From English to Mother Tongue-Based Mathematics Teaching in the Philippines: the Good, the Bad, and the Exigent

Marvin C. Casalan
Charisse O. Joting-Quiman
Marmon A. Pagunsan
Levi E. Elipane

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Background/Rationale

- MTB-MLE
- Mathematics and Language
- UA as Teacher Education Institution
- Teacher Training
The Study

• Grade 1 Teachers’ Positions on MTB-MLE and Experiences inside Mathematics Classrooms in the District of Caluya, Antique, the Philippines
• Academic Year 2013-2014
• Survey Questionnaire, Informal Interviews and Observation
Research Setting & Participants

• District of Caluya, Antique (AY 2013-2014), a year after the start of the MTB-MLE program.
• 8 schools
• each school has only one Grade 1 class
• 8 teacher respondents

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Research Participants

- All female, with rank status of Teacher 1
- All respondents claim to have attended MTB-MLE Trainings
  - half attended at least 24 hours
  - the other half attended at least 40 hours
Theoretical Underpinning

- Vygotsky’s sociocultural theory: “conceptual development among children is influenced by cultural practices, such as the discourse community in which they participate”
Results:
Teachers’ Positions on MTB-MLE

• 3 out of 8 teachers are in favor
• 3 are not in favor
• 2 whose answers are not indicated
• Those who favor MTB-MLE believe that:
  • pupils can easily understand the lesson
  • pupils participate actively in the discussions
  • for compliance
Results:
Teachers’ Positions on MTB-MLE

• Those not in favor note:
  • Difficulty in teaching numbers and shapes
  • No exact translation (shapes)
  • Pupils’ familiarity with math terms is greater in English than in Kinaray-a
  • Believe that learners should be taught English at a young age
Results:
Teachers’ Perceptions of MTB-MLE Effectiveness

- Most teachers’ answers were non-committal, but the teachers agree that the use of mother tongue in Mathematics is effective in bridging processes, in explaining the concepts to the pupils and in facilitating discussions, and during group activities.
Results:
Teachers’ Perceptions of MTB-MLE Effectiveness

• Although only one teacher said that she believes MTB-MLE is not effective, the rest also shared that there are symbols and mathematics terms which do not have Caluya Kinaray-a equivalents; and because of that, they believe that pupils cannot develop critical thinking and reasoning using purely the mother tongue.

• Pupils become confused because of the language used in the classroom.
MTB-MLE Experiences: **The Good**

- Pupils enjoy doing the activities and solving the problems.
- Cooperative learning is noticeable.
- Pupils are eager to participate in class discussions.
- Teachers observe that even slow learners understand mathematics concepts easily when explained in Caluya Kinaray-a.
MTB-MLE Experiences: The Bad

- Pupils’ loss of interest due to language confusion
- Non-native language teacher’s difficulty in dealing with native language learners
- A teacher accustomed to use English in teaching mathematics
MTB-MLE Experiences: The Bad

• Transferee pupils (with different L1) have difficulty understanding the lessons and do not participate
• Inevitable pupils’ use of English in class
• Use of the national language (Filipino) in class
• Adjustment process
• Difficulty in teaching fractions using the native language
How did the teachers survive the seemingly tumultuous initial year of MTB-MLE implementation?

• Obedience, compliance, no choice
• Developing strategies
• Learning the native language of learners
Results – Suggested Topics for Inservice Training (INSET)

• Work text in L1 for Caluya learners.
• INSET on MTB-MLE specific to Caluya
• Production and reproduction of contextualized Teaching Guides and Learner’s Activity Sheets for Grade I
• Pedagogies for training in the MTB-MLE scheme
• Teaching fractions, number sentences, measurement, and problem solving using the mother tongue should be included in the INSET
Triangulating the Responses
(The Actual Linguistic Scenario)

• Teachers attribute learners’ difficulty in numbers because they were taught to count in English at home.

• Observation, however, shows that time and money make use of Spanish and English terms at home and in the community (market place, church, hospitals, government offices, etc.).
Conclusions

• Mother tongue used inside the classroom is not necessarily the same language used in the homes of the children.

• Code switching/mixing and language blending are an integral parts of the “real” language that surrounds the children.

• The need for materials which deal with the realities of Caluyanhon life and preferably in their language.

• There is also a need for the mathematics teacher who is multilingual and knowledgeable of the learners’ language.
Implications

• Code mixing or any other form of language blending in a mathematics classroom
• Community support for contextualized instructional materials
• INSET for the creation of teacher-made materials
• Language learning for mathematics teachers
Afterthought

- Some languages do not have terms for more advanced mathematics concepts;
- English offers a practical alternative.
- Teachers and learners be allowed to make use of the harmonious blending of these languages (at their disposal)
Thank you very much for your attention and for letting us share some insight from our part of the globe.