1
Peer Reviewed Journal

A Study on the NCERT Initiatives for Inclusive and Accessible Education and the Status of Implementation in Secondary Level Schools of India: Focus on e-Pathshala

Jaganmohana Rao Gurugubelli[1]*, Kate Dandesh Kumar[2] and Ganta Suman[3]

[1]Assistant Professor, MPD, CIET, NCERT, New Delhi, India
[2]Associate Professor cum Principal, Modern Institute of Teacher Education, Kohima, Nagaland
[3]Principal, K.L.R. College of Education, Paloancha, Telangana, India

*Corresponding author: jaganedn@gmail.com

Received: 13 Mar., 2025 **Revised:** 23 May, 2025 **Accepted:** 05 June, 2025

ABSTRACT

This study investigates the implementation of NCERT's initiatives for inclusive and accessible education, with a specific focus on the e-Pathshala platform, within secondary level schools in India. It examines the utilization and effectiveness of e-Pathshala and related NCERT resources such as PRASHAST, Barkhaa, ISL resources, and others in fostering inclusive educational environments. Employing a mixed-methods approach, this research assesses the accessibility of these resources, their impact on students with diverse needs, and the challenges faced by educators in their implementation. The study aims to provide insights into the current status of inclusive education practices in secondary schools and offer recommendations for enhancing the effective integration of NCERT's inclusive initiatives.

Keywords: NCERT, e-Pathshala, Inclusive Education, Accessible Education, Secondary Education, India, PRASHAST, ISL, Digital Education, Teacher Training

How to cite this article: Gurugubelli, J.R., Kumar, K.D. and Ganta, S. (2025). A Study on the NCERT Initiatives for Inclusive and Accessible Education and the Status of Implementation in Secondary Level Schools of India: Focus on e-Pathshala. *TechnoLearn: An International Journal of Educational Technology,* **14**(01): 01-15.

Source of Support: None; **Conflict of Interest:** None

Education is a fundamental human right and a cornerstone of societal development. In India, with its vast and diverse population, ensuring inclusive and accessible education for all is a paramount national goal. The National Council of Educational Research and Training (NCERT), as the apex advisory body to the Government of India on school education, plays a pivotal role in formulating policies and developing resources to achieve this objective. Inclusive education, as envisioned by national policies like the National Education Policy (NEP) 2020, aims to address the diverse learning needs of all students, including those from Socio-Economically Disadvantaged Groups (SEDGs) and Children with Special Needs (CwSN), ensuring that every child has equal opportunities to learn and thrive within the mainstream educational system.

The advent of Information and Communication Technologies (ICTs) has revolutionized the educational landscape, offering unprecedented avenues for enhancing access and quality. Recognizing this potential, NCERT has spearheaded various digital initiatives to promote inclusive and accessible education. Among these, e-Pathshala stands out as a significant endeavor. Launched as a joint initiative of the Ministry of Education (formerly MHRD) and NCERT in November 2015, e-Pathshala is a comprehensive digital platform designed to showcase and disseminate a wide array of educational e-resources. These resources include textbooks, audio, video, periodicals, and other digital materials, accessible to students, teachers, parents, researchers, and educators across various devices such as mobile phones, tablets, laptops, and desktops. The platform aims to bridge the digital divide, provide quality e-content, and ensure free access to learning materials anytime, anywhere, thereby aligning with Sustainable Development Goal (SDG) 4, which advocates for inclusive and equitable quality education and lifelong learning opportunities for all.

While the conceptual framework and resource availability of NCERT's inclusive education initiatives, particularly e-Pathshala, are well-established, their actual implementation and impact at the grassroots level, specifically within secondary schools across India, warrant a thorough investigation. Despite the policy mandates and the availability of digital tools, various challenges can hinder the effective integration of these initiatives into daily classroom practices. These challenges often include issues related to digital infrastructure, internet connectivity, teacher training in digital pedagogy, awareness among stakeholders, and the digital divide that continues to exist between urban and rural areas.

This study, therefore, seeks to critically examine the NCERT initiatives for inclusive and accessible education, with a particular focus on e-Pathshala, and to assess the current status of their implementation in secondary level schools across India. By delving into the practical aspects of adoption, utilization, and the perceived benefits and challenges, this research aims to provide a comprehensive understanding of the efficacy of these initiatives in fostering a truly inclusive and accessible learning environment for all secondary school students in the country.

Significance of the Study

Provides empirical evidence on the effectiveness of NCERT's inclusive education initiatives, specifically e-Pathshala, at the secondary level. Identifies the challenges and barriers to the successful implementation of these initiatives. Offers practical recommendations for policymakers, educators, and school administrators to improve inclusive education practices. Contributes to the broader discourse on educational equity and accessibility in India, aligning with the goals of NEP-2020, RPwD Act 2016, and SDG 4. Highlights the usage of Digital tools in enhancing educational equity.

Review of Literature

- Review of NCERT's policy documents and guidelines on inclusive education.
- Analysis of research on the impact of digital resources on learning outcomes for students with diverse needs.
- Examination of studies on the implementation of inclusive education practices in Indian schools.
- Literature on the use of Universal Design for Learning (UDL) in educational settings.
- Studies on the effectiveness of teacher training programs in promoting inclusive practices.
- Research on the digital divide and its impact on accessing educational resources.
- Review of the RPwD act 2016, RTE 2009 and NEP-2020.
- Studies related to the impact of mobile application based learning.

Research Gap

- Limited empirical research on the actual implementation and impact of e-Pathshala and related NCERT initiatives at the secondary level in India.
- Lack of comprehensive studies assessing the accessibility and usability of these resources for students with diverse needs.
- Insufficient data on the challenges faced by teachers in integrating these initiatives into their classroom practices.
- There is a need to understand the level of usage, and effectiveness of all the NCERT inclusive initiatives, together at the secondary level.
- There is a lack of research that combines the digital platform side, with the physical classroom implementation of inclusive practices.

Objectives of the Study

1. To assess the awareness and utilization of e-Pathshala and other NCERT inclusive education initiatives among secondary school teachers and students.
2. To evaluate the accessibility and usability of e-Pathshala resources for students with diverse learning needs.
3. To examine the impact of these initiatives on the learning outcomes and inclusion of students with disabilities.
4. To identify the challenges and barriers faced by teachers in implementing these initiatives.
5. To analyze the effectiveness of teacher training programs in promoting inclusive practices.
6. To provide recommendations for improving the implementation of NCERT's inclusive education initiatives in secondary schools.

Hypothesis of the Study

- H1: The utilization of e-Pathshala and related NCERT initiatives positively correlates with improved learning outcomes for students with diverse needs.
- H2: Teacher training programs significantly enhance the effective implementation of inclusive education practices in secondary schools.
- H3: The accessibility of digital resources plays a crucial role in promoting inclusive education.
- H4: There is a significant difference in the level of implementation of NCERT inclusive initiatives between urban and rural secondary schools.

Research Methodology

Mixed-methods approach: Combining quantitative and qualitative data collection and analysis.

Population: Secondary level schools in India.

Sample: A representative sample of secondary schools from diverse geographical locations (urban, rural and tribal). Data collected from 73 secondary school teachers from different states.

Sampling Method: Simple Random sampling to ensure representation across different regions and school types.

Respondents:

- Secondary School teachers.

Data Collection Tools

- Surveys (for teachers).
- Document analysis (NCERT resources, school records).
- Usability testing of e-Pathshala and PRASHAST apps.

Statistical Methods

- Descriptive statistics (mean, standard deviation, frequency).
- Inferential statistics (chi square, p-value, r-value and Mann-Whitney U test).
- Qualitative data analysis using thematic analysis.

Limitations

- Potential for bias in self-reported data.
- Challenges in accessing schools in remote areas.
- Variability in the availability of digital infrastructure.
- This study is limited to Nagaland, Andhra Pradesh and Telangana States only.

Data Analysis and Interpretation

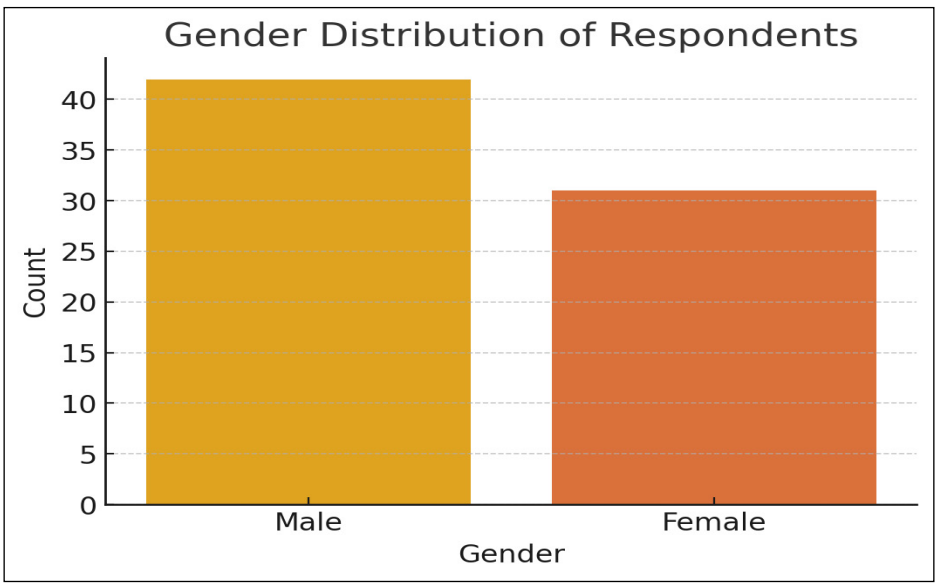

Fig. 1

Gender Distribution of Respondents

The majority of respondents are Male. Female respondents are fewer in number, indicating a gender imbalance in the survey participation or possibly in the teaching workforce represented.

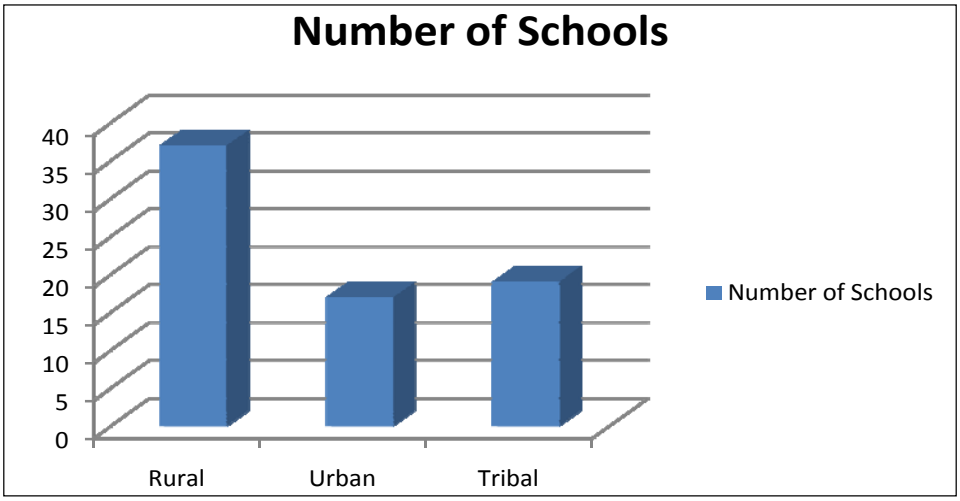

Fig. 2: School Location Distribution

School Location Distribution

Most respondents are from Rural schools. Urban and Tribal school respondents are fewer, with Tribal being the least represented. This suggests a strong rural representation in the dataset, which may influence the challenges and resource availability reported.

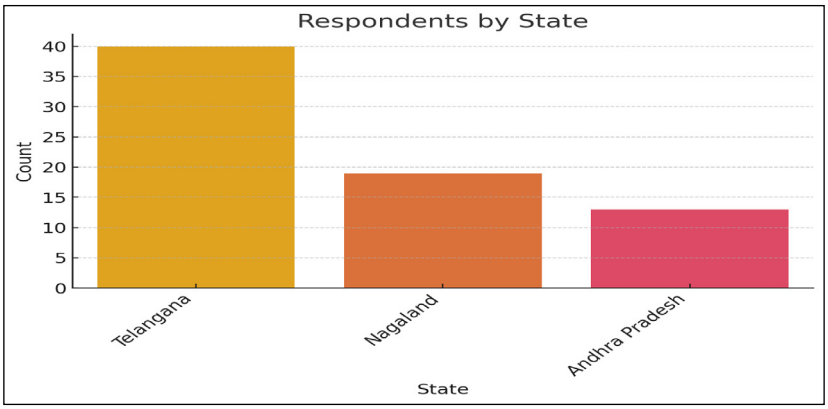

Fig. 3

Respondents by State

Telangana state has the highest number of respondents by a significant margin. Other states have very few respondents. This concentration suggests that insights may be more reflective of Telangana's context.

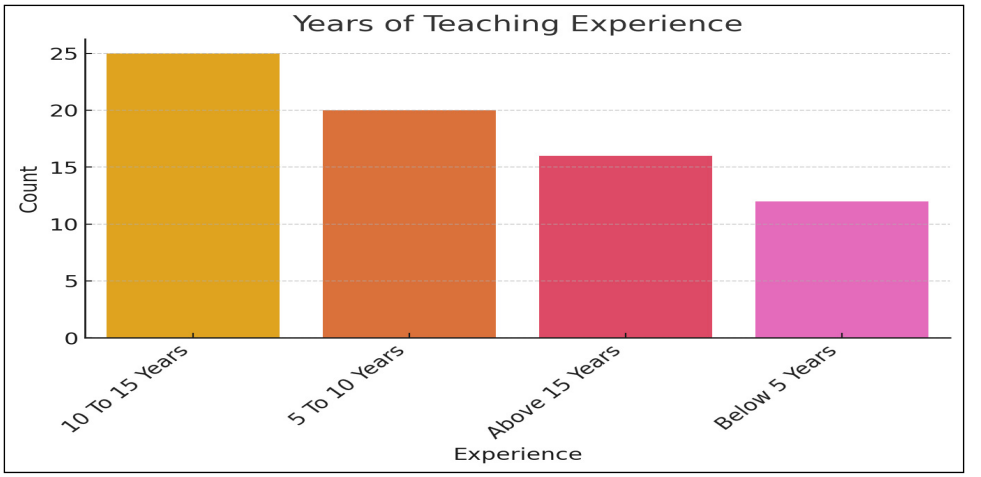

Fig. 4

Years of Teaching Experience

A large portion of respondents have "10 to 15 Years" of teaching experience. The next largest groups are those with "5 to 10 Years" and "Above 15 Years." This indicates a relatively experienced group of teachers participated in the survey.

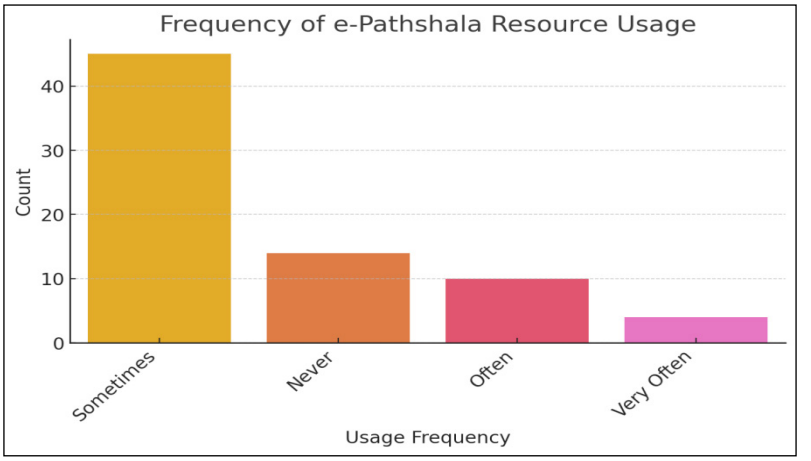

Fig. 5

Frequency of e-Pathshala Resource Usage

The most common usage frequency is "Sometimes," followed by "Never." A smaller group uses the resources "Often" and "Very Often." This suggests moderate engagement with e-Pathshala resources among teachers.

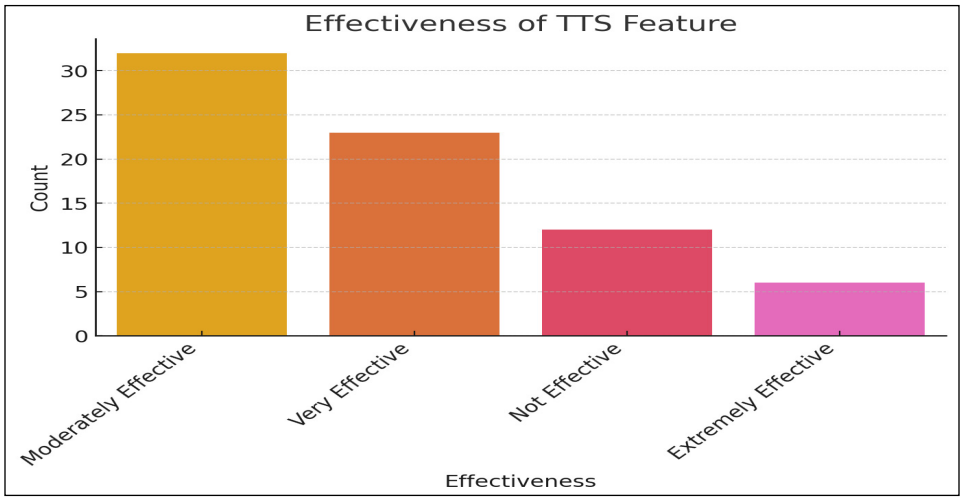

Fig. 6

Effectiveness of e-Pathshala's Text-to-Speech (TTS) Feature

Most respondents who use the TTS feature find it "Very Effective" or "Moderately Effective."

A smaller number find it "Extremely Effective." This indicates a generally positive perception of the TTS feature's usefulness.

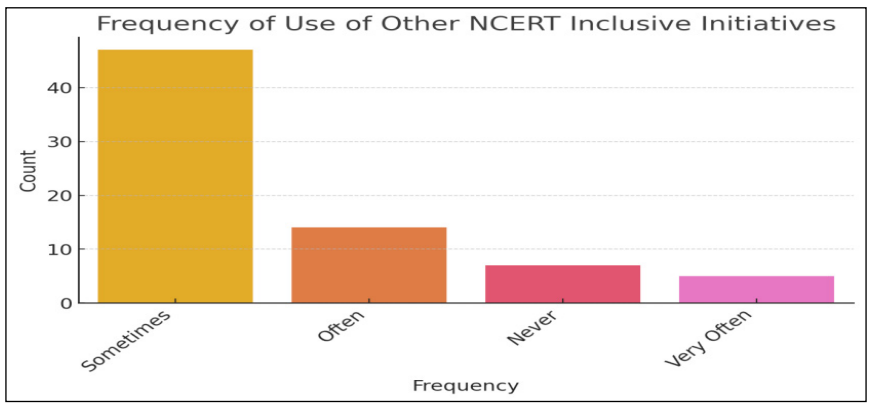

Fig. 7

Frequency of Use of Other NCERT Inclusive Initiatives

"Sometimes" is the most common response, followed by "Often." Few respondents use these initiatives "Never" and "Very Often." This shows moderate use of other NCERT inclusive initiatives, similar to e-Pathshala usage.

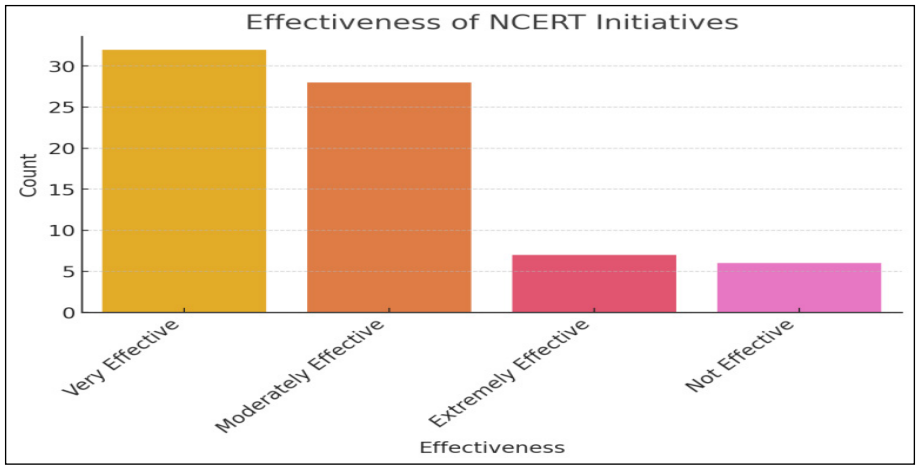

Fig. 8

Opinions on Effectiveness of NCERT Initiatives

The majority find NCERT initiatives "Very Effective" or "Moderately Effective." This reflects a positive overall opinion on the impact of these initiatives in promoting inclusive education.

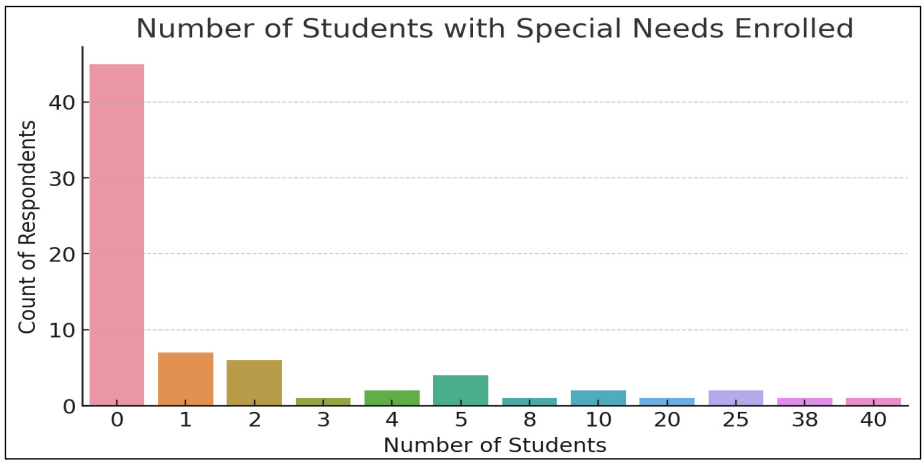

Fig. 9

Number of Students with Special Needs Enrolled

Most respondents report having 0 to 3 students with special needs in their classes. The highest frequency is at 0 students, followed by 1 and 3 students. This suggests that while many teachers have some students with special needs, a significant number do not currently have any enrolled.

Overall, the data reveals a teacher group that is predominantly male, rural-based, and experienced, with moderate engagement and positive perceptions of e-Pathshala and NCERT inclusive education initiatives. The presence of students with special needs varies, with many teachers having few or none in their classes. These insights can help tailor support and resources to the needs and contexts of these educators. If you want, I can also provide a detailed report or further analysis on any specific aspect.

Objective wise Data Interpretation and Analysis

Objective 1: Awareness and Utilization of e-Pathshala and NCERT Initiatives

Variable	Categories (Count)
Awareness of ePathshala	Yes: 51, No: 22
Frequency of ePathshala Usage	Sometimes: 45, Never: 14, Often: 10, Very Often: 2, Rarely: 2
Frequency of Other NCERT Initiatives Usage	Sometimes: 47, Often: 14, Never: 7, Very Often: 3, Rarely: 2

Interpretation:

Most teachers are aware of e-Pathshala, and a majority use it sometimes or often. Other NCERT initiatives show similar usage patterns.

Objective 2: Accessibility and Usability of e-Pathshala Resources

Accessibility Level	Count
Moderately Accessible	33
Very Accessible	22
Not Accessible	10
Extremely Accessible	8

Interpretation:

Most respondents find e-Pathshala resources moderately to very accessible for students with diverse needs, though some report accessibility issues.

Objective 3: Impact on Learning Outcomes (Proxy: Number of Students with Special Needs)

Statistic	Value
Count	73
Mean	3.10
Std. Dev.	7.84
Min.	0
25%	0
Median	0
75%	2
Max.	40

Interpretation:

The number of students with special needs per class varies widely, with many teachers reporting none or few students.

Objective 4: Challenges Faced by Teachers (Top 10 Responses)

Challenge	Count
Lack of understanding	2
None	2
Yes	2
Not understanding	2
Lack of facilities	2
Lack of knowledge students	1
No facilities providing	1
Awareness	1
Lake of knowledge students	1
Poor Connectivity I'm Rural areas	1

Interpretation

Challenges include lack of understanding, facilities, and connectivity issues, especially in rural areas.

Objective 5: Effectiveness of Teacher Training Programs

Training Received	Extremely Effective	Very Effective	Moderately Effective	Not Effective
No	4	20	14	4
Yes	3	12	14	2

Interpretation

Both trained and untrained teachers have mixed opinions on the effectiveness of NCERT initiatives, with many rating them as very or moderately effective.

Objective 6: Implementation Level by School Location

School Location	Never	Often	Sometimes	Very Often
Rural	1	8	22	2
Urban	4	3	8	2
Tribal	1	2	12	1
Others (various)	0-1	0-0	0-1	0-0

Interpretation

Rural schools tend to use NCERT initiatives more frequently than urban or tribal schools.

Summary of hypothesis testing results:

The correlation coefficient between the utilization of e-Pathshala resources (usage frequency) and the perceived effectiveness of NCERT initiatives is approximately 0.43. This indicates a moderate positive correlation, supporting **Hypothesis 1 (H1)** that utilization positively correlates with improved learning outcomes (as perceived effectiveness).

Hypothesis 2 (H2) regarding the impact of teacher training programs on the effective implementation of inclusive education practices.

The chi-square test contingency table for training received vs. training adequacy is:

Training Received	No	Yes
No	15	27
Yes	5	26

The chi-square statistic is approximately 2.53 with a p-value of 0.11.

Since the p-value is greater than 0.05, we do not have enough evidence to reject the null hypothesis. This means there is no statistically significant association between receiving training and believing the training was adequate based on this data.

Hypothesis 3 (H3) about the role of accessibility of digital resources in promoting inclusive education.

The correlation coefficient between the accessibility of e-Pathshala resources and the perceived effectiveness of NCERT initiatives is approximately 0.61. This indicates a strong positive correlation, supporting Hypothesis 3 (H3) that accessibility plays a crucial role in promoting inclusive education.

Hypothesis 4 (H4) regarding the difference in the level of implementation of NCERT inclusive initiatives between urban and rural secondary schools.

The Mann-Whitney U test statistic is 260.0 with a *p*-value of approximately 0.36.

Since the *p*-value is greater than 0.05, we do not have enough evidence to conclude a significant difference in the level of implementation of NCERT inclusive initiatives between urban and rural secondary schools based on perceived effectiveness.

Summary of hypothesis testing results

Hypothesis	Test/Analysis	Result	Interpretation
H1	Correlation between usage frequency and effectiveness	$r = 0.43$	Moderate positive correlation, supports H1
H2	Chi-square test for training received vs adequacy	$p = 0.11$	No significant association, does not support H2
H3	Correlation between accessibility and effectiveness	$r = 0.61$	Strong positive correlation, supports H3
H4	Mann-Whitney U test for urban vs rural effectiveness	$p = 0.36$	No significant difference

Major Findings

1. There is a moderate positive correlation ($r = 0.43$) between the utilization of e-Pathshala resources and the perceived effectiveness of NCERT initiatives, indicating improved learning outcomes.
2. No statistically significant association was found between receiving teacher training and perception of training adequacy ($p = 0.11$), suggesting room for improvement in training programs.
3. A strong positive correlation ($r = 0.61$) exists between accessibility of e-Pathshala resources and perceived effectiveness, highlighting the importance of accessible digital resources.
4. No significant difference in perceived effectiveness of NCERT initiatives between urban and rural schools ($p = 0.36$), indicating similar levels of implementation.

Recommendations

1. Encourage and support teachers to integrate e-Pathshala resources more frequently, with incentives for effective use.
2. Review and redesign teacher training programs to better address practical challenges, including hands-on training and continuous support.

3. Invest in infrastructure and assistive technologies to improve accessibility of digital resources for all students.
4. Maintain equitable implementation across urban and rural schools, with tailored support based on local needs.

CONCLUSION

It is clear that secondary school teachers are aware of and use e-Pathshala and NCERT programs moderately. Digital resource accessibility should be given top priority since it is essential to advancing inclusive education. Although the effectiveness of teacher training programs varies, results could be improved by improving training quality and aftercare. While inclusive efforts are more frequently used in rural schools, urban schools could require more focused assistance to boost participation. To enhance implementation, issues including a lack of knowledge, infrastructure, and connectivity must be resolved. It is advised to conduct further study using direct measurements of learning outcomes in order to more accurately evaluate impact. NCERT programs have a positive effect on inclusive education, and accessibility and utilization are important factors. Improvements must be made to training programs, and progress is being made in implementing equity, which calls for continued assistance.

REFERENCES

Anupriya, G. 2020. Inclusive Education in India: Challenges and Opportunities. *International Journal of Multidisciplinary Educational Research*, **9**(10): 1-10.

Government of India. 2009. *The Right of Children to Free and Compulsory Education Act, 2009*. Ministry of Law and Justice.

Government of India. 2016. *Rights of Persons with Disabilities Act, 2016*. Ministry of Social Justice and Empowerment.

Government of India. 2020. *National Education Policy 2020*. Ministry of Education.

NCERT. (n.d.). *e-Pathshala*. Retrieved from [e-Pathshala website link].

NCERT. (n.d.). *PRASHAST - A Disability Screening Checklist for Schools*. Retrieved from [PRASHAST website link].

NCERT. (n.d.). *DIKSHA (Digital Infrastucture for knowledge sharing)*. Retrieved from [DIKSHA website link].

NCERT. (n.d.). *NISHTHA*. Retrieved from [NISHTHA website link].

NCERT. (n.d.). *SWAYAM MOOCs*. Retrieved from [SWAYAM website link].

NCERT. (n.d.). *PMeVidya*. Retrieved from [PMeVidya website link].

NCERT. (n.d.). *Priya-The Accessibility Warrior*. Retrieved from [Priya comic book website link].

NCERT. (n.d.). *Tactile Map Book*. Retrieved from [Tactile Map Book website link].

Sharma, A. and Singhal, N. 2018. Digital Resources and Inclusive Education: A Study of Indian Schools. *Journal of Educational Technology & Society,* **21**(4): 100-112.

Singal, N. 2010. The education of children with disabilities in India: Issues and challenges. *Prospects,* **40**(3-4): 281-294.

UNESCO. 2017. *A guide for ensuring inclusion and equity in education*. UNESCO.

UNESCO. 2019. *Inclusive education: Where are we now?*. UNESCO.

Mitra, S. 2013. Beyond the hole in the wall: Discovering the social potential of self-organized learning. *TED Books*.

Rose, D.H. and Meyer, A. 2002. *Teaching every student in the digital age: Universal design for learning*. Association for Supervision and Curriculum Development.

Smith, D.D. and Tyler, N.C. 2010. *Introduction to special education: Making a difference*. Pearson.