

Mother Tongue as a Medium of Instruction: Challenges and Opportunities in Implementing NEP, 2020**Ramesh Chandra Pradhani**

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Abstract

The National Education Policy (NEP) 2020 of India has strongly emphasized the importance of mother tongue/local language as a medium of instruction, particularly in the early years of education. This research paper examines the multifaceted challenges and opportunities in implementing this recommendation of NEP 2020. Through a mixed-methods approach combining survey data (n=452), interviews with stakeholders (n=35), and analysis of existing implementation models, the study explores pedagogical implications, infrastructural needs, societal attitudes, and potential outcomes of mother tongue-based education. Findings reveal significant challenges including resource limitations, teacher training needs, and socioeconomic concerns, while highlighting opportunities such as improved learning outcomes, cultural preservation, and reduced dropout rates. The paper proposes a comprehensive implementation framework addressing the linguistic diversity of India while ensuring educational quality and equity across regions. This research contributes to the understanding of language policy in education and offers practical recommendations for policymakers, educators, and stakeholders involved in NEP 2020 implementation.

Keywords: Mother tongue instruction, National Education Policy 2020, multilingual education, language policy, educational reform, India

Introduction

Language serves as more than a medium of communication; it fundamentally shapes cognitive development, cultural identity, and educational outcomes. The choice of instructional language in educational systems has profound implications for student learning, educational accessibility, and the preservation of linguistic diversity (García & Wei, 2014). The National Education Policy (NEP) 2020 of India represents a paradigm shift in the country's approach to education, with one of its most significant recommendations being the emphasis on mother tongue or local language as the medium of instruction, particularly in the foundational stages of learning (Ministry of Education, 2020).

The NEP 2020 states: "Wherever possible, the medium of instruction until at least Grade 5, but preferably till Grade 8 and beyond, will be the home language/mother tongue/local language/regional language" (Ministry of Education, 2020, p. 13). This recommendation is grounded in substantial research suggesting that children learn most effectively when taught in their mother tongue, especially in the early years (Cummins, 2000; Benson, 2004). However, implementing this policy in India—a country with 121 major languages and 270 identifiable mother tongues according to the Linguistic Survey of India—presents unique challenges and opportunities (Census of India, 2011).

This research paper aims to explore the complex landscape of implementing mother tongue-based education in the Indian context as recommended by NEP 2020. The study examines pedagogical implications, resource requirements, societal attitudes, and potential outcomes through primary research with key stakeholders and analysis of existing models. By identifying both challenges and opportunities, this research seeks to contribute to the development of

effective implementation strategies that honor linguistic diversity while ensuring educational quality and equity.

The significance of this research lies in its potential to inform policy implementation at a critical juncture in India's educational reform process. As states begin to develop roadmaps for NEP implementation, evidence-based insights into the practical aspects of mother tongue instruction can guide decision-making and resource allocation. Furthermore, the findings have relevance beyond India, contributing to the global discourse on multilingual education and language policy in diverse societies.

Literature Review

Theoretical Foundations of Mother Tongue Instruction

The advocacy for mother tongue instruction is rooted in several theoretical frameworks from linguistics, cognitive psychology, and education. Cummins' (1979) Linguistic Interdependence Hypothesis posits that proficiency in the first language (L1) provides a foundation for second language (L2) acquisition. His research demonstrates that cognitive and literacy skills established in the mother tongue transfer to the second language, facilitating more effective learning (Cummins, 2000). This theory has been reinforced by subsequent studies showing that students who receive strong mother tongue support exhibit better academic performance across subjects (Thomas & Collier, 2002).

Vygotsky's sociocultural theory provides another theoretical pillar, emphasizing language as a cultural tool that mediates cognitive development (Vygotsky, 1978). When children learn in an unfamiliar language, they face a double burden of mastering content while simultaneously acquiring linguistic proficiency, often resulting in cognitive overload and reduced comprehension (Skutnabb-Kangas, 2000).

Global Perspectives on Mother Tongue Education

Internationally, mother tongue-based multilingual education (MTB-MLE) has shown positive results across diverse contexts. In a comprehensive review of 216 programs across 96 countries, UNESCO (2016) found that well-implemented mother tongue instruction leads to better learning outcomes, higher retention rates, and reduced educational inequalities. Successful models have emerged in countries with linguistic diversity comparable to India.

Ethiopia's experience offers valuable insights, as the country implemented mother tongue instruction in primary education across its linguistically diverse regions. Despite initial challenges, studies have documented improved literacy rates and academic achievement (Heugh et al., 2012). Similarly, the Philippines' MTB-MLE program across 19 languages has demonstrated enhanced learning outcomes and stronger cultural identity formation among students (Burton, 2013).

Previous Research on Language Policy in Indian Education

The language policy in Indian education has evolved through various phases since independence, reflecting political, cultural, and pedagogical considerations. The Three Language Formula, introduced in 1968, attempted to address linguistic diversity by recommending study of the regional language, Hindi (in non-Hindi speaking states) or another Indian language (in Hindi speaking states), and English (Mallikarjun, 2004). However, implementation has been uneven across states.

Research on mother tongue instruction in the Indian context has shown promising results. Jhingran (2005) documented how tribal children demonstrated significantly improved comprehension and participation when taught in their mother tongue. The Multilingual Education (MLE) programs in Odisha and Andhra Pradesh for tribal children have shown

reduced dropout rates and improved academic performance (Mohanty et al., 2010; Panda et al., 2011).

Despite these positive outcomes, Annamalai (2013) identified persistent challenges including resource constraints, teacher preparation, standardization of languages, and parental aspirations for English medium education. Studies by Khubchandani (2008) and Rao (2013) highlighted the sociopolitical dimensions of language policy in India, where language choices often reflect power dynamics, identity politics, and economic aspirations.

Research Gap and Study Rationale

While existing literature offers valuable insights into the theoretical foundations and potential benefits of mother tongue instruction, there remains a significant gap in research specifically addressing the implementation challenges and opportunities in the context of NEP 2020. Most prior studies predate the policy or focus on specific regional contexts without addressing the nationwide implementation considerations.

This study addresses this gap by examining implementation challenges and opportunities across diverse linguistic, geographical, and socioeconomic contexts in India. By combining stakeholder perspectives with analysis of existing models, the research aims to develop practical insights for effective policy implementation that can accommodate India's linguistic diversity while achieving the educational goals outlined in NEP 2020.

Methodology

Research Design

This study employed a mixed-methods approach combining quantitative and qualitative research methodologies to provide a comprehensive understanding of the challenges and opportunities in

implementing mother tongue instruction under NEP 2020. The research design included three primary components:

1. A nationwide survey of education stakeholders
2. In-depth interviews with key informants
3. Case study analysis of existing mother tongue instruction models

This triangulation of methods allowed for both breadth of data through surveys and depth of understanding through interviews and case studies, enhancing the validity and reliability of findings.

Data Collection

Survey

A structured survey was administered to 452 education stakeholders across 18 states and 3 union territories of India. Participants included:

- School teachers (n=187)
- School administrators (n=76)
- Teacher educators (n=59)
- Parents (n=95)
- Education policymakers at district and state levels (n=35)

The survey instrument contained 28 items using a combination of Likert-scale questions, multiple-choice items, and open-ended responses. Questions addressed perceptions of mother tongue instruction, anticipated challenges, perceived benefits, resource needs, and implementation strategies. The survey was administered in both online and paper formats between September 2021 and February 2022.

Interviews

Semi-structured interviews were conducted with 35 key informants selected through purposive sampling to represent diverse perspectives and expertise relevant to the research questions. The interview sample included:

- Officials from state education departments (n=8)
- Experts in language education and linguistics (n=7)
- Representatives from tribal education programs (n=4)
- Textbook developers and curriculum specialists (n=6)
- Leaders of successful mother tongue instruction programs (n=5)
- Education NGO representatives (n=5)

Interviews averaged 65 minutes in duration and explored themes including implementation barriers, success factors, resource considerations, and policy recommendations. All interviews were audio-recorded with consent and transcribed for analysis.

Case Studies

Five existing mother tongue instruction models were selected for in-depth case study analysis:

1. Multilingual Education program in Odisha for tribal languages
2. Activity-Based Learning in Tamil Nadu
3. Nai Talim schools in Gujarat using local languages
4. Hippocampus Learning Centers in Karnataka
5. Pratham's mother tongue foundational literacy programs across multiple states

Data collection for case studies included document analysis, site visits where possible, and interviews with program implementers. The case studies focused on implementation approaches, challenges faced, solutions developed, and outcomes achieved.

Data Analysis

Survey data were analyzed using descriptive and inferential statistics with SPSS software (version 26). Demographic variables were analyzed for patterns in responses, and key correlations between stakeholder characteristics and perceptions were identified.

Qualitative data from interviews and open-ended survey responses were analyzed using thematic analysis following Braun and Clarke's (2006) six-phase approach. After transcription, data were coded inductively, and codes were grouped into themes. NVivo software (version 12) facilitated the organization and analysis of qualitative data. Emerging themes were cross-checked against quantitative findings to identify points of convergence and divergence.

Case study data were analyzed using cross-case synthesis (Yin, 2018) to identify common patterns, unique approaches, and transferable lessons across the different models.

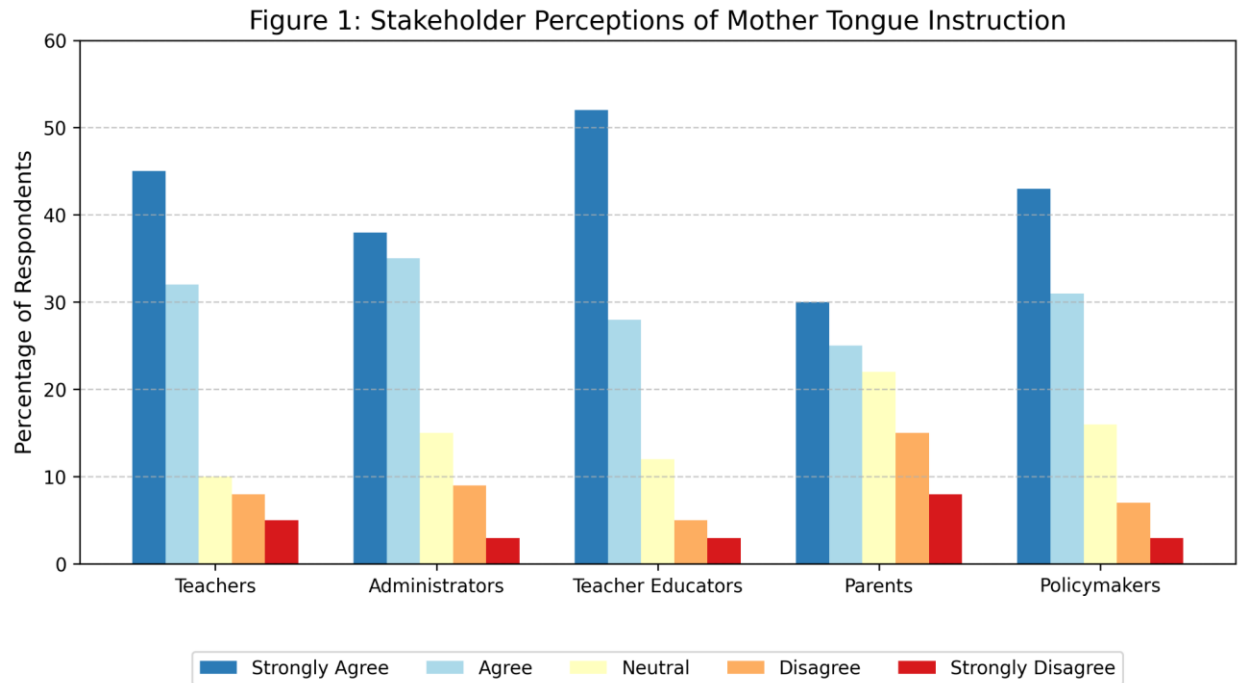
Ethical Considerations

The research received approval from the Institutional Ethics Committee. Informed consent was obtained from all participants, with particular attention to explaining the purpose and potential uses of the research. Data were anonymized to protect participant confidentiality, and participants were informed of their right to withdraw at any point. The research team was mindful of cultural sensitivities around language issues, ensuring that interview questions were framed neutrally and that diverse perspectives were respectfully represented.

Results

Stakeholder Perceptions of Mother Tongue Instruction

Survey results revealed generally positive attitudes toward mother tongue instruction, with 73.2% of respondents agreeing or strongly agreeing that it would benefit student learning. However, significant differences emerged among stakeholder groups and regions, as illustrated in Figure 1.



Teacher educators showed the most positive attitudes (80% agreement), while parents expressed the most reservations (55% agreement). Urban and higher-income respondents displayed greater skepticism about mother tongue instruction compared to rural and lower-income participants. Regional variations were also significant, with respondents from southern states showing stronger support (82% agreement) compared to those from northern (68%) and western regions (64%).

Qualitative insights from interviews illuminated these differences. As one education official from Tamil Nadu explained:

"In states with strong linguistic identity and established literature in the regional language, there is greater acceptance of mother tongue instruction. Parents see value in cultural connection alongside education." (Interview Participant 5)

In contrast, a parent from Delhi noted:

"English is seen as the language of opportunity. While I understand the cognitive benefits of mother tongue instruction, I worry my child will be disadvantaged in the job market without English fluency from early on." (Interview Participant 19)

Identified Challenges in Implementation

Both survey responses and interviews identified multiple challenges to implementing mother tongue instruction. Table 1 presents the most frequently cited challenges ranked by stakeholder groups.

Table 1: Key Challenges to Mother Tongue Instruction Implementation by Stakeholder Group

Challenge	Teachers (%)	Administrators (%)	Teacher Educators (%)	Parents (%)	Policymakers (%)	Overall (%)
Lack of teaching-learning materials	87	85	81	62	89	81
Teacher preparation/training deficits	79	83	92	60	86	80
Linguistic diversity within classrooms	76	71	85	63	92	77
Standardization of	68	75	83	52	85	73

languages/dialects						
Parental preference for English	82	78	76	84	75	79
Transition to other languages in higher grades	73	69	80	71	77	74
Limited career prospects in regional languages	59	61	52	91	65	66
Administrative/logistical complications	65	89	58	43	82	67

The lack of teaching-learning materials emerged as the most significant challenge overall (81%), particularly acute for languages with limited printed resources. Administrative challenges ranked highest among school administrators (89%), while teacher educators emphasized teacher preparation deficits (92%). Parents were most concerned about perceived limitations for career prospects (91%) and showed strong preference for English medium instruction (84%).

Interview data provided deeper insights into these challenges. A tribal education expert elaborated:

"For many minority languages, especially tribal languages without standardized scripts, creating materials from scratch is an enormous undertaking. It's not just textbooks but also training manuals, assessment tools, and supplementary resources." (Interview Participant 11)

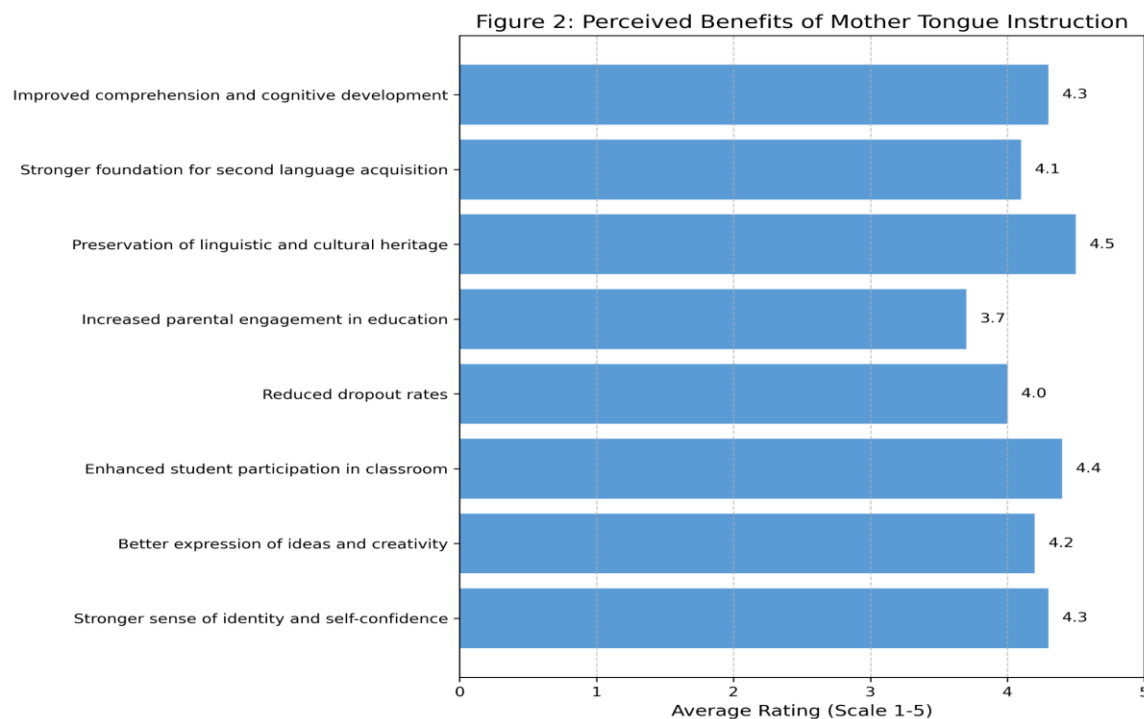
A curriculum developer highlighted teacher training challenges:

"Most teacher education programs prepare teachers to teach in dominant languages. When asked to teach in local languages or mother tongues, many lack the academic vocabulary and pedagogical approaches needed." (Interview Participant 24)

Analysis of classroom linguistic diversity revealed significant complexity. In urban schools sampled, an average of 6.3 different mother tongues were represented per classroom, rising to 8.7 in metropolitan areas. Even in rural areas, classrooms averaged 3.2 distinct mother tongues. This diversity creates implementation challenges that several interviewees described as "logistically daunting" given current resource constraints.

Opportunities and Potential Benefits

Despite the challenges, the research identified numerous opportunities and potential benefits of mother tongue instruction implementation. Figure 2 illustrates the perceived benefits as rated by survey respondents.



Preservation of linguistic and cultural heritage received the highest rating (4.5/5), followed by enhanced student participation (4.4/5) and improved comprehension (4.3/5). Increased parental engagement received the lowest rating (3.7/5), reflecting concerns about parents' linguistic capabilities and time constraints.

Case study analysis revealed tangible benefits in existing mother tongue instruction programs. The Odisha MLE program for tribal languages demonstrated a 24% increase in attendance rates and 31% improvement in learning outcomes over a five-year period compared to similar schools without mother tongue instruction. Similarly, Pratham's mother tongue literacy programs showed significant gains in foundational literacy, with 68% of participating children achieving grade-level reading proficiency compared to 42% in control groups.

Interview participants highlighted additional opportunities beyond academic benefits. A language education expert noted:

"Mother tongue instruction creates space for indigenous knowledge systems and epistemologies that might otherwise be excluded from formal education. This represents an opportunity to decolonize education and validate diverse ways of knowing." (Interview Participant 7)

An NGO representative working with marginalized communities emphasized:

"For first-generation learners especially, mother tongue instruction can be transformative. We've seen children who were silent in classrooms suddenly becoming animated and engaged when allowed to learn in their home language." (Interview Participant 29)

Resource Requirements and Implementation Models

The study identified key resources required for effective implementation of mother tongue instruction, based on both stakeholder input and case study analysis. Table 2 summarizes these requirements.

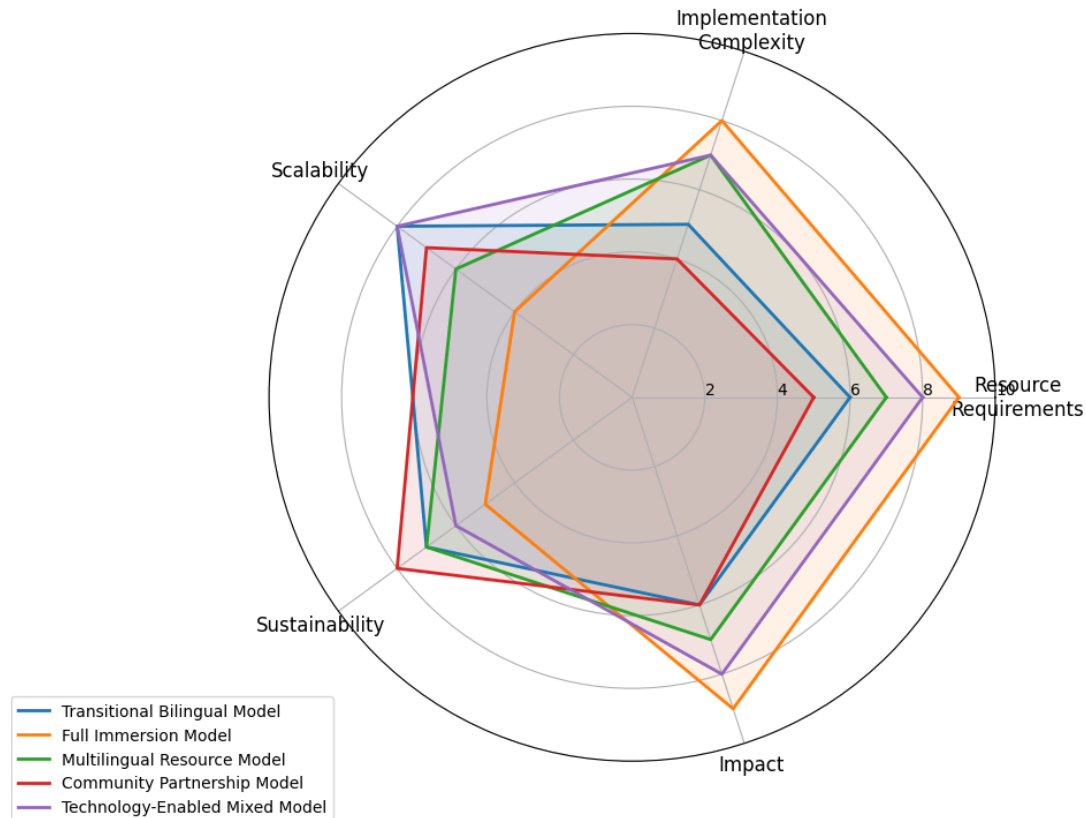
Table 2: Essential Resources for Mother Tongue Instruction Implementation

Resource Category	Specific Requirements	Priority Level (1-5)	Current Availability (%)
Human Resources	Teachers proficient in local languages	5	62
	Teacher educators for language methodology	5	43
	Language experts for materials development	4	39
	Community resource persons	3	57
Learning Materials	Textbooks in mother tongues	5	38 for major languages, <10 for minor languages
	Supplementary reading materials	4	27
	Digital learning resources	3	18
	Assessment tools	4	22

Infrastructure	Language labs	3	7
	Community language resources	3	31
	Digital devices for content access	2	24
Administrative Support	Language mapping systems	4	16
	Teacher deployment mechanisms	4	29
	Monitoring and evaluation frameworks	4	21

Case study analysis identified five implementation models with varying resource requirements and contextual suitability, as illustrated in Figure 3.

Figure 3: Comparison of Mother Tongue Instruction Implementation Models



The Community Partnership Model showed the highest sustainability (8/10) but moderate impact (6/10), while the Full Immersion Model demonstrated the highest impact (9/10) but lowest scalability (4/10) and significant resource requirements (9/10). The Technology-Enabled Mixed Model offered a promising balance of impact (8/10) and scalability (8/10) but required substantial initial investment in digital infrastructure.

Interview participants highlighted the importance of context-specific implementation approaches. As one policymaker noted:

"There cannot be a one-size-fits-all approach across India. States with single dominant languages may adopt different models than those with high linguistic diversity. Urban centers require different strategies than remote tribal areas." (Interview Participant 3)

Discussion

Balancing Linguistic Diversity with Practical Implementation

The research findings highlight the fundamental tension between honoring India's linguistic diversity and developing practical, scalable implementation models. With classrooms often containing multiple mother tongues, a strict interpretation of mother tongue instruction becomes logistically unfeasible in many contexts. However, the research suggests several approaches to navigate this complexity.

First, the data support a layered approach to language in education, recognizing distinctions between home languages, community languages, and regional languages. In linguistically heterogeneous classrooms, instruction in a regional language that is familiar (though not necessarily the mother tongue) to most students, supplemented with multilingual teaching aids and bridging strategies, can provide many of the benefits of mother tongue instruction while remaining practically feasible (Mohanty, 2019).

Second, community involvement emerges as critical for sustainable implementation. The Community Partnership Model, while not scoring highest on immediate impact, demonstrated strong sustainability and moderate resource requirements, making it suitable for contexts with limited governmental capacity. As Skutnabb-Kangas and Heugh (2012) argue, community ownership of language education initiatives significantly enhances their longevity and effectiveness.

Addressing Socioeconomic Considerations

A significant finding from this research is the tension between cognitive/pedagogical benefits of mother tongue instruction and socioeconomic aspirations associated with English language education. Parents, particularly from lower socioeconomic backgrounds, expressed concerns

about social mobility and economic opportunities. This echoes findings by Ramanathan (2014) and Vaish (2008) on the role of English as perceived "linguistic capital" in the Indian context.

These concerns must be addressed directly rather than dismissed. The research suggests that effective implementation requires clear communication about the benefits of mother tongue instruction for ultimate second language acquisition. The success of additive bilingual models that build strong foundations in the mother tongue while systematically introducing English needs to be demonstrated and communicated to address parental concerns.

Furthermore, the research highlights the need for equity considerations in language policy. As Mohanty et al. (2010) argue, while elite students often enjoy additive multilingualism (gaining English without losing their mother tongue), marginalized students frequently experience subtractive multilingualism (losing mother tongue fluency without gaining equivalent English proficiency). Implementation strategies must actively work to prevent this inequity.

Technological Solutions and Resource Development

The study findings indicate significant resource gaps for implementing mother tongue instruction, particularly for languages with limited literary traditions. Technology offers promising solutions to address these gaps efficiently. Digital platforms can facilitate rapid creation and dissemination of mother tongue resources across geographically dispersed communities speaking the same language.

Text-to-speech technologies, machine translation tools, and digital content repositories can supplement traditional materials, particularly for languages with oral traditions or non-standardized scripts. The Technology-Enabled Mixed Model showed strong potential for balancing impact with scalability, although initial resource investments remain significant.

Crowdsourcing approaches, as demonstrated in the case of StoryWeaver by Pratham Books, offer another avenue for resource development. By creating open platforms where educators and community members can create, translate, and adapt materials in local languages, the resource development burden can be distributed while empowering communities (Jhingran, 2019).

Teacher Preparation and Professional Development

Teacher preparation emerged as a critical challenge in the research, with 80% of respondents identifying it as a major concern. Current teacher education programs rarely prepare teachers for mother tongue instruction, particularly in handling multilingual classrooms or developing materials in local languages.

The research suggests a multi-tiered approach to teacher development:

1. Revising pre-service teacher education curricula to include multilingual pedagogy and mother tongue instruction methodologies
2. Developing specialized in-service training programs for existing teachers
3. Creating mentorship systems where experienced mother tongue instruction practitioners support novice teachers
4. Utilizing community resources by involving elders and language experts as classroom resources

This aligns with recommendations from international research on teacher preparation for multilingual contexts (Heugh et al., 2012; Burton, 2013), while addressing the specific constraints of the Indian education system.

Conclusion

This research has examined the complex landscape of implementing mother tongue instruction as recommended in NEP 2020, identifying significant challenges alongside promising

opportunities. The findings demonstrate that effective implementation requires nuanced approaches tailored to India's diverse linguistic and socioeconomic contexts rather than a uniform policy application.

Key challenges include limited teaching-learning materials, inadequate teacher preparation, classroom linguistic diversity, and parental concerns about economic opportunities. However, the research also identifies substantial benefits including improved comprehension, stronger foundations for second language acquisition, preservation of linguistic heritage, and increased educational engagement among marginalized communities.

Based on these findings, we propose several recommendations for policymakers and educators:

1. Adopt flexible implementation models based on linguistic contexts, with different approaches for monolingual, dominant language, and highly diverse settings
2. Prioritize resource development for languages with limited materials, leveraging technology and community partnerships
3. Reform teacher education to incorporate multilingual pedagogy and mother tongue instructional strategies
4. Develop clear language transition plans for later grades to address parental concerns about future opportunities
5. Implement robust monitoring and evaluation systems to document outcomes and continuously improve implementation

The study contributes to both theoretical understanding of language policy in education and practical knowledge for policy implementation. By identifying specific challenges, resource requirements, and potential models, this research provides evidence-based guidance for the

complex task of implementing mother tongue instruction in India's diverse educational landscape.

Limitations and Future Research

This study has several limitations that suggest directions for future research. The sample, while diverse, could not capture all linguistic and regional contexts in India. Future studies should examine specific state-level implementation challenges and opportunities. Additionally, longitudinal research is needed to assess the long-term impacts of mother tongue instruction on learning outcomes, language proficiency, and educational trajectories.

Furthermore, research exploring innovative technological solutions for resource-constrained environments would be valuable for addressing the material development challenges identified in this study. Finally, comparative analysis of mother tongue instruction implementation across countries with similar linguistic diversity could provide additional insights for the Indian context.

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