

Balancing globalization and linguistic heritage involves preserving mother tongues through inclusive education that values cultural identity and language diversity

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Abstract - In the era of educational globalization, the preservation of mother tongues has become a critical concern for educators, linguists, and policymakers. The dominance of global languages such as English in educational curricula and academic discourse often leads to the marginalization of indigenous and minority languages. This study aims to explore the challenges and opportunities associated with preserving mother tongues within globalized educational frameworks. It seeks to highlight the implications of language loss on cultural identity, intergenerational communication, and linguistic diversity. The research employs a qualitative descriptive method, utilizing literature review, case studies, and interviews with educators and language activists from multilingual communities. The analysis reveals that while globalization facilitates access to international knowledge and collaboration, it also pressures educational institutions to prioritize global languages, often at the expense of local linguistic heritage. Case studies from regions such as Southeast Asia, Sub-Saharan Africa, and Latin America demonstrate how communities are attempting to integrate mother tongues into formal education through bilingual or multilingual education models. Interviews indicate that successful preservation efforts often depend on community involvement, governmental support, and curriculum integration that values both global and local knowledge systems. The study concludes that preserving mother tongues in education is not only a matter of linguistic justice but also of cultural sustainability. It emphasizes the need for inclusive language policies that balance global communication demands with the rights of communities to maintain their linguistic identities. Educational institutions must embrace multilingualism as an asset rather than a hindrance to progress. Further research is recommended to develop scalable models of mother-tongue-based multilingual education that can be adapted across diverse educational settings.

Keywords: mother tongue preservation, educational globalization, linguistic diversity, multilingual education, language policy

1. Introduction

In an increasingly interconnected world, globalization has profoundly influenced various facets of society, including education. While globalization facilitates the exchange of ideas and knowledge across borders, it also poses significant challenges to linguistic diversity. The



dominance of global languages, particularly English, in educational systems worldwide has often led to the marginalization of indigenous and minority languages (Dady, 2020). This linguistic shift not only threatens the survival of these languages but also undermines the cultural identities and heritage of the communities that speak them.

Mother tongues serve as the primary medium through which individuals first experience the world, conveying cultural nuances, traditions, and collective memories. The erosion of mother tongue usage in formal education can lead to a disconnect between generations and a loss of cultural continuity. Moreover, research indicates that initial literacy and education in one's mother tongue can enhance cognitive development and academic performance (Lartec et al., 2014). Despite these benefits, many educational policies continue to favour dominant global languages, often at the expense of local linguistic heritage. (Lartec et al., 2014).

The preservation of mother tongues within educational systems transcends mere linguistic concerns; it is intrinsically linked to cultural sustainability, human rights, and the holistic development of individuals and communities. Languages are not only tools for communication but also repositories of unique worldviews, traditions, and knowledge systems. Their loss signifies the erosion of cultural diversity and the diminishment of collective human heritage.

Languages encapsulate the essence of cultural identity. They carry the nuances of traditions, customs, and collective memories of communities. The extinction of a language often leads to the disappearance of the associated cultural practices and knowledge. As Harrison (2007) emphasizes, the loss of indigenous languages results in the erosion of entire systems of knowledge encoded within them.

Moreover, the preservation of mother tongues has profound implications for social cohesion and mental health. A study conducted among Indigenous communities in British Columbia, Canada, revealed that communities with higher rates of mother tongue speakers experienced significantly lower youth suicide rates. Specifically, in communities where at least half of the members reported conversational knowledge of their native language, youth suicide rates effectively dropped to zero (Hallett et al., 2007). This finding underscores the role of language in fostering a sense of belonging and resilience among youth.

Incorporating mother tongues into educational systems enhances inclusivity and effectiveness. Students are more likely to engage and excel when instruction is delivered in a language they understand intimately. Early education in the mother tongue facilitates better comprehension of abstract concepts, critical thinking, and cognitive development. UNESCO (2022) asserts that education in the mother tongue is a key factor for inclusion and quality learning, improving learning outcomes and academic performance.

Furthermore, mother tongue-based education bridges the gap between home and school environments, fostering better communication between educators and families. Salie and Moletsane (2021) found that learners in the Foundation Phase who received instruction in their mother tongue experienced fewer learning barriers and better academic outcomes. This approach not only supports academic achievement but also reinforces cultural identity and self-esteem among learners.

The right to receive education in one's mother tongue is recognized as a fundamental human right. The United Nations Declaration on the Rights of Indigenous Peoples emphasizes the importance of preserving and promoting the use of indigenous languages. UNESCO (2022) highlights that multilingual education fosters inclusive societies where the rights of all individuals are guaranteed, serving as a pillar for preserving non-dominant, minority, and indigenous languages.

However, despite policy commitments, many countries face challenges in implementing mother tongue-based education effectively. These challenges include a lack of trained educators, insufficient teaching materials, and societal attitudes that favour dominant languages over indigenous ones (UNESCO, 2016). Addressing these issues requires concerted efforts from governments, educational institutions, and communities to allocate resources, develop culturally relevant curricula, and promote positive attitudes towards linguistic diversity.

Preserving mother tongues within educational systems is vital for cultural sustainability, social cohesion, educational equity, and the protection of human rights. Languages are integral to the identity and well-being of individuals and communities. Their preservation through education not only enriches the learning experience but also strengthens the social fabric and cultural heritage of societies. As globalization continues to influence language dynamics, it is imperative to implement inclusive language policies and practices that honour and sustain linguistic diversity for future generations.

Several studies have explored the dynamics of mother tongue preservation in education amidst globalization. In Tanzania, efforts to replace English with Kiswahili as the medium of instruction have faced numerous challenges, including policy inconsistencies and lack of implementation frameworks (Dady, 2020). Similarly, in the Philippines, teachers implementing mother tongue-based instruction in multilingual classrooms reported difficulties such as the absence of instructional materials and lack of training (Lartec et al., 2014; Dady, 2020).

In South Africa, research in historically disadvantaged schools revealed that non-mother tongue instruction in early education phases led to learning barriers, emphasizing the need for mother tongue education to promote linguistic diversity and educational equity (Maimona & Mokgadi, 2020). Furthermore, a study in Aceh, Indonesia, highlighted the potential threat to local languages due to globalization and the importance of integrating these languages into school curricula to ensure their preservation (Mulyani et al., 2023; Maimona & Mokgadi, 2021).

These studies underscore the complex interplay between language policy, educational practices, and cultural preservation. They also highlight the need for comprehensive strategies that address infrastructural, pedagogical, and societal factors influencing mother tongue education. Despite the globally acknowledged importance of preserving mother tongues in education, numerous challenges continue to hinder effective implementation. One of the most persistent issues is the gap between policy and practice. Although many nations have adopted formal policies in support of mother tongue instruction, the actual application often remains inconsistent and ineffective due to limited political will, lack of monitoring, and weak institutional frameworks (Dady, 2020). Compounding this issue are significant resource limitations, such as the shortage of trained educators proficient in indigenous languages, the absence of quality teaching materials, and insufficient infrastructure to support localized instruction (Lartec et al., 2014). Societal attitudes also play a critical role; many communities perceive global languages like English as key to economic mobility, leading to the undervaluing of native languages and their gradual abandonment (Mulyani et al., 2023).

The selected references collectively underscore the complex interdependence between language, culture, and identity, highlighting how educational practices and globalization influence linguistic diversity and heritage preservation. Several works emphasize the role of education in maintaining cultural identity amid global pressures, pointing to challenges and strategies for integrating mother tongues and cultural knowledge in formal learning environments. Digital innovation is recognized as both a threat and an opportunity for preserving endangered languages, with scalable models proposed to sustain linguistic heritage. Multilingual policies, such as those examined in Malaysia and Southeast Asia, reveal tensions between national identity and global demands. Furthermore, translanguaging is presented as a dynamic pedagogical tool for transmitting heritage languages within increasingly diverse classrooms (Hamidi, 2023; Fahrudiana, 2025; Hutson et al., 2024; Tochon, 2017; Azman et al., 2024; Karpava et al., 2025).

The reviewed studies collectively highlight the multifaceted role of mother tongues across educational, cultural, and technological contexts. A significant focus is placed on educational systems where mother tongue use either enhances or hinders pedagogical goals depending on the framework employed. For instance, the use of functional grammar to analyse passive sentence acquisition in Japanese classrooms shows how mother tongue interference can obstruct learning outcomes when not properly addressed (Liu, 2018). Similarly, the effectiveness of mother tongue-based multilingual education policies in the Philippines reveals gaps between policy and implementation, particularly in technical subjects like mathematics (Tungul &



Lapinid, 2024). On the other hand, perspectives from educators suggest that teacher training significantly influences whether mother tongue usage is encouraged or avoided in ESL classrooms (Neokleous et al., 2022), with other works warning against assimilationist practices that downplay linguistic diversity (Oral & Lund, 2022).

From a sociolinguistic and cultural sustainability standpoint, several works argue that preserving mother tongues is not merely a linguistic concern but a cultural and identity-based imperative. Research in Nepal underscores the transition from indigeneity to modernity as both a threat and a point of negotiation for native identity (Chaudhary, 2023). Likewise, the maintenance of mother tongues in multilingual communities such as Dieng in Central Java becomes a measure of vitality and resistance to homogenization (Sitaresmi et al., 2024). Meanwhile, the integration of mother tongue in biblical hermeneutics offers a culturally resonant interpretive framework, emphasizing the depth of spiritual identity through language (Wandusim, 2023). Efforts to preserve languages through sustainable strategies further affirm the need for community involvement and cross-sectoral policies (Atifnigar et al., 2025).

Digital and technological approaches introduce an emerging domain for mother tongue analysis, where language profiling using keystroke dynamics demonstrates potential but also ethical concerns regarding privacy and representation (Tsimperidis et al., 2023). In a similar vein, grammatical analysis of religious texts in Akan languages illustrates the continued relevance of mother tongue in linguistic anthropology and theology (Korankye et al., 2024). Gender is another recurring variable; disparities in second language acquisition point to broader sociocultural influences that intersect with linguistic background and acquisition pace (van der Slik et al., 2015).

A critical epistemological question is raised about what constitutes valid knowledge in the education of linguistically diverse students. This is discussed through frameworks that critique the dominance of colonial languages and promote the philosophical repositioning of mother tongues as central to knowledge systems (Tsebe, 2021). Educational institutions that successfully integrate children's native languages—particularly in intercultural settings—are viewed as progressive and inclusive (Lorenzini & Giulivi, 2021), while globalisation's role in language shift is critiqued for promoting linguistic homogenisation (Sruthi & Anburaj, 2024). Lastly, the symbolic association between mother tongue and identity is addressed in studies that frame language as a cultural collocation. Such perspectives recognize language as a bearer of memory, belonging, and heritage, thus reinforcing the idea that language preservation is inseparable from human dignity and cultural survival (Vishnu et al., 2025).

Furthermore, technological barriers persist, especially in rural or under-resourced regions, where there is limited access to digital tools and e-learning resources developed in local languages, restricting innovation in mother tongue-based educational delivery (Kompas, 2023). Additionally, the diminishing use of mother tongues within formal education systems contributes to cultural erosion, leading to the loss of traditional practices, indigenous knowledge systems, and a weakening of community identity (Valera, 2016). The preservation of mother tongues in the era of educational globalization is thus a complex and multifaceted issue intersecting with broader themes of cultural resilience, equity, and sustainable development. Addressing these challenges necessitates not only policy reforms and strategic resource allocation but also a societal reorientation that values linguistic diversity. Future research must prioritize the development and contextual adaptation of mother tongue-based education models that are responsive to varied sociocultural landscapes, ensuring that educational progress does not come at the expense of linguistic and cultural heritage.

2. Method

2.1 Method of Providing Data

This study adopts a **qualitative descriptive research approach**, aiming to explore how educational globalization affects the preservation of mother tongues and to identify strategies used in various regions to support linguistic diversity in schools. Qualitative methods are chosen because they provide rich, in-depth understanding of social phenomena and the contextual meanings behind language policies and practices (Creswell & Poth, 2018).

Data sources include:

- **Policy documents** from ministries of education and international bodies (e.g., UNESCO),
- **Academic literature** and peer-reviewed journal articles,
- **Curriculum guides** and language instruction models from selected multilingual countries,
- **Interview transcripts** and testimonies from educators, where available from previous research.

The selection of data is **purposive**, focusing on materials from regions known for language diversity and with documented challenges or success in implementing mother tongue-based education—such as Southeast Asia (e.g., Indonesia and the Philippines), Sub-Saharan Africa (e.g., Tanzania and South Africa), and Indigenous communities in Canada and Latin America.

To support credibility, the study integrates **secondary data triangulation**, combining findings from (a) Government reports, (b) Published case studies, and (c) NGO and UNESCO project outcomes.

This approach ensures a comprehensive view of the educational realities and linguistic challenges encountered globally.

2.2 Data Analysis

The data collected are analysed using **thematic analysis**, a widely used method in qualitative research to identify, interpret, and report patterns (themes) within data (Braun & Clarke, 2006).

The analysis follows these steps: **(1) Familiarization**: Reading and re-reading all documents, notes, and transcripts to become deeply familiar with the content. **(2) Coding**: Manually coding relevant information using open coding to label concepts such as “language policy gap,” “curriculum exclusion,” or “community resistance.” **(3) Theme development**: Grouping codes into broader themes like “globalization impact,” “cultural loss,” “multilingual education,” and “policy strategies.” **(4) Review and refinement**: Evaluating whether themes align with research objectives and refining them for clarity and relevance. **(5) Interpretation**: Connecting themes to the research questions, interpreting their significance within the context of educational globalization and mother tongue preservation.

The analysis also draws on **critical discourse analysis (CDA)** to examine how language is used in policy texts to construct narratives around modernization, globalization, and language use. This helps to uncover ideological assumptions in language policy decisions and how they influence educational priorities (Fairclough, 2013).

To ensure **trustworthiness**, the study applies: (a) **Credibility**: Using peer-reviewed sources and diverse data types. (b) **Transferability**: Selecting examples from various cultural and national settings. (c) **Dependability and Confirmability**: Keeping detailed notes of decisions during analysis and referencing original sources.

Through this qualitative lens, the study offers insights into how global educational trends can coexist with the local imperative to sustain linguistic and cultural heritage.

3. 3. Results and Discussion

3.1 Results

3.1.1 Policy Implementation Gaps

Despite growing recognition of the educational and sociocultural benefits of mother tongue-based multilingual education (MTB-MLE), significant gaps remain between policy formulation and its practical implementation in various contexts. Many governments have formally endorsed policies that promote the use of learners' first languages in early education. However, in practice, these policies often falter due to systemic, institutional, and attitudinal barriers.

One prominent example is the Philippines, which has been lauded for its progressive stance on MTB-MLE. The Department of Education issued Order No. 74 in 2009, institutionalizing mother tongue instruction for Kindergarten to Grade 3 in 19 major Philippine languages. While this policy marked a historic step in multilingual education reform, its implementation has been riddled with challenges. According to Espada et al. (2017), many schools lack adequate instructional materials written in local languages, and teachers frequently report being insufficiently trained to deliver curriculum content in mother tongues. Furthermore,



some educators, although fluent in their regional language, lack formal pedagogical training in teaching academic subjects using those languages, which hinders effective content delivery.

Tanzania presents another illustrative case. In 2015, the Tanzanian government announced a policy shift from English to Kiswahili as the medium of instruction in secondary schools. While this move was intended to enhance comprehension and educational equity, practical challenges emerged quickly. Dady (2020) reports that the policy change was met with resistance from both parents and teachers, many of whom view English as the language of socioeconomic advancement. Additionally, the scarcity of textbooks, reference materials, and classroom aids in Kiswahili, coupled with a shortage of trained Kiswahili teachers, has obstructed the intended transition. As a result, many schools continue to use English in practice, despite official directives to the contrary.

These cases reflect a common pattern in many multilingual countries: the existence of well-meaning language-in-education policies that are not backed by sufficient planning, resource allocation, and stakeholder engagement. Mohanty (2019) highlights that language policies in postcolonial nations are often symbolic rather than strategic, serving to signal inclusivity without committing the resources necessary for meaningful implementation. This discrepancy creates a "policy-practice gap" that undermines the goals of equitable and inclusive education.

Moreover, political will and administrative continuity also play a critical role in determining the success of mother tongue policies. In some contexts, shifts in government or leadership priorities can lead to the abrupt abandonment or dilution of language policies. As Alexander (2005) argues, the sustainability of language-in-education reforms requires long-term commitment, including curricular redesign, material development, teacher training programs, and public awareness campaigns.

In summary, although many nations have formally adopted MTB-MLE policies, actual implementation remains limited due to resource constraints, societal attitudes favouring dominant global languages, and inadequate support structures. Addressing these gaps requires a multi-pronged approach involving coordinated investment in teacher education, curriculum development, and community engagement. Only through a comprehensive and inclusive strategy can the promise of MTB-MLE be realized in practice.

3.1.2 Resource Limitations

Resource constraints remain one of the most significant obstacles to the effective implementation of mother tongue-based multilingual education (MTB-MLE) across diverse educational contexts. While many national education policies recognize the value of using learners' first languages in early instruction, the lack of supporting infrastructure often undermines these initiatives. The case of India illustrates this complex challenge.

India's National Education Policy (NEP) 2020 strongly advocates for foundational learning in the mother tongue or regional language until at least Grade 5, with a preference to continue until Grade 8 and beyond. The policy is grounded in evidence suggesting that children learn best in a language they understand (Ministry of Education, 2020). However, the operationalization of this vision faces several practical hurdles. Schools across India struggle with a chronic shortage of trained teachers fluent in local languages, particularly in tribal and remote regions where linguistic diversity is most pronounced (Panda & Mohanty, 2019). In many cases, teachers are assigned to classrooms without being proficient in the students' home languages, which leads to ineffective communication and poor learning outcomes.

In addition to the teacher shortage, the scarcity of educational materials in indigenous and regional languages is a recurring challenge. Textbooks, workbooks, and storybooks in the mother tongue are often unavailable or limited in scope and quality. According to Jhingran (2009), in several Indian states, such as Odisha and Chhattisgarh, the development and distribution of multilingual learning materials lag behind policy promises, especially for minority languages that lack standardized scripts or orthographies. As a result, teachers are forced to rely on ad-hoc translations or fall back on dominant state or national languages such as Hindi or English.

Infrastructure deficits also exacerbate the problem. Many rural and low-income schools lack the basic facilities needed to support differentiated instruction across multiple languages, such as classroom space, teaching aids, and access to localized digital content (UNESCO, 2016). In multilingual classrooms, the lack of multilingual instructional support tools often pushes educators to adopt a “one-language-fits-all” approach, which marginalizes non-dominant language speakers and widens educational inequalities.

The absence of adequate funding is a root cause of these limitations. Implementing MTB-MLE is resource-intensive, requiring investments in curriculum development, teacher training, translation and printing of materials, and community involvement. Yet, as Mohanty (2019) points out, language-in-education policies are frequently adopted without a corresponding increase in budget allocations, rendering implementation superficial. Furthermore, donor and government priorities often favour English or other international languages under the guise of global competitiveness, leaving indigenous language initiatives under-resourced.

Globally, similar patterns are observed. For instance, in parts of Sub-Saharan Africa, such as Ethiopia and Nigeria, although mother tongue instruction is officially promoted, the dearth of trained teachers and the limited availability of books in local languages impede successful implementation (Benson, 2004). These recurring issues reveal a disconnect between policy intentions and the realities of educational practice in multilingual societies.

In conclusion, resource limitations present formidable barriers to the effective delivery of MTB-MLE. Without a comprehensive strategy to address teacher shortages, expand the development of culturally and linguistically appropriate materials, and improve school infrastructure, the goals of inclusive and equitable education will remain elusive. Closing the gap between policy and practice requires sustained investment, cross-sector collaboration, and a genuine commitment to linguistic diversity as a cornerstone of educational justice.

3.1.3 Societal Attitudes

Societal attitudes toward language play a critical role in shaping the implementation and reception of mother tongue-based multilingual education (MTB-MLE). The success of such educational policies is deeply influenced by the perceptions, values, and preferences of communities, parents, and even students. Across many multilingual societies, there is a strong association between global languages—particularly English—and socioeconomic mobility. This belief system often leads to a devaluation of local and indigenous languages, both in daily use and within the formal education system.

In Indonesia, for example, parents and communities increasingly perceive English as a gateway to higher education, global employment opportunities, and modernity (Mulyani et al., 2023). Consequently, English-medium instruction is often preferred, even in early childhood education, where pedagogical research consistently advocates for the use of the child’s first language (UNESCO, 2016). This societal preference for English over local languages has led to a gradual decline in the intergenerational transmission of regional languages, especially in urban areas where local linguistic practices are viewed as less prestigious or outdated (Lauder, 2008).

Such attitudes are not limited to Indonesia. In African countries like Kenya and Nigeria, English is similarly equated with educational success and upward social mobility. Parents often resist mother tongue education programs, fearing that they might hinder their children’s competitiveness in national exams or access to better employment (Trudell, 2016). These perceptions create a significant disconnect between educational policy—which may support MTB-MLE—and actual practice, where stakeholders push for English or other dominant languages to be prioritized.

Moreover, internalized linguistic hierarchies contribute to the stigmatization of mother tongues. In many postcolonial societies, local languages are often seen as inferior or unfit for academic or formal discourse. Children who speak in their mother tongue in schools are sometimes punished or discouraged, reinforcing negative attitudes toward their own linguistic heritage (Skutnabb-Kangas & Phillipson, 1995). This not only hampers effective learning but also damages children’s self-esteem and cultural identity.



The article offers a thoughtful overview of how national language policies can be more effective when grounded in thorough documentation of mother tongues. It clearly outlines the challenges of bridging policy and practice, though it could be strengthened by more concrete examples or case studies. Still, it contributes meaningfully to discussions on language planning and cultural preservation (Nwachukwu & Joseph, 2024).

The role of mass media and digital technology also influences societal attitudes. With most content—television shows, educational apps, and online platforms—being produced in dominant languages like English, children are increasingly exposed to global languages rather than their own (Lotherington, 2013). This media dominance further entrenches the notion that local languages are less useful or prestigious, especially among younger generations.

Changing these entrenched societal attitudes requires more than policy reform. It demands a cultural shift that recognizes the intrinsic value of linguistic diversity. Community awareness campaigns, mother tongue literacy programs, and showcasing successful role models who use their native language can help reshape perceptions. Encouraging local language use in media, literature, and digital platforms can also elevate its status in public life (Prah, 2009).

Societal attitudes remain one of the most formidable challenges to implementing mother tongue education. While parents and communities often seek the best opportunities for their children, the widespread belief that global languages are inherently superior undermines the sustainability of MTB-MLE programs. Combating this issue involves not only educational reform but also a broader societal commitment to celebrating and preserving linguistic diversity.

3.1.4 Technological Barriers

The integration of technology in education has brought significant advancements in teaching and learning processes. However, this progress has not been evenly distributed, especially regarding language inclusivity. One of the most critical challenges in promoting mother tongue-based multilingual education (MTB-MLE) in the digital age is the technological barrier that exists due to the lack of support for local and indigenous languages across digital platforms. Most educational software, online learning tools, and digital content are designed primarily for dominant languages such as English, Mandarin, Spanish, or French (UNESCO, 2021). This digital exclusion creates a significant disadvantage for learners whose primary language is not supported by mainstream technology.

This issue is particularly pronounced in multilingual and low-income regions, where access to information and communication technologies (ICTs) is already limited. In sub-Saharan Africa, for example, the availability of digital content in local languages is minimal, making it difficult for educators to integrate mother tongue instruction with online learning tools (Beyene, 2018). Consequently, learners are often forced to adapt to content in second or third languages, which can hinder comprehension and learning outcomes. This mismatch between the learners' linguistic background and the language of digital instruction perpetuates educational inequality.

Moreover, there is a stark underrepresentation of minority languages in digital spaces. Language processing technologies such as automatic speech recognition, machine translation, and text-to-speech systems are typically developed for high-resource languages. According to Joshi et al. (2020), over 90% of the world's digital content is in a handful of major languages, leaving the vast majority of the world's 7,000+ languages virtually invisible online. The absence of digital tools tailored to minority languages not only undermines educational efforts but also accelerates the marginalization and possible extinction of those languages.

In Indonesia, Kompas (2023) reported that the lack of digital literacy and infrastructure in rural areas further compounds the problem. Schools in remote regions often lack access to basic technological resources such as computers, stable internet connections, or teacher training in ICT. When digital learning platforms are available, they are rarely localized to support regional languages, forcing teachers and students to navigate content in Bahasa Indonesia or English, even when these are not their first languages. This results in diminished engagement and lower academic performance among students from non-dominant linguistic communities.

To address these issues, there is a pressing need to develop inclusive digital education strategies. Governments and private sector partners should invest in the creation of open-source

digital content in local languages. Initiatives such as the African Storybook Project and Global Digital Library have shown promising results in increasing access to multilingual digital learning materials (Trudell & Piper, 2014). Additionally, advancements in artificial intelligence and machine learning offer opportunities to develop localized language technologies that support minority languages in both text and speech formats.

Technological barriers remain a significant hurdle to the equitable implementation of mother tongue education. The lack of digital infrastructure, tools, and content in minority languages widens the educational divide and undermines linguistic diversity. Overcoming these challenges requires a concerted effort from governments, tech developers, educators, and communities to ensure that all learners, regardless of their linguistic background, can access and benefit from digital education in their mother tongue.

3.1.5 Cultural Erosion

The erosion of mother tongue usage is not merely a linguistic phenomenon—it is a profound cultural issue with far-reaching implications. Language serves as a repository of a community's collective memory, traditional knowledge, and social values. When a mother tongue is lost or marginalized, cultural practices that depend on that language often decline in parallel. This includes oral histories, folklore, indigenous knowledge systems, customary law, and even spiritual and ritual expressions (Skutnabb-Kangas & Phillipson, 2017).

One of the most detrimental effects of cultural erosion linked to language loss is the disruption of intergenerational communication. In many indigenous and minority communities, elders are the custodians of traditional knowledge and oral literature, often transmitted through storytelling, songs, or proverbs in the local language. When younger generations are not proficient in their ancestral tongue, these knowledge systems are lost or become fragmented (Hinton, 2011). For example, in the Arctic regions of Canada, the decline in Inuktitut usage among youth has coincided with a reduced understanding of traditional hunting practices and environmental knowledge vital to survival in harsh climates (UNESCO, 2018).

Moreover, the marginalization of local languages in formal education, media, and governance can result in psychological and social alienation. When individuals are denied the opportunity to use their mother tongue in public or institutional spaces, they may experience a sense of inferiority or cultural displacement. This phenomenon, referred to as “linguistic shame,” is common among speakers of stigmatized minority languages and has been linked to lower self-esteem and reduced civic engagement (Benson, 2010).

In regions like Southeast Asia, including Indonesia, many local languages are increasingly viewed as less “prestigious” compared to national or international languages like Bahasa Indonesia or English. As a result, families may consciously avoid using regional languages with their children, believing that this will improve their socioeconomic mobility. However, this practice often severs children from their linguistic roots and diminishes their cultural identity (Mulyani et al., 2023). According to Meng (2019), when languages disappear, people lose not only their linguistic heritage but also the worldviews and moral frameworks embedded in that language.

UNESCO (2021) emphasizes that linguistic diversity is essential to the world's intangible cultural heritage. When mother tongues are preserved and promoted, they foster a sense of belonging and cultural pride. Conversely, the erosion of mother tongues may lead to cultural homogenization, where minority communities lose distinct practices that once defined them. This homogenization, driven by globalization and dominant-language policies, contributes to the weakening of local governance systems, rituals, and social norms.

To mitigate cultural erosion, it is vital to support bilingual or multilingual educational frameworks that validate and institutionalize mother tongue use. Community-led language revitalization programs, such as language nests and storytelling circles, have proven effective in places like New Zealand (Māori) and Hawaii (‘Ōlelo Hawai‘i), where language revitalization efforts are directly linked to cultural renewal (Hinton et al., 2018). These models show that when local languages are given space to thrive, cultural traditions also re-emerge and strengthen.



The decline of mother tongues is intricately tied to the erosion of cultural identity, social cohesion, and indigenous knowledge. Protecting linguistic diversity is, therefore, not just a linguistic or educational concern—it is a cultural imperative that supports broader goals of heritage preservation and community empowerment.

3.2 Discussion

While many countries have enacted policies supporting mother tongue-based multilingual education (MTB-MLE), a persistent challenge remains: translating these policies into practical, effective educational strategies. The discrepancy between policy formulation and on-the-ground implementation often stems from a lack of coordinated planning, insufficient resource allocation, and minimal stakeholder involvement. Addressing these gaps requires a multifaceted and inclusive approach that ensures policies are not only well-intentioned but also actionable and sustainable.

First and foremost, stakeholder engagement is essential. Policies imposed from the top down often fail to consider the linguistic and cultural complexities of local communities. By involving parents, teachers, local leaders, and indigenous organizations in the development and implementation of MTB-MLE programs, policymakers can ensure that initiatives are contextually appropriate and widely supported (UNESCO, 2021; Ball, 2010). Participatory approaches also foster ownership and accountability among communities, which is crucial for long-term success. In addition, adequate funding must accompany policy mandates. Many education ministries struggle to support teacher training, develop learning materials in local languages, or establish administrative structures to manage MTB-MLE programs effectively. As noted by Kosonen and Young (2009), underfunded policies often result in tokenistic implementation, where mother tongue instruction is limited to early grades or a few pilot schools. Governments should prioritize budgetary allocations for multilingual education and leverage partnerships with NGOs and international donors for additional support.

Monitoring and evaluation mechanisms are also critical. Without systematic data collection and feedback loops, it is difficult to assess the effectiveness of implementation and make necessary adjustments. Governments should invest in research to evaluate the outcomes of MTB-MLE programs and identify best practices (Heugh, 2011). Moreover, these evaluations should be disaggregated by region, ethnicity, and language group to capture nuanced realities. In summary, bridging the gap between policy and practice in mother tongue education requires inclusive planning, sufficient resources, and robust evaluation. A holistic approach ensures that language policy becomes a living framework capable of promoting equity, inclusion, and cultural sustainability in education.

Implementing Mother Tongue-Based Multilingual Education (MTB-MLE) effectively in diverse sociolinguistic settings faces significant challenges, particularly in terms of resource limitations. These include the scarcity of trained teachers proficient in local languages, lack of teaching and learning materials developed in mother tongues, and inadequate infrastructure in remote or marginalized communities. To overcome these barriers, a multipronged approach must be adopted that combines governmental policy reforms, institutional capacity-building, and strategic collaborations.

First and foremost, governments and educational institutions must prioritize sustainable investment in teacher education. Teachers are the frontline implementers of MTB-MLE, and equipping them with the pedagogical skills to teach in mother tongues is essential. Training programs should include modules on bilingual education strategies, second language acquisition, and cultural competency. These programs must also target existing teachers through in-service training, ensuring ongoing professional development tailored to local linguistic contexts (Ball, 2011; Benson, 2013).

Furthermore, developing instructional materials in local languages is a foundational necessity. Materials should be culturally relevant and linguistically appropriate, which entails collaboration with local linguists, educators, and community leaders. Creating open-access repositories of mother tongue teaching resources can enhance the scalability of such initiatives.

Advances in digital technology can support this effort by enabling the low-cost production and distribution of materials, especially in underserved areas (UNESCO, 2020).

Infrastructural improvements also play a crucial role. Many rural and indigenous communities lack basic educational facilities, including classrooms, libraries, and access to information technology. Targeted investment in school infrastructure can dramatically improve the learning environment and the feasibility of delivering MTB-MLE. This may include building schools closer to remote communities, providing electricity and internet connectivity, and ensuring that classrooms are equipped with audio-visual tools to support multilingual instruction (Pinnock, 2009).

Public-private partnerships (PPPs) offer an effective avenue for mobilizing additional resources and technical expertise. Corporations, NGOs, and international organizations can contribute funding, materials, and human capital. Successful PPPs in countries like the Philippines and Papua New Guinea have demonstrated how multi-stakeholder engagement can lead to the creation of culturally responsive curricula and the training of thousands of local teachers in mother tongue pedagogy (Walter & Dekker, 2011).

To ensure long-term sustainability, MTB-MLE initiatives must be embedded within broader educational development strategies. This includes aligning MTB-MLE goals with national education plans, decentralizing curriculum design to accommodate linguistic diversity, and securing political commitment to linguistic rights and inclusion.

Beyond logistical and infrastructural challenges, societal attitudes remain a substantial barrier to the widespread acceptance and implementation of MTB-MLE. In many multilingual societies, mother tongue instruction is often undervalued, perceived as inferior to education in dominant national or international languages such as English. This perception is deeply rooted in historical, economic, and political factors, including colonial legacies and globalization pressures (Skutnabb-Kangas & Heugh, 2012).

Changing these attitudes requires deliberate and sustained advocacy. Public awareness campaigns should emphasize the cognitive, social, and academic benefits of mother tongue education. Research consistently shows that children who receive foundational instruction in their first language perform better academically and exhibit higher self-esteem and participation rates (Cummins, 2001; Heugh, 2006). These campaigns can leverage mass media, community forums, and social networks to reach parents, educators, and policymakers.

Another effective strategy is the use of success stories and empirical case studies. For example, in Ethiopia and parts of Southeast Asia, the introduction of MTB-MLE has led to improved literacy rates, reduced dropout levels, and greater parental involvement (Benson, 2005; Malone & Paraide, 2011). Showcasing such outcomes through documentary videos, educational symposiums, and local champions can help dispel myths and demonstrate the tangible value of mother tongue instruction.

Community engagement is also vital. Involving local stakeholders in decision-making processes fosters ownership and trust. Parents, elders, and community leaders must be seen not just as beneficiaries but as partners in education. Participatory workshops and dialogue sessions can be used to surface concerns, share knowledge, and build consensus around MTB-MLE goals (Trudell, 2009).

In sum, transforming societal perceptions is a long-term process that requires persistence, transparency, and inclusive communication strategies. When communities recognize that their languages are assets rather than obstacles, they are more likely to support and sustain MTB-MLE initiatives.

In today's rapidly advancing digital age, leveraging technology to support mother tongue-based education is an essential strategy for ensuring inclusive, equitable access to quality education. However, in many multilingual societies, technological barriers—such as limited access to devices, unreliable internet connectivity, and a lack of digital resources in minority languages—continue to hinder the potential of technological advancements in education. To bridge these technological barriers, concerted efforts are needed at both the local and global levels, involving governments, educational institutions, tech companies, and linguistic experts.



One of the key areas of focus is the development of digital tools and platforms that support local languages. While English and other dominant global languages dominate the digital space, there is a growing recognition of the need to cater to minority languages, particularly in educational contexts. The creation of digital content in mother tongues has the potential to make education more accessible and culturally relevant. This can include e-books, mobile apps, online courses, and educational games designed specifically for children who speak local languages. A significant challenge is that many of these languages are not standardized or widely represented in digital formats. Therefore, partnerships between tech companies and linguistic experts are crucial to ensure that these languages are accurately represented and that digital tools cater to local needs (UNESCO, 2021).

Moreover, partnerships with global tech giants such as Google, Microsoft, and Facebook could help address some of these barriers by developing software that facilitates the inclusion of local languages in digital education. In 2019, Google launched its "Endangered Languages Project" in collaboration with several universities, aiming to document and digitize languages that are at risk of extinction (Google, 2019). Such initiatives can pave the way for more inclusive digital education by ensuring that resources are available in languages spoken by marginalized communities. These tools can also include real-time translation, which can help bridge communication gaps between students, teachers, and parents who speak different languages.

Another promising technological solution is the development of low-cost digital devices and platforms that can work in areas with limited connectivity or infrastructure. In many rural and indigenous communities, reliable internet access is a luxury that most schools cannot afford. To address this, the development of offline educational platforms that do not require constant internet access could be crucial. For instance, initiatives such as the "One Laptop per Child" (OLPC) program, which has been implemented in several countries, aims to provide affordable laptops loaded with educational content that can be used offline (Miller et al., 2008). These types of solutions can democratize access to education in local languages, fostering greater participation from marginalized communities in the digital education space.

Additionally, the integration of Artificial Intelligence (AI) and machine learning into education can help address language barriers. AI-powered systems can assist in creating localized content for specific communities, and they can provide real-time translation, speech recognition, and other linguistic features that make education more accessible. For example, Google's AI-driven tools like Google Translate have made significant strides in supporting a wide range of languages, including those that were previously underrepresented. With advancements in natural language processing (NLP), such technologies can support teachers in multilingual classrooms by allowing them to adapt content in real-time and offer personalized learning experiences for students (Tegmark, 2017).

Finally, increasing the digital literacy of teachers and students is a crucial step in ensuring the effective use of technology in education. Teacher training programs should include courses on how to utilize digital tools effectively, particularly in multilingual environments. Empowering educators with the skills to integrate technology into their teaching practices ensures that the full potential of digital platforms is realized.

In summary, bridging technological barriers to support mother tongue education requires innovation, collaboration, and investment in both infrastructure and digital tools. By making technology accessible and adaptable to local languages, societies can ensure that all linguistic groups benefit from the educational opportunities technology offers, leading to a more inclusive and sustainable model of education.

Language is not only a means of communication but also an important carrier of culture, history, and identity. Mother tongue-based education plays a critical role in preserving cultural heritage by integrating local languages and traditions into the educational curriculum. Beyond its practical function of improving literacy and academic performance, education in the mother tongue can foster a deep sense of pride and cultural belonging among students, which is essential for sustaining cultural diversity in a globalized world.

One of the most effective ways to preserve cultural identity through education is by integrating cultural elements into the curriculum. This includes the inclusion of local languages, indigenous knowledge systems, history, and traditions within formal education. For example, cultural festivals, storytelling sessions, and the inclusion of traditional art, music, and dance in the curriculum can provide students with a rich understanding of their heritage and its value. Such initiatives can also create opportunities for cross-generational learning, as elders and community members often serve as knowledge bearers in the transmission of cultural practices and values. In regions such as Sub-Saharan Africa, indigenous knowledge has long been passed down orally, and educational systems that support this mode of transmission can help preserve vital cultural traditions (Battiste, 2008).

Storytelling, in particular, has been identified as an effective method for teaching cultural values. Storytelling is not only a form of entertainment but a pedagogical tool that teaches ethics, social norms, and historical narratives. By including indigenous storytelling traditions in the classroom, students are not only learning about their cultural heritage but are also gaining critical skills in communication and creative expression (Moloney & Tickle, 2020). In indigenous communities around the world, storytelling is a key method of education that connects young people with their ancestral wisdom and collective memory, helping them understand their cultural identity within a broader social context.

Cultural preservation through education also involves the protection and promotion of indigenous languages. For many communities, their mother tongue is a key part of their cultural identity and a repository of their collective wisdom. However, many of these languages are endangered due to the dominance of national or global languages in formal education and media. To address this, it is essential that educational systems actively support the teaching and use of indigenous languages. Programs that promote bilingual or multilingual education, where children are taught in both their mother tongue and the national language, can help students maintain fluency in their native language while also acquiring proficiency in other languages (Harrison, 2007).

Moreover, integrating indigenous knowledge systems into the curriculum helps to preserve diverse worldviews and ecological knowledge. For example, many indigenous communities possess extensive knowledge about sustainable farming, medicine, and environmental management, which can offer valuable insights into modern ecological challenges. By incorporating these practices into the curriculum, educational systems not only preserve important cultural knowledge but also promote sustainability and environmental stewardship (Vaughan, 2019).

In conclusion, preserving cultural identity through education requires the active integration of indigenous languages, cultural practices, and knowledge systems into the formal curriculum. By doing so, educational systems can foster a sense of pride and belonging among students, ensuring that cultural diversity is respected and sustained for future generations.

4. Conclusion

4.1 Conclusion

In the context of increasing globalization and educational homogenization, the preservation and promotion of mother tongues have emerged as both a challenge and a necessity. This study set out to investigate the critical issues surrounding the survival of indigenous and minority languages in modern education systems that are increasingly shaped by global linguistic trends – especially the dominance of English as the language of international communication, science, and technology.

Through a qualitative, document-based method of analysis and synthesis of various scholarly sources, the research revealed that while policies and frameworks supporting mother tongue-based multilingual education (MTB-MLE) have gained global recognition, implementation remains uneven due to multiple challenges. These include inadequate resources, policy-practice mismatches, societal preference for dominant languages, technological limitations, and the slow erosion of cultural identity through language loss.



The findings indicate that policy implementation gaps remain a primary obstacle. Although frameworks like the National Education Policy 2020 in India and MTB-MLE in the Philippines demonstrate positive intent, the success of such policies depends on adequate funding, infrastructure, and localized planning (Espada et al., 2017; ResearchGate, 2024). Resource limitations, particularly in rural and underfunded regions, often force schools to prioritize globally dominant languages, thereby marginalizing indigenous ones.

Furthermore, the attitudinal factors play a pivotal role. Many communities perceive proficiency in English and other dominant languages as a pathway to socioeconomic mobility. This perception undermines the value of mother tongues, especially when parents push for English-medium education, sidelining local languages (Mulyani et al., 2023). This linguistic shift reflects broader cultural erosion, where communities lose vital knowledge, oral traditions, and identities that are intrinsically tied to their native languages (Meng, 2019).

Another significant finding is the technological divide. Educational technology has the potential to support language preservation, but digital platforms largely cater to dominant languages. Minority languages are underrepresented in online learning environments, hindering inclusive access to education (UNESCO, 2021).

Despite these obstacles, the study also points to viable strategies for reversing these trends. Integrating local languages into curricula, teacher training, community involvement, and increasing public awareness of the cognitive and cultural benefits of mother tongue education are crucial. A paradigm shift is needed – from viewing local languages as obsolete to seeing them as valuable cultural and educational resources.

Educational stakeholders – governments, schools, communities, and international agencies – must collaborate to invest in multilingual content development, teacher education programs, and the creation of digital resources in indigenous languages. Additionally, celebrating linguistic diversity through festivals, literature, media, and arts can strengthen pride and identity among speakers of minority languages.

This research also emphasizes the interconnectedness of language, culture, and identity. The preservation of mother tongues is not just an educational issue; it is a matter of human rights and cultural sustainability. When children learn in their mother tongues, they are more likely to stay in school, develop stronger cognitive skills, and maintain cultural roots.

While this study contributes to a deeper understanding of the dynamics between globalization and mother tongue preservation, it has limitations. The research is primarily based on secondary data and literature reviews, which may not capture real-time, community-specific challenges. Moreover, sociolinguistic dynamics vary significantly across regions and require localized studies.

Future research should focus on empirical case studies, particularly from underrepresented regions in Africa, Asia, and South America, where multilingualism is both a resource and a challenge. Longitudinal studies that assess the impact of mother tongue-based education on academic performance, dropout rates, and identity development will provide more robust evidence for policy advocacy.

In conclusion, preserving mother tongues in the era of educational globalization requires a multidimensional effort involving policy innovation, educational reform, technological inclusion, and cultural revitalization. It is not merely about language; it is about sustaining worldviews, histories, and identities that contribute to the richness of human civilization.

4.2 Recommendations

In light of the findings and conclusions drawn from this research, several recommendations are proposed to strengthen the preservation of mother tongues within the framework of globalized education.

First, governments and education policymakers must prioritize the institutionalization of *Mother Tongue-Based Multilingual Education* (MTB-MLE) across all levels of schooling. This includes curriculum development, localized teaching materials, and culturally responsive pedagogy (UNESCO, 2021). Policies should be accompanied by sufficient funding and training

to empower teachers with linguistic and pedagogical competencies for multilingual instruction (Ball, 2011).

Second, community involvement must be encouraged in curriculum design and language resource development. Local speakers, elders, and cultural practitioners should actively contribute to school content to ensure authenticity and foster intergenerational language transmission (Skutnabb-Kangas & Heugh, 2012).

Third, teacher education institutions should revise their training programs to include multilingual education strategies, indigenous language appreciation, and culturally inclusive practices. This can help reduce teacher resistance and promote confidence in delivering mother tongue instruction (Pinnock & Vijayakumar, 2009).

Fourth, the integration of technology should be leveraged for mother tongue revitalization. Developing digital dictionaries, e-books, mobile applications, and e-learning platforms in indigenous languages can promote both literacy and technological engagement (Moseley, 2010). International collaborations and open-source linguistic technologies should be utilized to support underserved linguistic communities.

Finally, there must be a paradigm shift in societal attitudes. Public awareness campaigns, language festivals, and media programming in indigenous languages can help restore pride and value in linguistic heritage (Crystal, 2000). Promoting linguistic diversity as a national asset, rather than a barrier, is essential for inclusive education.

In sum, preserving mother tongues in education requires collaborative, policy-driven, and culturally anchored approaches that engage institutions, communities, and learners alike.

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