

# Developing Innovative Solutions to Enhance MTB-MLE Implementation

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## Abstract

To improve the implementation of mother tongue-based multilingual education (MTB-MLE), this study identifies the main obstacles, effective strategies, and creative solutions found in MTB-MLE programs. Through a thorough literature review and synthesis of the available research, this study addresses the challenges associated with implementing MTB-MLE, including a lack of instructional materials, inadequate teacher preparation, language transition issues, and parental concerns about future employability. The study also looks at best practices and efficient solutions, such as resourcefulness, ongoing professional development, and strategic planning, to maximize learning outcomes in MTB-MLE settings. It is noted that utilizing technology to support and improve MTB-MLE implementation—such as digital learning platforms and machine translation—is a viable strategy. The results highlight the significance of tackling resource limitations, improving teacher preparation, and formulating plans to enable seamless language transfers in MTB-MLE courses. To enhance learning outcomes for students in linguistically varied situations and to establish an environment that is supportive of the effective implementation of MTB-MLE, the study ends with evidence-based recommendations for stakeholders, educators, and legislators.

**Keywords:** Mother Tongue-Based Multilingual Education (MTB-MLE), Implementation, Challenges, Innovative solution

## 1. Introduction

The value of mother tongue-based multilingual education (MTB-MLE) in enhancing student learning outcomes is being acknowledged by educational systems across the globe in the 21st century. In an MTB-MLE classroom, education is given in both the student's native tongue and additional languages. Compared to educational systems that solely employ a dominant language as the medium of instruction, research indicates that MTB-MLE results in higher academic achievement, stronger literacy skills, and more positive attitudes about school (UNESCO, 2014).

However, implementing effective MTB-MLE programs is not easy hence it faces various challenges and issues. Many countries lack sufficient teaching and learning materials in native languages, trained teachers who are not proficient in local languages, and policies that fully support the utilization of the mother tongue in education. As a result, MTB-MLE implementation often struggles to achieve its full potential.

### Purpose of the Study

This research proposal aims to develop innovative solutions to enhance the implementation of MTB-MLE programs to improve the outcomes of students' learning. The study will focus on identifying best practices,

developing new tools and resources, and providing recommendations to policymakers and educators to strengthen MTB-MLE programs.

### **Significance of the Study**

The importance of this study stems from the urgent need to raise the standard and efficacy of MTB-MLE programs in the world. Millions of students who receive instruction in a language other than their mother tongue could benefit from the study's creative solutions and recommendations, which are grounded in empirical data. Moreover, the study's findings will expand the knowledge of effective strategies and best practices for teaching multilingual students and offer insightful information to teachers, researchers, and policymakers.

### **Background of the Study**

The twenty-first-century learning environment is evolving swiftly, focusing on effective and inclusive teaching strategies. Mother Tongue-Based Multilingual Education (MTB-MLE) has emerged as the most significant tactic for improving learning outcomes by employing students' mother tongues as the primary language of instruction.

Learners begin their education in the language they understand best—their mother tongue—and need to develop a strong foundation in their mother language before effectively learning additional languages. This is where the Department of Education (DepEd) gets inspiration from its inclusion of Mother Tongue-Based Multilingual Education (MTB-MLE) as a feature of the Enhanced Basic Education Program. It mandates the use of the language that students are familiar with (their first language) as the medium of instruction to allow them to grasp basic concepts more easily (DEPED, 2016). This critical approach promotes remarkable academic achievement, improved literacy, and positive attitudes toward learning.

However, the realization of MTB-MLE implementation dealt with various issues and challenges, ranging from insufficient teaching materials in mother tongue texts to the need for trained educators proficient in these languages (Bangsoyao, 2024). Despite these hindrances, there is a sense of hope among teachers and parents, highlighting the potential of MTB-MLE to upgrade student performance over time (Sanchez et al., 2023).

Research in this field has disclosed the importance of addressing key issues such as translation difficulties, multilingual environments, and lack of resources to contribute to MTB-MLE efforts (Atong & Escote, 2023). Moreover, the progression from pilot projects to widespread implementation of MTB-MLE programs poses a remarkable challenge, often hampered by systemic issues at the national level. While the advantages of MTB-MLE are evident, the effectiveness of these implementations ultimately depends on factors like adequate materials, teacher training, and language development (Monje et al., 2021).

In light of these challenges and opportunities, the proposed research aims to develop innovative solutions to enhance the implementation of MTB-MLE programs. By addressing the complications of language planning, policy implementation, and resource availability, this study seeks to contribute valuable insights into the field of multilingual education and offer evidence-based recommendations for policymakers, educators, and researchers striving to improve educational practices in the 21st century.

### **The research problem**

The implementation of Mother Tongue-Based Multilingual Education (MTB-MLE) continues to face unending and various challenges that hinder its effectiveness and impact on students' English literacy. Despite efforts to address these challenges, several key issues remain prevalent in the field of MTB-MLE implementation.

The latest research problem within the realm of MTB-MLE implementation reflects the need to address the following crucial issues:

**Resource Constraints and Outdated Teaching Materials:** Many educational settings still dealt with inadequate resources, relying on obsolete reference books due to their scarcity and limited access to internet resources. This leads to various challenges to the quality of teaching and learning within MTB-MLE programs (Malone, 2016; Monje et al., 2021; Elgincolin 2020, David, 2021, Sanchez et al., 2023; Bangsoyao, 2024).

**Professional Development and Teacher Training:** The effectiveness of MTB-MLE programs heavily relies on continuous professional learning and in-service training for teachers. However, there are concerns about the insufficient national and international training opportunities for teachers, impacting their capacity to navigate complex pedagogical challenges effectively (Bangsoyao, 2024).

**Language Transition Challenges:** Transitioning from the mother tongue to English as the medium of instruction presents significant difficulties for both teachers and students. Issues such as translating words, providing varied activities, and maintaining English proficiency during subject transitions pose substantial obstacles to the successful implementation of MTB-MLE (Pagarigan et al., 2020; Monje et al., 2021; Sumalinog, 2019).

**Program Logic and Plausibility:** Ensuring that teachers and parents understand the significance of shifting to a mother tongue-based multilingual education is crucial for implementing MTB-MLE successfully. There is a need to reassess existing policies and practices to enhance the logic and plausibility of MTB-MLE programs (Elgincolin, 2020).

Addressing these research problems is essential to enhance the effectiveness and sustainability of MTB-MLE programs, ultimately improving students' English literacy outcomes and ensuring equitable access to quality education. By focusing on innovative solutions to address resource constraints, enhance teacher training, and facilitate smoother language transitions, in particular, the result of the study will help and may provide valuable insights for parents, teachers, school administrators, and the higher DepED authorities to make informed decisions). The study provides data that can be formalized and used by policymakers to create regulations about the setup and management of schools.

### **Research Question**

To address these challenges and develop innovative solutions to enhance MTB-MLE implementation, this research proposal aims to explore the following key questions:

- What are the main challenges experienced by educators in the enactment of mother tongue-based multilingual education?
- What innovative solutions and best practices have been employed in overcoming these challenges in various settings?
- How can innovative technologies, such as digital learning resources and platforms be employed to support MTB-MLE implementation?
- What policies and strategies can governments and education systems adopt to foster an enabling environment for successful MTB-MLE programs?

### **Literature Review**

The literature on Mother Tongue-Based Multilingual Education (MTB-MLE) implementation highlights the challenges and benefits associated with this approach. Several key studies shed light on the complexities and opportunities in enhancing MTB-MLE programs:

Malone (2016) emphasizes the circumstances that many kids from language minority groups face when they enroll in formal schooling in her keynote address during the 5th International Conference on Language and Education. “Their teachers speak a language they don’t understand; Their own language and culture, knowledge, and experience are excluded from the curriculum; They are expected to learn to read and write in a language they don’t know or are just learning; and They are expected to learn Math, Science, and other subjects but don’t have the language to learn the concepts (Malone, 2016).”

Furthermore, her address emphasizes the cyclical nature of MTB-MLE implementation and stresses the importance of regular evaluations and adaptations. In addition, she underscores the critical role of MTB-MLE in ensuring inclusive and equitable quality education, aligning with Sustainable Development Goal 4. Moreover, she also emphasized the growing recognition of MTB-MLE benefits in Asia, Africa, and the Pacific, highlighting the need for clear and accessible information to develop strong and sustainable programs.

In an MTB-MLE evaluation, the Philippine Institute for Development Studies (PIDS) focuses on the use of the mother tongue as the major language of instruction in the early years of primary education. Moreover, the study highlights issues with selecting a teaching medium that is foreign to both teachers and students, emphasizing how crucial it is to match the selected medium to the language backgrounds of the pupils (PIDS, 2021).

In the study of Bangsoyao (2024) it delves into the issues surrounding the adoption of MTB-MLE, concentrating on the teaching-learning process, utilizing outdated materials, and resource scarcity in some educational environments. The study explores the problems encountered in MTB-MLE implementation, emphasizing challenges in the teaching-learning process, reliance on outdated materials, and limited access to resources in some educational settings. It emphasizes the importance of continuous professional development, efficient teaching techniques, and creativity. to maximize learning results in MTB-MLE environments The study also addresses the need for remedies to enhance the effectiveness of MTB-MLE implementation, focusing on instructional materials, teacher training, and parental concerns about future employability.

In the study of Cabansag (2016), he concluded that, “There is no assurance that a policy will be implemented successfully by the mere issuance of a directive. It then creates a challenge for outsiders to sincerely grasp the real scenario at the ground level because teachers and parents are accustomed to presenting an image of compliance.”

As Hunahunan (2019) explained in his study, the most prevailing problem in the implementation of MTB-MLE is the inadequate supply of textbooks. The success of MTB-MLE also relies upon the quality of learning materials used and provided. He also stated that the teaching materials in the mother tongue are insufficient and these materials used “Sinugbuanong Binisaya” which is not the exact mother tongue of the pupils.

The qualitative research study of Puno et al. (2023) showed that teachers were having a hard time translating Mathematics concepts into English as the pupils in grades 4-6 were used to their MT, which had a significant effect on their reading comprehension.

The study of Estremera (2017), highlights the relevance of MTB-MLE to pupils' performance in these subjects, emphasizing the need for addressing vocabulary limitations and improving the quality of instructional materials. Teachers’ Guide and Learners’ Manual Inconsistency, and lack of time to prepare localized instructional material.

In addition, the study of Eslit (2017) underscores the insufficiency of MT learning materials, especially books as one challenge/factor affecting the implementation of the MTB-MLE. Emphasizing that, “Parents’ support is essential to the success of a mother tongue education program. Therefore, parents need to be well informed about the benefits of MTB instruction and reassured that learning in the mother tongue will not hinder their children’s opportunity to learn a foreign or national language, often a key goal of sending their children to school.”

Also, the study of Lartec et al. (2017), emphasized difficulties encountered by teachers in the enactment of the mother-tongue-based instruction, including the unavailability of books written in the mother tongue, insufficient vocabulary, and teacher training.

Language Transition Challenges: Transitioning from the mother tongue to English as the medium of instruction presents significant difficulties for both teachers and students. Issues such as translating words, providing varied activities, and maintaining English proficiency during subject transitions pose substantial obstacles to the successful implementation of MTB-MLE. (Pagarigan et al., 2020; Monje et al., 2021; Sumalinog, 2019)

In the study of Anudin (2018), he specified these challenges: inadequate books/references written in the mother tongue, insufficient teacher training and the lack or deficiency in vocabulary.

Findings of Lopez et al. (2020), showed that mother-tongue books and instructional materials have the highest points in terms of Mother Tongue Based- Multilingual Education challenges.

Lopez et al. (2019) give prominence to the inconsistency between the policy and practice wherein the national assessment of students being instructed in the mother tongue is in English. To a large extent, there is utter disregard for the welfare of students whose mother tongue or home language is not English.

The inconsistency between the policy and practice exhibits a high form of hypocrisy in the Philippine educational system that exacerbates the further deterioration of learning among indigenous students whose access to quality education is very limited. The national assessment of students being instructed in the mother tongue is in English.

### **Innovative Practices and Remedies**

To address these problems, teachers employ various coping strategies including self-training and study, asking for help from a more knowledgeable faculty, and shouldering the expenses of instructional material reproduction, asking help from a more knowledgeable faculty and shouldering expenses of instructional material reproduction (Hunahunan, 2019).

The phenomenological analysis of Lartec et. al (2017) revealed that the strategies used by teachers were: translation of the target language to the mother tongue, utilization of multilingual teaching, utilization of lingua-franca, improvisation of instructional materials written in the mother tongue, remediation of instruction, and utilization of literary piece written in the mother tongue as motivation.

According to Billones M.G & Cabatbat, M.G. (2019), “The teacher’s device mechanisms or used strategies in the conduct of the lesson. The common strategy used to address the problem is the use of translation methods or code-switching. Code-switching means shifting from Ilonggo language (Hiligaynon) to Filipino language which is understood by all learners to be used in classroom especially for classes which are multilingual.”

To overcome the challenges the teachers employed the following mechanisms: asking for help from colleagues and stakeholders, translating unfamiliar terms to the dialect of the learners, and improvising instructional materials written in the MTB–MLE. With these, a Framework was developed to guide MTB

– MLE teachers in the implementation of the said program in the district (Sanchez et al., 2023; Hunahunan, 2019).

As presented by Bautista et al. (2020) the use of translanguaging, particularly in the teaching and learning of mathematical problem-solving, in content area education and evaluation.

These strategies involved research, resourcefulness, contextualization and localization of materials, and providing a pool of activities for learners to have helped educators succeed over the challenges (Atong & Escote, 2023).

As stated in the study of Hunahunan (2019), to cope with the MTB-MLE difficulties, the teacher did some research on the internet as to teaching and learning strategies in mother-tongue and asked senior faculty members for mentoring through LAC sessions.

In the study of Dequña & Oliva (2022), strategies such as translation of terminologies, utilization of other instructional materials, use of technology in teaching, and consultation with another teacher are the most emerging themes.

The remedies utilized in addressing teaching-learning processes, learning materials, and professional development were found to be both highly utilized and effective. (Bangsoyao, 2023)

## **Methodology**

A literature review was employed in this study utilizing a thorough synthesis of the available scholarly literature, about the implementation of the MTB-MLE program. Secondary sources from published peer-reviewed research journals were the main sources of the data needed in the study. The Data Analysis read through the collected literature carefully to identify key themes, challenges, and innovative practices related to MTB-MLE implementation. The literature was categorized based on the identified themes, such as teaching and learning processes, learning materials, teacher training, and language transition challenges. Then the literature was analyzed within each theme to synthesize the main findings, identify gaps in knowledge, and highlight promising practices and solutions.

## **Data Collection**

The researcher conducted a systematic search of academic databases, such as Google Scholar, ERIC, and ResearchGate, using keywords related to MTB-MLE implementation such as challenges, best practices, and innovative solutions. Collected relevant peer-reviewed journal articles, conference papers, reports, and book chapters published in 2015 onwards through Internet-Enabled Devices that have access to an internet connection. The researcher ensures that the selected literature covers a range of contexts, including different provinces and educational settings.

## **Result and Discussion**

The study "Developing Innovative Solutions to Enhance MTB-MLE Implementation" is being summarized and discussed to incorporate the important obstacles, best practices, and creative solutions found in MTB-MLE implementation. This section seeks to give readers a thorough grasp of the condition of MTB-MLE programs today and to suggest ways to improve their efficacy.

## **Key Challenges:**

The numerous barriers to implementing MTB-MLE, including the dearth of teaching materials and learning resources, inadequate teacher preparation and language competency, and language transition

issues, (Pagarigan et al., 2020; Monje et al., 2019; Sumalinog, 2019; Malone, 2016; Elgincolin, 2020; David, 2021; Sanchez et al., 2023; Hunahunan, 2019; Bangsoyao, 2024) and parental worries about their children's future employment, highlight the complexity of the issues surrounding multilingual education. (Eslit, 2017; Monje et al., 2021; Bangsoyao, 2024)

### **Best Practices:**

In-service training and continuous professional learning are successful solutions for problems with MTB-MLE implementation, underscoring the significance of continual professional development for teachers to successfully negotiate pedagogical complexity (Bangsoyao, 2024; Hunahunan, 2019).

To maximize learning outcomes in MTB-MLE contexts, resourcefulness, strategic planning, and resolving resource restrictions were found to be critical components. This highlights the necessity of creative problem-solving techniques to get around constraints in educational environments (Lartec et al., 2017, Eslit 2017).

### **Innovative Solutions:**

This study emphasizes how critical it is to address resource limitations, improve teacher preparation and language skills, and create plans to help MTB-MLE programs transition students smoothly between languages (Cabansag, 2016; Lartec et al., 2017).

Utilizing technology can help and improve MTB-MLE implementation by providing creative ways to increase access to educational resources and speed up language acquisition. Examples of this technology include digital learning platforms and machine translation (Bautista et al., 2020; Atong & Escote, 2023; Hunahunan, 2019; Dequiña, & Oliva, 2022).

### **Conclusion**

The study "Developing Innovative Solutions to Enhance Mother Tongue-Based Multilingual Education (MTB-MLE) Implementation" has illuminated the difficulties, effective methods, and creative approaches instructors use to enhance the MTB-MLE program's implementation. Important insights to improve the efficacy of MTB-MLE programs have been obtained from a thorough assessment of the literature and empirical studies.

The complexity of implementing MTB-MLE in a variety of educational settings is highlighted by the hurdles that have been discovered, including a shortage of teaching resources, inadequate teacher training, language transition issues, and parental concerns. However, teachers have shown their dedication to overcoming these obstacles and maximizing learning outcomes for children by utilizing creative approaches and solutions such as ongoing professional development, resourcefulness, strategic planning, and utilizing technology.

To establish a supportive environment for the successful implementation of MTB-MLE, the study highlights the significance of cooperation, exchanging best practices, and lobbying for laws that will help. To effectively manage the complexity of multilingual education and advance inclusive, equitable, high-quality education for all students, educators should address resource restrictions, improve teacher preparation, and make better use of technology.

To meet the changing demands of MTB-MLE programs, legislators, educators, and stakeholders must emphasize the creation of locally relevant teaching materials, fund programs for the professional development of teachers, and have continuing conversations. The project is to develop MTB-MLE efforts

and guarantee that students receive high-quality instruction that respects their linguistic variety and promotes academic achievement by putting evidence-based suggestions into practice and encouraging a culture of continuous improvement.

### **Recommendations:**

Emanated from the synthesis of challenges, best practices, and innovative solutions, the study provides evidence-based recommendations to policymakers, educators, and legislators involved in MTB-MLE programs. Thus, the recommendations may include:

1. Developing strategies and materials to help teachers effectively translate words from Filipino or English to their native tongue and navigating subject transitions because of the different teaching languages.
2. Developing localized, and contextualized instructional materials.
3. Allocating funds for teacher training programs,
4. Raising awareness among stakeholders, such as parents, education officials, and school staff about the goals and advantages of MTB-MLE to win their support, and
5. Utilizing technology to enhance the quality and effectiveness of MTB-MLE implementation.

By synthesizing the identified challenges, best practices, and innovative solutions, this study aims to contribute to the advancement of MTB-MLE programs and provide actionable insights for improving learning outcomes and promoting inclusive and equitable quality education for all learners in linguistically diverse contexts.

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