

Challenges in Mother Tongue-Based Multilingual Education and Pupils' Academic Performance

Aiza Mae D. Cabactulan^a, Nick C. Pañares^b

^a aizamae.cabactulan@deped.gov.ph, ^bnick.pañares@deped.gov.ph
Southern de Oro Philippines College – Graduate School, Cagayan de Oro City, Philippines

Abstract

The study aimed to determine the relationship between teachers' challenges in mother tongue-based multilingual education and pupils' academic performance and its relationship. The study utilized a descriptive-correlational research design analyzed through mean and standard deviation and Pearson r correlation. A self-made questionnaire was used to gather data, which was validated and inspected through a reliability test with the use of Cronbach's alpha. Average quarterly grades for the School Year 2022–2023 were used to determine the academic performance of the pupils. A total of one hundred teachers from the four (4) schools in the West II district division of Cagayan de Oro City took part in the study. The study revealed that the teaching and learning process and the preparation of learning resources are not significant to the pupils' academic performance. It was also found that teachers' training and development have a significant relationship with the pupils' academic performance. Thus, this study proves that teachers are resilient in dealing with challenges, and this does not hinder them from performing their tasks to provide the quality education that the pupils need.

Keywords: *multilingual, mother's tongue, pupils' academic performance*

1. Introduction

Language plays a critical role in educational practice, particularly in the classroom. The teacher uses language to impart knowledge and provide instructions to the students. It is assumed that the students are either familiar with or can quickly learn the language of instruction to achieve the desired educational objectives. One of the most critical decisions made by education ministries is the choice of language(s) to be used in the classroom. The language(s) used in the classroom has a significant impact on the ability of students to learn and achieve their educational goals (Brock-Utne, 2018).

However, the decision to use a particular language as the medium of instruction is often made without considering its potential impact on learning outcomes. Moreover, educational program planners seldom take into account the influence of the language of instruction on education enhancement. The use of mother tongue or familiar language in instruction is frequently regarded as a political or national issue, which is deemed too intricate to resolve within a project's boundaries. Consequently, language's critical role in promoting educational access and academic achievement is not acknowledged, and the issue is often overlooked.

Mother-tongue-based education is a form of instruction where children are taught in their first language (L1) and gradually transition to a second language (L2) or foreign language at a specified time during primary school (UNESCO, n.d.). This type of education is typically provided as part of a bilingual or multilingual education program. In mother-tongue-based programs, children learn core concepts primarily in a language they are familiar with before learning the labels or vocabulary for those concepts in a new language. This approach is especially beneficial in early childhood programs, preschool, and early grades up to Grade 6, as children are still learning to read and gaining new concepts. When curriculum content is presented in an

unfamiliar language, it can take time for children to learn how to understand, speak, read, and write in the new language, which can be difficult and wasteful, taking away from valuable time that could be spent on learning to read and gaining academic concepts in their first language (L1) (UNESCO, n.d.).

Furthermore, children who do not understand the language used in the classroom may have difficulty demonstrating what they know, asking questions, and participating in classroom activities. In contrast, providing children with an opportunity to learn in a language they understand starting on the first day of school has significant advantages for the education system, teachers, parents, and students. Children who understand the language of instruction are more likely to enter school at age-appropriate times and attend school regularly, and they are less likely to drop out than those who receive instruction in a foreign language (UNESCO, n.d.).

According to UNESCO, a child's language and the way they use it reflects their perception of the world and their attitude towards it. The mother tongue is the language that a child learns in their mother's lap, almost effortlessly, as part of their social group, and is typically the language spoken at home by their parents (UNESCO, n.d.).

In order to address the challenges that can arise when a child's mother tongue is not the language of instruction in school, it is important to assess and evaluate their performance. This feedback can be used to establish concrete and practical educational theories to improve their performance level. The school must provide quality education through a sound academic program, and the teachers must be prepared and oriented to bring about the desired changes to improve student learning. By doing so, pupils can be helped to function at an academic level that is most suitable for them and avoid struggling with concepts or facts that are inappropriate for their ability (UNESCO, n.d.).

This study examines the challenges that teachers face in implementing mother-tongue-based multilingual education (MTB-MLE) policies in public elementary schools, particularly in the West II District of Cagayan de Oro City, during the School Year 2022-2023. Specifically, the study aims to identify the challenges associated with MTB-MLE and its impact on pupils' academic performance in the primary grades. By exploring the difficulties that teachers face in implementing the MTB-MLE policy, the study seeks to provide insights into the factors that contribute to the effectiveness of this approach and to identify potential areas for improvement in order to enhance its impact on student learning.

The present study is based on the guidelines set out in Department Order No. 16, s. 2012, which focus on the implementation of Mother Tongue-Based Multi-Lingual Education (MTB-MLE). These guidelines require that MTB-MLE be implemented in all public schools, specifically in Kindergarten, Grades 1, 2, and 3, as a part of the K to 12 Basic Education Program. The primary goal of MTB-MLE is to ensure that every child is able to read and write by Grade 1, as stated by the Department of Education (2012). The guidelines cover a range of areas including objectives, areas of focus, teaching and learning processes, teachers' training and development, and preparation of learning resources.

The program aims to provide teachers with the guidance and motivation needed to enable learners to effectively apply their literacy skills in their daily lives. The guidelines and objectives for the successful implementation of Mother Tongue-Based Multi-Lingual Education (MTB-MLE) in the new K-12 Basic Education Program are intended to support the broader purpose of the language policy. MTB-MLE should impact four areas of child development, namely language development, cognitive development, academic development, and sociocultural awareness.

Language development refers to the cognitive skill of auditory and oral abilities that enable individuals to communicate verbally. According to Seidenberg and MacDonald (2018), language development is essential for success in school and lifelong learning as it allows individuals to effectively communicate with others. Language is a complex system with structures and rules based on probabilistic relationships between multiple levels of correlated features, such as sounds, words, and grammar. These relationships enable individuals to understand and use language efficiently, making it a crucial aspect of human development. Ramscar (2021) proposes that language development is the result of general learning

mechanisms operating across rich input. In this view, the transition to adult-like language comprehension and production is gradual, reflecting the accumulation of experience with sounds, words, sentences, and their contexts over several years.

Education places a significant emphasis on cognitive development, which involves the cultivation of Higher Order Thinking Skills (HOTS) through different learning taxonomies, such as Bloom's taxonomy. Critical thinking is a fundamental skill in this area, which is distinguished from low-order learning outcomes like rote memorization. Critical thinking involves synthesizing, analyzing, reasoning, comprehending, applying, and evaluating, among other HOTS (Watson, 2019). Furthermore, academic development plays a crucial role in enabling students to acquire proficiency in all learning areas. Therefore, it is important to ensure that students have sufficient opportunities to master essential skills and knowledge before progressing to the next level.

In conclusion, sociocultural awareness is crucial in language learning as it encompasses the understanding of social and cultural aspects related to the target language's societies and cultures, including the language's context of use. Teachers play a significant role in transmitting cultural and societal information to students through their interactions and behaviors, which can help foster a greater appreciation and respect for students' heritage, language, and culture (British Council, 2019; Vitalaru, 2020). Furthermore, sociocultural awareness can aid students in navigating and adapting to new cultural contexts, facilitate communication, and promote intercultural understanding, which are essential skills in today's interconnected world.

2. Methodology

To better understand the relationships between naturally occurring variables in Mother Tongue-Based Multilingual Education and pupils' academic performance, the study employed a descriptive correlational design. This type of research design allows researchers to identify and comprehend the correlations between variables without manipulating them (Bhandari, 2022). The study utilized a quantitative approach to describe and analyze the challenges in Mother Tongue-Based Multilingual Education and pupils' academic performance, as outlined in the conceptual framework. The research utilized survey questions to collect data and analyze the correlations between the variables. The use of a quantitative approach was considered relevant for this study because it aimed to determine whether there is a substantial relationship between the challenges in Mother Tongue-Based Multilingual Education and pupils' academic performance.

For descriptive statistics, data analysis, and interpretation, mean and standard deviation were employed. Using this method, the challenges in Mother Tongue-Based Multilingual Education and pupils' academic performance will be summarized. The challenges in Mother Tongue-Based Multilingual Education and pupils' academic performance of West II district public elementary schools in the Division of Cagayan de Oro City were examined using the Pearson correlation to determine whether there is a relationship between the variables.

3. Results and Discussion

Problem 1. What is the perceived level of challenges in MTB - MLE in terms of:

- 1.1 Teaching and Learning Process;
- 1.2. Teacher's Training and Development; and
- 1.3. Preparation of Learning Resources?

Table 1 illustrates the summary results of the Perceived Level of Challenges in MTB-MLE. It has an Overall Mean of 4.09 with SD=0.59, which is described as and interpreted as Highly Observed. This means that when implemented and assisted properly, participants recognize the benefits of the MTB-MLE

curriculum and its high probability of success if the language used is appropriate for the subject area and as a mode of communication within the school.

Table 1

Overall Results of the Perceived Level of Challenges in MTB - MLE of the Public Elementary School Teachers

Indicators	Mean	SD	Description	Interpretation
Teaching and Learning Process	4.15	0.56	Agree	Highly Observed
Teachers' Training and Development	3.89	0.66	Agree	Highly Observed
Preparation of Learning Resources	4.24	0.56	Strongly Agree	Very Highly Observed
Overall Mean	4.09	0.59	Agree	Highly Observed

Note: 4.21 - 5.00 Strongly Agree Very Highly Observed; 3.41 – 4.20 Agree Highly Observed; 2.61 – 3.40 Moderate Neutral; 1.81-2.60 Disagree Lowly Observed; 1.00-1.80 Strongly Disagree Very Lowly Observed

Among the challenge in MTB-MLE, the indicator, *preparation of learning resources*, got the highest Mean of 4.24 with SD=0.56, which is described as Strongly Agree and interpreted as Very Highly Observed. It means that teachers' preparedness serves as a shield against any challenges encountered while teaching MTB-MLE. Cabardo (2017) pointed out that for instruction to be effective, teachers must take into account their role in furthering the objectives of enhancing teaching and learning, the student performance process, and all efforts toward academic excellence and greater academic results. Including educational resources in the MTB-MLE curriculum is another successful tactic. Instructors make use of the MTB-MLE storybooks that pupils can use.

Furthermore, this implies that students exhibit an appreciation for literature as well as competence in and understanding of the subject matter. A familiar language also makes learning much more approachable. As a result, since pupils, as well as educators, rely on these resources to learn, any flaws in instructional materials must be addressed and fixed. Teachers of MTB-MLE have used storybooks to gauge the success of their medium of instruction. (Balacano, 2020), using other books in the classroom or for exercises (Kolman, 2019) and using dictionaries and references (Trujillo, 2020).

While the lowest-rated indicator among the *challenges, teachers' training and development*, with a Mean of 3.89 with SD=0.66, which is described as Agree and interpreted as Highly Observed. It means that teachers' coaching has a significant impact on instruction and achievement. According to Kraft et al. (2018), teacher mentoring has emerged as a promising alternative to conventional professional learning designs, with literacy coaching programs for preschool and elementary teachers providing a wealth of evidence that have a significant impact on pupils' academic achievement.

Problem 2. What is the pupils' academic performance in S.Y. 2022 – 2023?

Table 2 presents the frequency and percentage distribution of pupils' academic performance in the First Quarter of the school year. It has an Overall Mean of 86.31, which is described as Very Satisfactory. Meanwhile, thirteen (13) learners (13%) earned a grade point average between 90-100, described as Outstanding. The majority of the pupils got (77%), which is described as Very Satisfactory. On the other hand, ten pupils (10%) on the record obtained a grade point average between 80-84, which is described as Fairly Satisfactory. This connotes that the learners have average cognitive achievement.

Table 2

Frequency and Percentage Distribution of Pupils' Academic Performance Based on the Average of Quarterly Grades in the First Quarter of S.Y. 2022-2023

Academic Performance	F	%
Outstanding	13	13
Very Satisfactory	77	77
Satisfactory	10	10
Fairly Satisfactory	0	0
Needs Improvement	0	0
Overall Mean	86.31	Very Satisfactory

Note:90-100 Outstanding; 85-89 – Very Satisfactory; 80-84 – Satisfactory; 75-79 – Fairly Satisfactory; Below 75- Did Not Meet Expectation

Accordingly, as they were exposed to the integration of a familiar language, pupils reportedly developed idea comprehension, mastery, intellectual skills, and familiarity with the topic. Additionally, as it lays the groundwork for learning, a child's mother tongue aids in the development of early reading skills and comprehension (Tunmer & Hoover, 2019). In light of this, the MTB-MLE fosters the learners' speaking and critical thinking abilities in order to increase their knowledge and competence (Rodriguez & Abocejo, 2018).

Problem 3: Is there a significant relationship between the teachers' perceived level of challenges in mother tongue-based multilingual education and pupils' academic performance?

Table 3

Correlation Analysis between Challenges in MTB-MLE and Pupils' Academic Performance

Challenges in Mother Tongue-Based Multilingual Education	R	P
Teaching and Learning Process	0.00	0.976
Teachers' Training and Development	0.21	0.040*
Preparation of Learning Resources	0.14	0.158

Note: = Pearson r correlation; P = probability value; Significant at 0.05 level.

Table 3 shows the correlation analysis between perceived level of challenges and pupils' academic performance. Pearson r Correlation Coefficient is used to determine whether a significant relationship exists between the independent variables and dependent variables. The result of the analysis presented that challenges in MTB-MLE were not significant to the pupils' academic performance as indicated in the computed $r=0.00$ ($P=0.976$) for *teaching and learning process*, $r=0.14$ ($P=0.158$) for *preparation of learning resources*. Therefore, teachers were not significantly related to the pupils' academic performance. Therefore, there was no significant relationship between the challenges in MTB-MLE in terms of teaching learning process, preparation of learning resources and the pupils' academic performance. With the result, the null hypothesis was accepted. The table showed that the challenges in MTB-MLE among the teachers did not directly influence the pupils' academic performance.

However, the previous table shows that among three (3) challenges in MTB-MLE, the *teachers'*

training and development, was significantly related to the academic performance of the pupils, with a p-value of 0.040. Standards for establishing qualifications and competencies are included in teacher training programs. The MTB-MLE curricular standards should demonstrate that teachers are capable of successfully educating students. This demands. The teachers are aware of and are able to put into practice, strategies for employing the mother tongue as the main path for the students to develop their foundational literacy skills as well as a bridge to oral and written literacy in the targeted second (L2) language. The success of the curriculum is significantly influenced by the MTB-MLE program's effective teachers.

Furthermore, the teacher should utilize the provided workshops, in-service courses, and extension courses to further their education in the area of pre-service training (Maina & Rosemary, 2019). The components of language teacher preparation ought to give the teacher subject-matter expertise. Second, he should be capable of teaching languages, and third, the teacher needs to leave training with the right attitude toward language use. This is true because the abilities of the implementers dictate how successfully an innovation is applied.

4. Conclusions and Recommendations

Based on the findings, the following conclusions have been made.

1. Preparation of learning resources has been considered as the Most Highly Observed practices in the implementation of MTB-MLE.
2. The pupil's academic performance suggests that they are proficient learners.
3. Challenges in MTB-MLE were not significantly related to the pupils' academic performance except for Teachers' Training and Development. Thus, the teachers are innovative despite of the challenges they encountered in the implementation of MTB-MLE policy.

Based on the findings and conclusions, the following recommendations are given:

1. Teachers must be exposed to different trainings, seminars and workshops on Mother Tongue-Based Multilingual Education for them to be more expert in transferring knowledge to learners using Mother Tongue.
2. A similar study maybe conducted to determine other related and intervening factors towards the achievement of the pupils in their Mother Tongue as a medium of instruction.
3. School administrators should strengthen the supervision of the learning process while taking into account the importance of the subject and the amount of information that needs to be conveyed to ensure progress by employing differentiated instruction.

REFERENCES

- Abdulrahman, M. D., Faruk, N., Oloyede, A. A., Surajudeen-Bakinde, N. T., Olawoyin, L. A., Mejabi, O. V., ... & Azeez, A. L. (2020). Multimedia tools in the teaching and learning processes: a systematic review. *Heliyon*, 6(11), e05312.
- Adriano, M. N. I., Franco, N. T., & Estrella, E. A. (2021). Language-in-education policies and stakeholders' perception of the current MTB-MLE policy in an ASEAN country. *Australian Journal of Language and Literacy, The*, 44(1), 84-99.
- Aliab, R. J., Othman, J., & Ismail, I. S. (2018). Mother Tongue-based Multilingual Education (MTB-MLE) Effects on Science Learning: A Meta-analysis Study. *International Journal of Instruction*, 11(2), 109-124.
- Angelo, D., Fraser, H., & Yeatman, B. (2019). The art of recognition: Visualising contact languages with community vernacular language posters. *Babel*, 54(1), 34-40.
- Aliñab, J. M., Prudente, M. S., & Aguja, S. E. (2018). Teachers' perceptions on using MTB-MLE in teaching

- grade 3 mathematics. *Advanced Science Letters*, 24(11), 8039-8042.
- Alieto, E. (2018). Language Shift from English to Mother Tongue: Exploring Language Attitude and Willingness to Teach among Pre-Service Teachers. *Online Submission*, 13(3), 134-146.
- Anudin, Ali. (2018). Six years of MTB MLE: Revisiting Teachers' Language Attitude towards the Teaching of Chavacano. 1
- Apolonio, A. L. (2022). Mother tongue-based multilingual education (MTB-MLE) in the Philippines: Its implications to language learning. *Erudio Journal of Educational Innovation*, 9(1), 1-12.
- Balacano, J. (2020). Mother Tongue-Based Multilingual Education (MTB-MLE) Program Implementation: Impacts, Challenges, and Prospects. *Journal of Ethnic and Cultural Studies*, 7(1), 1-10.
- Benson, C., Chik, C., & Lim, H. (2013). *Language Issues in Comparative Education: Inclusive Teaching and Learning in Non-Dominant Languages and Cultures*. Springer.
- Berowa, A. M. & Agbayani, R. (2019). The MTBMLE Policy: Attitudes Among Teachers on the Ground. *Asian EFL Journal*. 21. 123.
- Bhandari, P. (2022, December 05). *Correlational Research | When & How to Use*. Scribbr. Retrieved February 4, 2023.
- Brock-Utne, B. (2018). The role of language in learning and teaching: The challenges of multilingualism in sub-Saharan Africa. *International Journal of Educational Development*, 62, 276-284. doi: 10.1016/j.ijedudev.2018.01.006
- Cabardo, J. B. (2017). Importance of Teacher Preparedness in Enhancing Teaching and Learning Outcomes. *Journal of Education and Practice*, 8(2), 9-14.
- Caldas, B. (2019). To switch or not to switch: Bilingual preservice teachers and translanguaging in teaching and learning. *TESOL Journal*, 10(4), e485.
- Chiatoh, B. A. A., & Chiatoh, B. A. A. (2021). Original paper from oracy to literacy in the classroom: Implications for mother tongue-based bilingual education in Cameroon (Note 1). *Studies in Linguistics and Literature*, 5(2), 43-65.
- Frey, Bruce. (2018). *The SAGE Encyclopedia of Educational Research, Measurement, and Evaluation*.
- Department of Education, P. (2012). Guidelines on the implementation of the Mother Tongue-Based Multilingual Education (MTB-MLE) (DepEd order no. 16 2012). Retrieved from <https://www.deped.gov.ph/2012/02/17/do-16-s-2012-guidelines-on-the-implementation-of-the-mother-tongue-based-multilingual-education-mtb-mle/>.
- Department of Education (DepEd). (n.d.). Mother Tongue-Based Multilingual Education. Retrieved from <https://www.deped.gov.ph/programs-and-projects/mother-tongue-based-multilingual-education/>
- Department of Education. (2012). Department Order No. 16, s. 2012: Guidelines for the Implementation of Mother Tongue-Based Multilingual Education. Retrieved from https://www.deped.gov.ph/wp-content/uploads/2013/01/DO_s2012_016.pdf
- Dimaculangan, N. G., & Gonzales, M. A. (2020). Revisiting stakeholders' attitude towards MTB-MLE and ELT. *EPRA International Journal of Multidisciplinary Research (IJMR)*, 6(12), 81-91.
- Dizon, R.L., Calbi, J. S., Cuyos, J. S., & Miranda, M. (2019). Perspectives on the implementation of the K to 12 program in the Philippines: A research review. *International Journal of Innovation and Research in Educational Sciences*, 6(6), 2349-5219.
- Draper, J. (2019). Language education policy in Thailand. In *The Routledge international handbook of language education policy in Asia* (pp. 229-242). Routledge.
- Eslit, E., R. (2017). Mother tongue based multilingual education challenges: A case study. *Edelweiss Applied Science and Technology*, 1(1), 10-21.
- Espinosa, A. R. (2021). The decolonial option: Implications for the curriculum of foreign language teacher education programs. *Revista Boletín Redipe*, 10(12), 102-112.
- Estremera, M. L. (2017). The implementation of Mother Tongue-Based Multilingual Education: Viewing it

- from the grade III teachers' perspective. *Journal of Literature, Languages and Linguistics*, 40, 47-53.
- García, O., Johnson, S. I., & Seltzer, K. (2017). *The Translanguaging Classroom: Leveraging Student Bilingualism for Learning*. Philadelphia: Caslon Publishing.
- Gaylo, P. J. B. (2020). Implementing mother tongue based-multilingual education (MTB-MLE): Outcomes and challenges. *International Social Science Review*, 2, 148-183.
- Ganuza N., Hedman C.. 2017. 'Ideology vs. practice: Is there a space for pedagogical translanguaging in mother tongue instruction?' in Paulsrud B. A., Rosén J., Straszer B., Wedin Å. (eds.): *New Perspectives on Translanguaging and Education*. Multilingual Matters, pp. 208–26.
- Gatrell, J. D. (2013). Non-participant observation. In *Key concepts in social research* (pp. 203-208). SAGE Publications Ltd.
- Gempeso, H. D. P., & Mendez, J. D. S. (2021). Constructive Alignment of Mother Tongue-Based Multilingual Education (MTB MLE) Language Policy Implementation to the Practices of a Multilingual Classroom. *English Language Teaching Educational Journal*, 4(2), 125-137.
- Gesa, R., Olubukola, T. & Linda T. (2019): Implementing constructive alignment in higher education – cross-institutional perspectives from Australia, *Higher Education Research & Development*.
- Jorolan-Quintero, G. (2018). Oral traditions: An aid to implementation of mother tongue-based multilingual education in the Philippines' basic education programme. *International Review of Education*, 64, 759-777.
- Kolman, R. M., & San Carlos City, P. Current Status and Challenges of Mother Tongue Teachers in Pangasinan Public Elementary Schools.
- Kraft, M. A., Blazar, D., & Hogan, D. (2018). The effect of teacher coaching on instruction and achievement: A meta-analysis of the causal evidence. *Review of Educational Research*, 88(4), 547-588.
- Lawrence, J. E. (2019). Designing a unit assessment using constructive alignment. *International Journal of Teacher Education and Professional Development (IJTEPD)*, 2(1), 30-51
- Llaneta, C. A. (2018). *Teaching in Mother Tongues*. University of the Philippines. Last modified February, 6.
- Lee, H. Y., Hamid, M. O., & Hardy, I. (2021). Language and education policies in Southeast Asia: reorienting towards multilingualism-as-resource . *International Journal of Multilingualism*, 1-19.
- Lone, R. A., & Efstratopoulou, M. (2022). Linguistically-Responsive Educational Framework for Multilingual Contexts: Supporting Children's Academic Achievement. In *Rethinking Inclusion and Transformation in Special Education* (pp. 196-213). IGI Global.
- Medilo Jr., C. G. (2016). The experience of mother tongue-based multilingual education teachers in Southern Leyte, Philippines. *International Forum Journal*, 19(2), 64-79.
- Maina, G., & Rosemary, W. (2019). Digital literacy enhancement status in Kenya's competency-based curriculum. In *Sustainable ICT, Education and Learning: IFIP WG 3.4 International Conference, SUZA 2019, Zanzibar, Tanzania, April 25–27, 2019, Revised Selected Papers 1* (pp. 206-217). Springer International Publishing.
- Malone, S., & UNESCO. 2018. MTB-MLE resource kit: Including the excluded: promoting multilingual education (2 ed.).
- Monje, J. D., Orbeta Jr, A. C., Francisco, K. A., & Capones, E. M. (2021). 'Starting Where the Children Are': Process Evaluation of the Mother Tongue-Based Multilingual Education Program Implementation.

- Mose, P. N. (2017). Language-in-education policy in Kenya: Intention, interpretation, implementation. *Nordic Journal of African Studies*, 26(3), 16-16.
- Mueller, J. J., & File, N. (Eds.). (2019). *Curriculum in early childhood education: Re-examined, reclaimed, renewed*. Routledge.
- Ndangiza, D., & Cheng, A. (2021). Bridging Language and Knowledge Gaps through Translation in Mother Tongue-Based Multilingual Education. *International Journal of Multilingualism*, 18(2), 136-150.
- Namanya, S. J. C. (2017). The effects of mother tongue-based multilingual education on the English literacy of children in Silang, Philippines. In *International Forum Journal* (Vol. 20, No. 2, pp. 160-177).
- Nawzad, L., Rahim, D., & Said, K. (2018). The effectiveness of technology for improving the teaching of natural science subjects. *Indonesian Journal of Curriculum and Educational Technology Studies*, 6(1), 15-21.
- Ngugi, M. W. (2018). *The rise of the African novel: Politics of language, identity, and ownership*. University of Michigan Press.
- Njoroge, M. C., & Gathigia, M. G. (2017). The treatment of Indigenous Languages in Kenya's Pre-and Post-independent Education Commissions and in the Constitution of 2010. *Advances in Language and Literary Studies*, 8(6), 76-82.
- Ocampo, D. (2017). Mother Tongue-Based Multilingual Education (MTB-MLE) in the Philippines. Department of Education.
- Opiniano, G. A., Jackson, L., Cortez, F. G. F., de los Reyes, E. J., Mancenido-Bolaños, M. A. V., Altez-Albela, F. R., & Azada-Palacios, R. (2022). Philosophy of education in a new key: A collective writing project on the state of Filipino philosophy of education. *Educational Philosophy and Theory*, 54(8), 1256-1270.
- Peters, M. A., Arndt, S., Tesar, M., Jackson, L., Hung, R., Mika, C., & Gibbons, A. (2022). Philosophy of education in a new key: A collective project of the PESA executive. *Educational Philosophy and Theory*, 54(8), 1061-1082.
- Perez, N. B. (2019). A comparative study of the MTB-MLE programs in southeast Asian countries. *Journal of Humanities and Social Sciences Research (AJHSSR)*, 3(6), 47-55.
- Ramscar, M. (2021). How children learn to communicate discriminatively. *Journal of Child Language*, 48(5), 984-1022.
- Rihter, J., & Potočník, R. (2022). Preservice teachers' beliefs about teaching pupils with special educational needs in visual art education. *European Journal of Special Needs Education*, 37(2), 235-248.
- Rodriguez, K. F. R., & Abocejo, F. T. (2018). Competence vis-à-vis performance of special education pre-service teachers. *European Academic Research*, 6(7), 3474- 3498.
- RTI International. (2016). Early Grade Reading Assessment (EGRA) Toolkit, Second Edition. Reading for All project. <https://shared.rti.org/content/early-grade-reading-assessment-egra-toolkit-second-edition>
- Saneka, N. E., & de Witt, M. (2019). Barriers and bridges between mother tongue and English as a second language in young children. *South African Journal of Childhood Education*, 9(1), 1-8.
- Schmid, M. S., & Köpke, B. (2017). The relevance of first language attrition to theories of bilingual development. *Linguistic Approaches to Bilingualism*, 7(6), 637-667.
- Seidenberg, M. S., & MacDonald, M. C. (2018). The impact of language experience on language and reading. *Topics in Language Disorders*, 38(1), 66-83.
- Seidenberg, M. S., & MacDonald, M. C. (2018). The impact of language experience on language and reading: a probabilistic perspective. *Journal of Memory and Language*, 100, 1-21. doi: 10.1016/j.jml.2017.10.004
- Soruç, A., & Griffiths, C. (2018). English as a medium of instruction: Students' strategies. *Elt Journal*, 72(1), 38-48.
- Southeast Asian Ministers of Education Organization (SEAMEO). (n.d.). SEAMEO's Vision, Mission and

- Objectives. Retrieved from <https://www.seameo.org/about/vision-mission-objectives>
- Tonio, J., & Ella, J. (2019). Pre-service Teachers' Attitudes towards the Use of Mother Tongue as Medium of Instruction. *Asian EFL*, 21(2.3), 231-253.
- Trujillo, J. S. (2020). The use of mother tongue in instruction: Pupil's performance across the years. *Globus Journal of Progressive Education*, 10(1), 59-67.
- Tunmer, W. E., & Hoover, W. A. (2019). The cognitive foundations of learning to read: A framework for preventing and remediating reading difficulties. *Australian Journal of Learning Difficulties*, 24(1), 75-93.
- Umar, F. A., Muhoro, S. N., Opondo, F. O., Okumu, J. M., Kasimu, T. M., Wachira, D. W., & Wayong'o, S. N. (2018). Teacher factors influencing use of mother tongue in teaching of mathematics in lower primary schools in Yola South Local Government. Unpublished Masters Thesis, School of education, Kenyatta University.
- UNESCO. (2008). Mother tongue matters: Local language as a key to effective learning. UNESCO.
- UNESCO. (2021). Why use mother tongue-based multilingual education?. Retrieved from <https://en.unesco.org/news/why-use-mother-tongue-based-multilingual-education>
- UNESCO. (n.d.). Mother Tongue-Based Multilingual Education. Retrieved April 15, 2023, from <https://en.unesco.org/themes/mother-tongue-based-multilingual-education>
- UNESCO. (2021, February 19). Mother tongue-based multilingual education: The key to unlocking SDG 4. Retrieved from <https://en.unesco.org/news/mother-tongue-based-multilingual-education-key-unlocking-sdg-4>
- Vilcapoma Perez, J. (2019). Psychological foundations of English language teaching. (Undergraduate Thesis, National University of Education, Peru).
- Vitalaru, B. (2020). Sociocultural awareness, cultural perspectives and strategies in language assistants' academic papers in Spain. *Tejuelo. Didáctica de la lengua y la literatura. Educación*.
- Yu, X., & Liu, C. (2022). Teaching English as a lingua franca in China: Hindrances and prospects. *English Today*, 38(3), 185-193.
- Watson, S. (2019). Higher-order thinking skills (HOTS) in education. *Teaching Students to Think Critically*.