

A Socio-Educational Study on NEP 2020's Emphasis on Local Language Inclusion in Digital Content: With Special Reference to the Arunachal Pradesh

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Abstract:

This socio-educational study explores the emphasis of the National Education Policy (NEP) 2020 on local language inclusion within digital educational content, specifically focusing on Arunachal Pradesh's unique linguistic landscape. NEP 2020 highlights the importance of multilingualism to ensure equitable access and meaningful learning experiences for students across India. Given Arunachal Pradesh's rich linguistic diversity, implementing digital content in local languages presents both challenges and opportunities for educators, policymakers, and communities. This study investigates the effectiveness of NEP 2020's language inclusion strategies, examining their impact on student engagement, comprehension, and overall educational outcomes. Through interviews with educators and analyses of student responses to local language content, the research assesses how digital multilingualism aids or hinders learning. Findings contribute to a broader understanding of NEP 2020's role in supporting regional language preservation while promoting inclusive digital education, providing insights to enhance digital learning across diverse linguistic regions.

Keywords: Language, Learning, Content, Interview

1. Introduction:

The National Education Policy (NEP) 2020 marks a significant milestone in India's educational landscape, emphasizing inclusivity, equity, and the promotion of local languages in educational content. Recognizing India's linguistic diversity, with over 1,600 languages spoken across the country, NEP 2020 advocates for education in students' native languages to improve comprehension, engagement, and cultural connection (Ministry of Education, 2020). This focus on multilingualism within education, including digital platforms, aims to bridge the gap for students in diverse linguistic regions, fostering a more inclusive and contextually relevant learning environment.

Arunachal Pradesh, a state with a unique mosaic of local languages and dialects, offers a compelling setting to explore the effects of NEP 2020's multilingual vision. With approximately 26 major tribes and over 100 sub-tribes, each with its own language or dialect, implementing digital education in local languages presents both challenges and opportunities. However, realizing this vision in states like Arunachal Pradesh requires overcoming substantial barriers. Limited digital infrastructure, digital literacy

gaps, and a shortage of trained educators proficient in local languages are major challenges. Effective multilingual education also demands digital content adapted to specific regional languages, which may be logistically complex in resource-constrained settings. Nonetheless, NEP 2020's emphasis on local language inclusion presents an opportunity to strengthen cultural identity and foster greater inclusivity in education, ensuring that diverse learners are not left behind (Sen & Prakash, 2023).

This study aims to assess the impact of NEP 2020's local language inclusion initiatives on digital education in Arunachal Pradesh. By examining the role of multilingual digital content in enhancing student engagement, comprehension, and learning outcomes, this research seeks to contribute to the broader understanding of how technology can support equitable and culturally sensitive education across India's varied linguistic landscape.

2. Objective:

1. To evaluate the impact of NEP 2020 on local language inclusion in digital content on student learning outcomes
2. To examine the role of local language digital content in preserving cultural identity
3. To analyze the challenges of implementing NEP 2020's local language policy in digital education
4. To recommend strategies for effective implementation of NEP 2020's language policy in digital education

3. Review of Literature:

Cummins (2000) provides a foundational framework for understanding the cognitive and social benefits of bilingual education, positing that students learn more effectively when taught in their first language. He argues that native language instruction fosters deeper cognitive engagement and helps students transfer knowledge across languages. This work supports NEP 2020's emphasis on multilingualism in Indian education, underscoring the importance of language in educational equity.¹

Pattanayak (2016) discusses the challenges and benefits of implementing multilingual education in India, particularly in rural and tribal regions. The author highlights that while linguistic diversity presents a logistical challenge, it also offers an opportunity to create more inclusive and culturally attuned educational systems. Pattanayak's research is instrumental in understanding the feasibility of NEP 2020's local language initiatives, particularly in areas like Arunachal Pradesh, where linguistic diversity is extensive.²

Malik and Rahman (2020) examine the impact of native language instruction on academic outcomes in multilingual settings, finding that students taught in their mother tongue demonstrate higher comprehension and retention rates. Their study suggests that native language education can reduce dropout rates and improve students' emotional and social well-being. These findings align with NEP 2020's goals, advocating for localized digital content to foster better engagement and retention, particularly in linguistically diverse states.³

Sharma and Kiran (2021) explore the importance of native language instruction in enhancing student engagement and cultural identity within the Indian education system. Their study highlights that local

¹ Cummins, J. (2000). *Language, power, and pedagogy: Bilingual children in the crossfire*. Clevedon: Multilingual Matters.

² Pattanayak, D. P. (2016). *Multilingualism in India: A critical review*. *Indian Journal of Applied Linguistics*, 42(1), 25-38.

³ Malik, S., & Rahman, A. (2020). *The impact of native language education on student outcomes in multilingual contexts: A comparative analysis*. *International Journal of Multicultural Education*, 12(3), 233-245.

language inclusion supports students in understanding complex concepts more easily, fostering both educational and personal growth. They emphasize that for education to be effective, it must be linguistically and culturally relevant, suggesting that initiatives like NEP 2020 could transform education in multilingual regions by bridging cultural gaps.⁴

Sinha and Bhardwaj (2022) investigate the digital infrastructure necessary to support linguistic inclusivity as envisioned by NEP 2020. They identify challenges such as limited technological resources and insufficient digital literacy, especially in rural and tribal areas. The authors argue that for NEP 2020 to be successful in promoting local language digital content, investments in infrastructure and training are essential. Their research offers valuable insights into the practical requirements for achieving equitable access to education in regions like Arunachal Pradesh.⁵

4. Research Methodology:

This study employed a mixed-methods approach to gather comprehensive data on the implementation of NEP 2020's language policy in Arunachal Pradesh. The research involved both qualitative and quantitative data collection methods, including surveys, interviews, and document analysis.

5. Role of Local and Regional Language in NEP 2020:

The National Education Policy (NEP) 2020 emphasizes the inclusion of local and regional languages to enhance accessibility and inclusivity in education. It proposes that, wherever possible, education for children up to at least Grade 5—and ideally up to Grade 8—be conducted in the home language, mother tongue, or local language, recognizing the cognitive and cultural benefits associated with learning in a familiar language. NEP 2020 also endorses the three-language formula, encouraging flexibility and ensuring that no specific language is imposed on states or regions. This approach aims to support linguistic diversity, promote cultural heritage, and enhance student engagement and comprehension in foundational years. Additionally, NEP 2020 underscores the need for high-quality textbooks and educational resources in various Indian languages, including in subjects like science and mathematics. For regions with multiple languages, bilingual education methods and bilingual learning materials are encouraged, particularly in cases where the child's home language differs from the medium of instruction. Recognizing the rapid linguistic adaptability of young children, the policy advocates early exposure to multiple languages to foster multilingualism and broaden cognitive benefits. Considering the importance of a third language, the Government of Arunachal Pradesh has introduced third language books from Class VI to VIII in the state by collaborating with the Apex bodies of various tribes. In the first instance, the books of NYISHI, GALO, TAGIN, MISHMI (Idu), MISHMI (Kaman), MISHMI (Taraon), TANGSA, and WANCHO tribes are being introduced.⁶

6. Indian States and Multilingualism:

Each Indian state also happens to be multicultural, besides showing a great degree of multilingualism as the following table shows:

⁴ Sharma, R., & Kiran, R. (2021). *Language, learning, and cultural identity in Indian education: Challenges and opportunities*. *Journal of Educational Research and Development*, 16(2), 89-101.

⁵ Sinha, S., & Bhardwaj, V. (2022). *Digital infrastructure and linguistic inclusivity in Indian education: Challenges and pathways*. *Educational Technology and Society*, 25(1), 78-92.

⁶ State Council of Educational Research and Training, 2021. Government Of Arunachal Pradesh. Retrieved from <https://scertarunachal.nic.in/UserPortal/BookDetails.aspx>

Table - 1

S. No.	State / UT	Major Language	Other Languages With Significant Population
1.	Kerala	Malayalam (96.6%)	Tamil, Kannada
2.	Punjab	Punjabi (92.2%)	Hindi, Urdu
3.	Gujarat	Gujarati (91.5%)	Hindi, Sindhi
4.	Haryana	Hindi (91.0%)	Punjabi, Urdu
5.	U.P.	Hindi (90.1%)	Urdu, Punjabi
6.	Rajasthan	Hindi (89.6%)	Bhili, Urdu
7.	H.P.	Hindi (88.9%)	Punjabi, Kinnauri
8.	Tamil Nadu	Tamil (86.7%)	Telugu, Kannada
9.	West Bengal	Bangla (86.0%)	Hindi, Urdu
10.	A.P.	Telugu (84.8%)	Urdu, Hindi
11.	M.P.	Hindi (85.6%)	Bhili, Gondi
12.	Bihar	Hindi (80.9%)	Urdu, Santali
13.	Orissa	Oriya (82.8%)	Hindi, Telugu
14.	Mizoram	Lushai (75.1%)	Bangla, Lakher
15.	Maharashtra	Marathi (73.3%)	Hindi, Urdu
16.	Goa	Konkani (51.5%)	Marathi, Kannada
17.	Meghalaya	Khasi (49.5%)	Garo, Bangla
18.	Tripura	Bangla (68.9%)	Tripuri, Hindi
19.	Karnataka	Kannada (66.2%)	Urdu, Telugu
20.	Sikkim	Nepali (63.1%)	Bhotia, Lepcha
21.	Manipur	Manipuri (60.4%)	Thadou, Tangkhul
22.	Assam	Assamese (57.8%)	Bangla, Boro
23.	Arunachal	Nissi (19.9%)	Nepali, Bangla
24.	Nagaland	Ao (14.0%)	Sema, Konyak

Source: https://www.education.gov.in/sites/upload_files/mhrd/files/upload_document/languagebr.pdf

7. Impact of Local Languages in Digital Contents:

The National Education Policy (NEP) 2020 has placed significant emphasis on promoting local languages in education, aiming to make learning more inclusive and accessible for students across India. For regions like Arunachal Pradesh and other linguistically diverse areas, this approach can have a substantial impact on digital content creation and student learning outcomes. Here’s a look at the potential impacts of NEP 2020 on local language inclusion in digital content, specifically in relation to student learning outcomes:

1. Enhanced Comprehension and Learning Retention:

The NEP 2020 supports teaching young students in their mother tongue, especially in states with multiple languages, to make learning easier and help them understand and remember better. When students learn in a familiar language, they can grasp complex ideas faster without the extra burden of understanding a new language. Additionally, by creating digital content in local languages, students become more comfortable using digital tools and platforms in their native language, which boosts their digital skills and makes it easier for them to access and use educational resources.

2. Increased Inclusivity and Access to Education:

Many digital learning platforms are predominantly in English or Hindi, which limits accessibility for students from various linguistic backgrounds. The NEP's emphasis on local languages can help reduce this barrier, making digital learning resources more inclusive. Students may engage more actively in lessons presented in a language they understand well, which could improve participation and performance. Local language inclusion also helps parents who may not speak English or Hindi to understand better and support their children's education.

3. Promotion of Cultural Identity and Connection:

The NEP's emphasis on using local languages in education helps preserve indigenous knowledge and cultural practices. It allows students to learn through examples and stories that reflect their backgrounds. Including regional languages in digital content makes learning more relatable and meaningful. For students in multilingual areas like Arunachal Pradesh, seeing their language in educational materials builds pride in their culture, boosting their confidence and enthusiasm for learning.

4. Promotion of Cultural Identity and Connection:

The NEP's focus on local languages helps preserve indigenous knowledge and cultural traditions by enabling students to learn through examples and stories reflecting their culture. Incorporating regional languages into digital content makes education more relatable and meaningful for students. For those in multilingual areas like Arunachal Pradesh, seeing their language included in educational materials fosters pride in their heritage, boosting their self-confidence and motivation to learn.

5. Impact on Learning Outcomes:

The students learn better when taught in their mother tongue, and NEP 2020's language policy, if used effectively in digital content, can boost academic performance, literacy rates, and critical thinking. By including local languages, the NEP can also help close the digital gap, allowing students in rural and remote areas to access quality education. More students can benefit as digital content becomes available in regional languages, leading to better learning outcomes in areas like Arunachal Pradesh.

8. The Role of Local Language in Holistic Development:

The role of local language in holistic development is fundamental, especially in culturally diverse societies. Language shapes how individuals perceive and interact with the world, influencing cognitive, social, emotional, and cultural development. Here's an overview of how local language contributes to various aspects of holistic development:

- 1. Cognitive Development:** Learning in one's native language enhances comprehension and conceptual understanding, allowing learners to build knowledge on a familiar foundation. Studies show that when students are taught in their mother tongue, their cognitive skills, such as memory retention and problem-solving abilities, improve. This familiarity with language aids in faster cognitive processing and supports deeper engagement with educational material.
- 2. Cultural Identity and Heritage:** Local languages carry cultural values, traditions, and history. When education incorporates local languages, it strengthens learners' connections to their heritage, promoting cultural pride and continuity. Language fosters a sense of belonging, helping individuals navigate their cultural identity and preserving cultural diversity for future generations.
- 3. Emotional and Social Development:** Learning in a familiar language helps children express themselves more authentically, fostering confidence and emotional well-being. It supports social interaction within the community, building social cohesion and enhancing communication skills.

Additionally, when children feel understood in their own language, they experience reduced anxiety and greater enthusiasm for learning.

4. **Academic Achievement:** Research indicates that students who receive instruction in their native language perform better academically. Language proficiency enables students to understand complex concepts and develop literacy skills, building a strong foundation for future learning. Multilingual education also promotes greater language awareness and skills, which can benefit academic performance in additional languages.
5. **Promoting Inclusivity and Equity:** Incorporating local languages into education promotes inclusivity by recognizing and valuing linguistic diversity. It levels the playing field for learners from different linguistic backgrounds, reducing barriers to education and fostering equity. This approach helps marginalized groups feel seen and respected, enabling them to participate fully in educational and societal opportunities.

9. Challenges:

In a socio-educational study focusing on NEP 2020's emphasis on local language inclusion in digital content, especially concerning Arunachal Pradesh, several challenges specific to this region emerge:

1. **Extreme Linguistic Diversity:** Arunachal Pradesh is home to over 25 major tribes and more than 100 languages and dialects, which makes the development of standardized educational materials in local languages highly complex. Addressing such diversity in digital content without marginalizing certain languages or dialects is a significant challenge.
2. **Limited Digital Infrastructure:** Many areas in Arunachal Pradesh face limited access to reliable internet, electricity, and digital devices, especially in remote and hilly regions. This lack of infrastructure hampers the reach and impact of digital content in local languages, restricting access for students who would benefit most from it.
3. **Scarcity of Local Language Resources:** Many indigenous languages in Arunachal Pradesh lack written scripts, standardized grammar, or sufficient digital resources, which poses a challenge for creating high-quality educational content. This scarcity of language resources complicates the process of developing and implementing digital content.
4. **Teacher Training and Language Proficiency:** Teachers in Arunachal Pradesh often lack formal training in digital teaching methods and may not be proficient in the local languages of their students. Effective use of local language digital content requires teachers to be fluent in both digital skills and local languages, which may necessitate extensive training.
5. **Sociocultural Perceptions and Language Bias:** Some communities and educators may prioritize national languages like Hindi or English over indigenous languages, viewing them as more advantageous for career and educational opportunities. This bias can result in limited acceptance of local language content and resistance to the NEP's language policy.
6. **Sustainable Development and Maintenance of Content:** Developing and continually updating digital content in multiple languages, particularly those with smaller speaker bases, is resource-intensive. Ensuring the sustainability of such content for smaller language communities is challenging, as it requires ongoing investment and effort.
7. **Potential Marginalization of Minor Dialects:** With so many languages and dialects in Arunachal Pradesh, it may be difficult to include all in digital education, leading to potential marginalization of

less widely spoken dialects. Ensuring equitable representation across all linguistic groups is a complex issue.

10. Findings:

1. When children are introduced to concepts in their native language, they understand and retain information more effectively. This is particularly impactful in early education, where foundational concepts in subjects like math, science, and literacy are introduced.
2. Studies show that children develop cognitive skills faster when they learn in their mother tongue. The familiarity of the language reduces cognitive load, allowing them to focus on grasping concepts rather than struggling with a second language.
3. Learning in a familiar language helps young students feel more comfortable and confident, which fosters participation and interaction. They are more likely to ask questions, participate in discussions, and engage with digital educational content when it's in a language they understand well.
4. Digital content in local languages can feature culturally relevant themes, stories, and examples, making it more relatable. This cultural resonance keeps students interested and connected to their learning environment.
5. For students whose primary language at home differs from the instructional language, learning in their native tongue can bridge the gap between home and school environments, fostering a smoother transition to formal education.
6. When students comprehend lessons and feel engaged, they're less likely to become discouraged and more likely to continue their education. This could ultimately help reduce dropout rates, especially in regions where students face linguistic barriers in mainstream education.
7. NEP 2020's emphasis on multilingual education and local language inclusion in early education supports this approach, recognizing that native language instruction can significantly improve educational outcomes.
8. By developing digital content in local languages, schools and educators can provide a resourceful learning environment that respects linguistic diversity, aligns with policy objectives, and supports inclusive education.
9. Early education in local languages strengthens literacy skills, as students can connect phonetics, vocabulary, and grammar with their everyday language, reinforcing their foundational language abilities.
10. Strong literacy skills in a mother tongue provide a solid base for learning additional languages in later grades. This scaffolding approach can make bilingual or multilingual education more effective over time.

11. Conclusion and Recommendations:

The integration of local language digital content offers significant socio-educational benefits, particularly in linguistically diverse regions like Arunachal Pradesh, by enhancing comprehension, engagement, and cultural preservation. Learning in a familiar language boosts foundational literacy, fosters a sense of cultural pride, and aligns with the NEP 2020's goals of inclusive, multilingual education. However, this approach faces challenges in infrastructure and resource allocation: many remote areas lack reliable internet, electricity, and digital devices, which restricts equitable access to digital resources. Additionally, creating content for numerous indigenous languages requires substantial linguistic and technological

resources that are often limited, especially for minority and primarily oral languages. Funding constraints further complicate sustainability and scalability, making it essential to build multi-stakeholder partnerships that address these infrastructural and financial gaps to ensure the lasting impact of local language digital initiatives.

Recommendation:

1. The government and private sectors should prioritize improving internet connectivity, electricity access, and digital devices in remote and rural areas to ensure equitable access to digital educational resources. This could include providing subsidies or grants for schools to acquire necessary hardware and software.
2. Invest in developing digital content in local languages by collaborating with linguists, educators, and local communities. Standardizing scripts and creating tools for content translation, text-to-speech, and voice recognition in regional languages would be essential to making digital resources accessible to all students.
3. Encourage public-private partnerships to fund and scale the development of local language digital content. Tech companies and NGOs could be incentivized to create educational content in multiple languages, while the government can offer grants or tax incentives for such initiatives.
4. Implement training programs for teachers to effectively use local language digital content in classrooms. These programs should also focus on enhancing digital literacy among educators to ensure that they can make full use of available resources.
5. Engage local communities in the creation and dissemination of educational content to ensure cultural relevance and acceptance. Community-based content creation can help tailor educational materials to the specific needs and dialects of the region.
6. Establish sustainable funding mechanisms for the ongoing development and maintenance of local language digital content. Government policies should allocate specific budgets for digital education in regional languages, and long-term partnerships should be formed to ensure the continuity of these initiatives.
7. Align state and national education policies with the multilingual focus of NEP 2020, ensuring that local language inclusion is not seen as supplementary but central to educational reform. This could include setting guidelines for the integration of local languages in curriculum design and educational technology.

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