

Experiences of teachers teaching grade 4 pupils with Mother Tongue-Based Multilingual Education (MTB-MLE): inputs to policy development and teacher training for MTB-MLE

Adelyne Costelo Abrea, Randy Lagulao Robles, Elvie Charie Lumanao Ortua

Philippine Normal University - Mindanao

ARTICLE INFORMATION

Article History:

Received: August 13, 2019

Received in revised form: January 25, 2020

Accepted: February 14, 2020

Keywords:

experiences, MTB-MLE, transition

**Corresponding author: Adelyne Costelo Abrea
(abrea.ac@pnu.edu.ph)*

ABSTRACT

This phenomenological study described the experiences of 18 mathematics/science teachers of grade 4 pupils exposed to MTB-MLE from different divisions of Caraga using three modes of data gathering: survey questionnaire, classroom observation, and focus group discussion. Teachers perceived MTB-MLE as a barrier instead of being a bridge to learning concepts in English. However, they highlighted that MTB-MLE boosted the self-confidence of the pupils in expressing themselves using their Mother Tongue (MT). Teachers perceived the teaching of mathematics/science as challenging because of the pupils' limited English vocabulary leading to problems in spelling, reading comprehension, and solving word problems. Translation is the most common strategy used by teachers to transition pupils from MT (L1) to English (L2). Training for teachers to effectively manage transition is suggested, as well as integration of MTB-MLE concepts to the Professional Education courses in teacher education institutions.

Introduction

Language is the vehicle in transmitting the intended message to the receiver and plays a key role in unifying a vast and complex notion and provides individuals with outlets for developing diverse skills and abilities (Nath, 2010). According to Mudenda (2017), for one to send and ensure that the message is received, interpreted correctly, and understood properly, common language is necessary. Hence, it is important that in

schools, teachers and learners understand each other linguistically for communication to be effective.

Mother Tongue (MT) is viewed by many as one with a powerful effect in bringing out the potential of children in the learning process. Since 1953, this has always been attested by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) because of ample studies which already revealed that the use of mother

tongue permits children to attain higher level of comprehension (McEachern, 2010) and acquire basic literacy skills and concepts rapidly (Espada, 2012).

The Philippines, through its Department of Education (DepEd) in 2009, issued an order requiring the use of the learners' first language (L1) as the medium of instruction in all the disciplines of kindergarten to grade three except for Filipino and English. In 2013, the upgrade toward the K-12 basic education vis-a-vis MTB-MLE has become a law through the Enhanced Basic Education Act. Embedded in the legislation were requirements that instruction, teaching materials, and assessment should be in the regional or native languages of the learners from K to 3.

Mathematics and Science are parts of the K-12 curriculum that provide essential concepts and life skill needed by the Filipino learners to proceed to the next stage in their life. Mathematics is perceived as one subject that is important in one's life in any situation and in any age that develops learners to be critical thinkers and problem solvers. Science education aims at developing scientific literacy among students to prepare them to be well-versed and participative citizens capable of making judgments on the application of scientific knowledge.

The MTB-MLE implementation in the country has an assumption that there will be a development of strong literacy as the learners can easily relate their knowledge and skills to their own experiences (MTB-MLE Network, 2016). While the MT is used in the lower grades, instruction for Mathematics and Science shifts to English in grade 4. In this grade, teachers are expected to build a strong bridge from their MT to the second language (L2) or the language of instruction. This bridge is very important as it can make or break the transfer of what learners learned in their L1 into L2.

Despite the number of studies stating the positive effects of MTB-MLE implementation, a number of studies say otherwise. The study of Piper, Zuilkowski, Kwayumba, and Oyanga (2018) showed that the learners assigned in the MT group had somewhat lower mathematics outcomes. Also, Namanya (2017) in her study pointed out that children taught in the MT demonstrated a decline in English literacy level.

MTB-MLE implementation worldwide has been found facing similar set of challenges (Ball, 2011) but implementers in multilingual contexts face the additional impact of linguistic diversity, which makes the program implementation more difficult. Teachers, who are at the center of language policy implementation, are considered to be essential role-players in any educational program (Ssentanda, 2014). As key persons, they can provide a picture of how things really are and how they are actually going. It is therefore important to investigate teachers' experiences in dealing with the grade 4 pupils with MTB-MLE exposure and document the challenges that they encounter.

The aim of this study was to explore how teachers manage the process of transitioning from MT (L1) to English (L2) as the medium of instruction. This study was specifically conducted to draw language profiles of the participating schools and teachers; to examine teachers' perception of the current language policy and the practices as compared to the previous curriculum; to document the problems and challenges met by the grade 4 teachers in transitioning pupils with MTB-MLE exposure to English; and, to identify the educational strategies used by grade 4 teachers to facilitate the transition to English. As MTB-MLE has been implemented since 2012, the conduct of the study is viewed as timely as comprehensive input can be gathered. The results of the study can provide inputs to teacher education institutions, can be bases for

policy development, and for future training of teachers on MTB-MLE.

Methodology

Research Design

A phenomenological study, the research made use of three modes of data gathering: survey questionnaire for all grade 4 teachers handling mathematics and science in sample schools, classroom observation for selected teachers/classes to be observed, and focus group discussion for teachers whose classes were observed.

Participants

Convenient purposive sampling selected six schools from three divisions of Caraga region: Agusan del Sur, Surigao del Sur, and Bislig City. One small and one big school are identified in each division. A school is considered small if it has only one section per grade level. A big school and a small school were identified from the municipalities of Prosperidad, and Talacogon, respectively, in Agusan del Sur division; in the municipality of Cantilan in Surigao del Sur; and in Bislig City. The dominant language used in Prosperidad is Agusanong Binisaya, while Talacogon for Talacogon, Agusan del Sur, Kamayo for Bislig City and Cantilangnon for the identified schools in Surigao del Sur. The grade 4 teachers were identified as respondents as

they are the teachers who handle and manage students who are transitioned from MT (L1) to English (L2) in the subjects science and mathematics. Eighteen teachers answered the survey questionnaires and from them, 14 were observed and participated in the focus group discussion.

Research Instrument

Three instruments were used in the study: survey questionnaire, observation notes form, and researcher-made interview guide. Questionnaire was utilized to gather data on the participants' profile and to initially describe their perceptions on the MTB-MLE implementation, and their experiences and problems met in the teaching of mathematics/science to grade 4 pupils exposed to MTB-MLE. The observation notes form focused on teaching strategies to teach the lesson and learner responses.

The interview guide consisted of open-ended questions which sought to provide in-depth picture of their perception of the MTB-MLE implementation, how is it compared to the Revised Basic Education Curriculum (RBEC) and its strengths and weaknesses. Also, it aimed at delineating the problems and challenges met by teachers, the strategies they employ in transitioning pupils from MT to English, and their training needs.

The researchers modified the instrument used by Ferrer (2019) to get

Table 1

Distribution of the Participants of the Study

| Division | No. of Participants | | Total | Percentage |
|-----------------|---------------------|--------------|-------|------------|
| | Big School | Small School | | |
| Agusan del Sur | 5 | 2 | 7 | 38.89% |
| Bislig City | 4 | 3 | 7 | 38.89% |
| Surigao del Sur | 2 | 2 | 4 | 22.22% |
| Total | 11 | 7 | 18 | |
| Percentage | 61.11% | 38.89% | | |

the perceptions of the grade 4 teachers on the implementation of MTB-MLE. This tool and the developed observation tool and interview guide were presented to three experts in curriculum for validation. Comments and suggestions were considered in the finalization of the instruments. After the focus group discussions (FGD), responses were transcribed and the transcription was sent to the participants to ensure correct transcription.

Data Collection

Upon the approval of the Schools Division Superintendents to conduct the study, the researchers visited the identified schools for orientation with the participants. Schedule of observation of classes was likewise set within the first quarter of the school year as it is where challenges in the transition may be evident.

A total of 18 classroom observations and five focus group discussions were conducted after the observation period. Focus group discussion was conducted separately per school except for the combined FGD for schools in Bislig City. Using a guiding observation protocol, observation of classes was focused on the educational practices and strategies teachers employed to transition the medium of instruction from Mother Tongue (L1) to English (L2).

During the audio-recorded focus group discussion conducted for about two (2) hours, participants were asked to answer open-ended questions. The responses were the basis for follow-up questions. Per permission from the teachers and students, pictures were taken to document the observation.

Data Analysis

Frequency count was used to describe the profile of the participants and schools. Mean and standard deviation were utilized to

describe the perception of the participants, experiences, and problems met based on the survey questionnaire. On the qualitative part, the responses were transcribed and analyzed by the researchers. They applied to winnow the data where they identified similar ideas and recurring themes from the responses. These key words served as the basis for the development of the different themes which became part of the findings of the study.

Ethical Consideration

The researchers observed ethical considerations in the study as mandated in the APA Ethics Code as cited in Smith (2003). The researchers sent a letter of permission to conduct the study to the division superintendents. The participants were informed on the purpose, procedures, and duration of the study. They were likewise informed that they have the right to ask questions or decline from responding to the questions or decline from participating in the study. An assurance was further conveyed that the data collected would be dealt with professionalism and confidentiality.

Findings

Profile of the Participants and Schools

To describe participants' profile, subject(s) taught, years of experience in teaching the subject(s) and their L1 were determined. Furthermore, the location of their schools and majority L1 of their pupils were identified.

About 72% of the participants have taught the subject (s) for at least 5 years. This experience includes teaching the subject not only in grade 4 but in higher grades as well. The MTB-MLE has been implemented for 8 years. This means that the majority of the participants have taught the subjects before and during the implementation of the MTB-

Table 2*Participants' Subjects Taught and Years of Experience*

| Subjects Taught | Years of Experience | | | Total |
|------------------|---------------------|-------------|-----------|---------|
| | < 5 years | 5 - 9 years | ≥10 years | |
| Math | 2 | 3 | 1 | 6 (33%) |
| Science | 1 | 3 | 2 | 6 (33%) |
| Math and Science | 2 | 2 | 2 | 6 (33%) |
| Total | 5 (28%) | 8 (44%) | 5 (28%) | 18 |

Table 3*Language Profile of the Schools' Location and of the Participants*

| Location | Pupils' Majority L1 | No. of Participants | No. of Participants with the same L1 as that of the Pupils' Majority L1 |
|------------------------------|---------------------|---------------------|---|
| Prosperidad, Agusan del Sur | Cebuano | 5 | 5 |
| Talacogon, Agusan del Sur | Talacogonon | 2 | 1 |
| Cantilan, Surigao del Sur | Cantilangnon | 4 | 4 |
| Bislig City, Surigao del Sur | Kamayo | 7 | 5 |
| | Total | 18 | 15 (83%) |

MLE. Thus, they can provide a comparison between the current language policy (MTB-MLE) and that of the previous curriculum, Revised Basic Education Curriculum (RBEC), which considered Filipino, English, Science, and Mathematics as the basic tool subjects.

The dominant L1 of the pupils and that of the teachers are presented in Table 3.

Table 3 illustrates that despite being located in the same provinces, the places have different majority L1 of the pupils. This profile depicts the language diversity in these particular provinces. Furthermore, of the 18 participants, 15 (83%) have the same L1 as that of the pupils. This implies that not all teachers share the same L1 with their pupils. This situation may spell difficulty on the part of these teachers in helping transition pupils from MT (L1) to English (L2) and was therefore looked into in the study.

Teachers' Perception of MTB-MLE

Their perceptions on the rationale of

the MTB-MLE implementation and on its supposed benefits to pupils, initially determined through their responses in the administered survey questionnaire, are presented Table 4.

In general, the participants have a *neutral* ($M \geq 2.6$) perception of the indicators on the usefulness of the MTB-MLE. Among these items, 1 and 4 got the lowest means, which imply that the participants cannot decide whether or not the use of MT in the lower grades provide a bridge in learning mathematics/science when these subjects are already taught in English, nor the pupils can transfer the skills or knowledge they acquired from MT (L1) to English (L2).

The qualitative part of the survey questionnaire revealed that majority (55.56%) of the participants perceive that the teaching of mathematics/science in English is a challenge and this is attributed to the pupils' exposure to MTB-MLE. The FGD uncovered that teachers do not see the impact of MT in bridging learning. Pupils were confused with

Table 4*Participants' Perceptions Regarding the Teaching of Mathematics/Science to Grade 4 Pupils*

| Perceptions | Mean | SD |
|---|--------|--------|
| 1. Compared to teaching Mathematics/Science in English before, MTB-MLE provides a better bridge in learning the subject. | 2.8889 | 1.0482 |
| 2. Children who start their learning in their first language (MT) are more likely to do well in school than children who begin learning using English – a language not a familiar to them. | 3.1111 | 1.1967 |
| 3. Engaging learners in a discussion of what is already familiar to them using the mother tongue and culture enables better learning in Mathematics. | 3.3333 | 1.0541 |
| 4. Pupils can transfer the skills and knowledge learnt in mother tongue to English. | 2.9444 | 1.0259 |
| 5. The use of learners' mother tongue offers a strong foundation by developing the cognitive skills and comprehension of the academic content e.g. Mathematics/Science. | 3.1111 | 1.1493 |
| 6. Word problem comprehension skill of the pupils is more developed when the mother tongue is mastered. | 3.2778 | 1.3252 |
| 7. Teaching using mother tongue contributes to the achievement of literacy and numeracy skills later in grade 4 where instruction shifts to English. | 3.2222 | 1.1811 |
| 8. MTB-MLE cultivates critical thinking skill of the learners in learning Mathematics/Science. | 3.2778 | 1.0438 |
| 9. Learners appreciate it when the teacher uses the mother tongue to explain difficult concepts. | 4.1111 | 0.8749 |
| 10. The knowledge, skills, attitudes, and values gained through the MT better support learning of Mathematics/Science than teaching the subject using English as the medium of instruction. | 3.4118 | 1.0323 |

**n=18; 1 - 1.79 = strongly disagree, 1.8 - 2.59 = moderately disagree, 2.6 - 3.39 = neutral, 3.4 - 4.19 = moderately agree, 4.2 - 5 = strongly agree*

the terms used in MT and their translations in English. Teachers with experience in teaching in the previous curriculum, RBEC, claimed that pupils who did not have an MT orientation were easy at grasping concepts in science and mathematics, because these subjects were taught in English in the lower grades. Sample statements made by the participants relative to this perception are:

“..feeling nako sir kay di man ko ganahan sir kay murag naanad man gud sila nga kinder to grade 3 magbinisaya... unya pag abot sa grade 4 kay mag English, murag maglisod man gud...kay naanad na sila ba” (*I do not like MTB-MLE. The pupils become too used with MT from kinder to grade 3 that they have a difficulty in learning concepts taught in English.*)

“...parehas akua no, mas ganahan gyud ko sa una. Oh, ang mga bata sa una pagkanindot gyud kayo tudluan...Pila ra kabook ang dili maka makasabot.

Karon jud, maihap ra pila kabook sa kamot ang sigeg hands-up” (*Just like me, I prefer the old curriculum because the children were much easier to teach. Only a few could not grasp the lesson. Now, you can count with your fingers how many are really participating.*)

Similarly, Table 4 depicts that teachers cannot affirm nor deny that the use of MT in the lower grades led to the development of word problem comprehension skill (item 6), the cultivation of critical thinking and cognitive skills (items 5 and 8), and the acquisition of literacy and numeracy skills (item 7) among learners later in grade 4. FGD exposed that generally teachers are not inclined to believing that the use of MT in lower grades would provide the presumed benefits to the learners. They suggest that just like in the RBEC, mathematics/science should be taught in English in the lower grades and MT should be taught as a subject only and not as medium of instruction to teach mathematics/science. Sample

Table 5*Participants' Experiences Regarding the Teaching of Mathematics/Science to Grade 4 Pupils*

| Experiences | Mean | SD |
|---|--------|--------|
| 1. Pupils respond in MT during Mathematics/ Science discussion as they can understand it better. | 4.0000 | 1.1055 |
| 2. Pupils respond in mother tongue during Mathematics/ Science discussion as they can express it better. | 3.9444 | 1.1290 |
| 3. Pupils can easily understand Mathematics/ Science concepts taught in English as they can comprehend and can relate them in their learning taught in the mother tongue. | 3.1111 | 1.0999 |
| 4. Pupils respond in MT even if the question is in English. | 3.7222 | 1.1453 |
| 5. Pupils comprehend immediately the instruction when stated in English. | 3.5000 | 1.0672 |
| 6. Pupils' critical thinking skill is shown when the mother tongue is used as medium of instruction. | 3.6471 | 1.1853 |
| 7. Pupils exposed to mother tongue are participative during Mathematics discussion (when translated). | 3.5000 | 1.1667 |

*n=18; 1 - 1.79 = never, 1.8 - 2.59 = seldom, 2.6 - 3.39 = sometimes, 3.4 - 4.19 = often, 4.2 - 5 = always

statements made by the participants relative to this perception follow:

"Siguro ang subject nga math, science, yung english, dili na na siya mag MTB i-English nalang na siya." (*Maybe it should be that Math and Science will not be taught in MT in the lower grades but in English*).

"subject ra gyud siya... di gyud sya pwedeg himoong medium of instruction in teaching science and mathematics, lisud gyud." (*MT should just be a subject not the medium of instruction in math and science because it's difficult.*)

Meanwhile, items 9 and 10 obtained means equivalent to *moderately agree* ($M \geq 3.4$). Participants say that due to pupils' MT exposure, they appreciate it when the subjects are taught in MT or when the teacher does translation when discussing. In addition, pupils are participative and can express themselves well, with confidence, when the discussion is in MT – a perceived positive effect of MTB-MLE by the participants. However, when the teacher asks them to speak in English they become

reluctant at answering and would usually ask if they can have it in MT. Sample statements follow:

"...ug mag binisaya ko, dali ra sila makasabot. Murag mas confident sila mu kuan no, muistory ug kuan, binisaya." (*If I speak using MT, they easily understand. They seem to be more confident in expressing themselves using MT*).

"Oo, kay kung kuan no, ganahan sila ug binisaya. Mas ganahan sila kay makasulti sila." (*Pupils like it more when discussions are in MT because they can express themselves well*).

Problems and Challenges Met by the Participants

The perception of the participants discussed in the previous section are based on their experiences in teaching grade 4 pupils who are exposed to MTB-MLE. Of the identified possible experiences of teachers presented in Table 5, pupils responding in MT during mathematics/science discussion got the highest mean equivalent to *often*. The observation of classes noted that at the

start of the discussion, the teacher initially presents the lesson in English but eventually shifts to the use of MT as pupils do not seem to understand the teacher. When the teacher already uses MT, the pupils become participative.

Pupils have become very exposed on the use of MT in the lower grades that they generally cannot make sense of the lessons in mathematics/science taught in English unless translated in MT. With pupils exposed to MTB-MLE entering grade 4, it takes time for the teacher to cover a certain topic. They have to go down to the level of understanding of pupils to ensure smooth continuity of learning. These are just few of the challenges teachers attributed to the implementation and exposure of the pupils to MTB-MLE. Table 6 presents the problems teachers met in teaching science and mathematics. They generally view the identified situations as *much a problem* ($M \geq 3.4$). Among these situations, limited English vocabulary of pupils obtained the highest mean ($M = 4.11$, $SD = 1.19$). It is pointed out by the participants that this problem also resulted to poor reading comprehension and pupils not understanding instructions/word problems in English.

Other situations identified by the participants as *much a problem* which can be attributed to the limited English vocabulary of the pupils include items 2, 3, 7, and 8 of Table 5. It was noted during the classroom observations that pupils misspelled words, e.g. “calf” and “couth” instead of “cough”, “eays” for “eyes”. When reading, pupils have the tendency to read words in MT and can hardly answer comprehension-check questions. These observations were validated through the FGD where participants identified spelling, reading comprehension and solving word problems in mathematics as areas of concerns. Mathematics is a challenge since pupils are used to count and name numbers in MT - even spell the English names of numbers in MT. These problems already existed prior to MTB-MLE implementation but are perceived by teachers to have become serious with the current language policy. Sample statements made by the participants relative to these identified problems follow:

“Sa spelling gyud sir kay ilang binisayon.” (*They spell English words in MT.*)

“Ug sa Mathematics ma’am labi na in writing number in words, sa... grade

Table 6

Problems Met by Participants Teaching Mathematics/Science to Grade 4 Pupils

| Problems Met | Mean | SD |
|--|--------|--------|
| 1. Limited English vocabulary of the pupils. | 4.1111 | 1.1967 |
| 2. The ability of the pupils to understand instructions in English | 3.8889 | 1.2862 |
| 3. The ability of the pupils to answer Math/Science questions in English. | 3.6667 | 1.3333 |
| 4. Math/ Science performance of the pupils during assessments like in quiz, summative, etc. | 3.5556 | 1.2571 |
| 5. Teachers’ vocabulary in translating Mathematics/ Science concepts which are in English to mother tongue. | 3.2778 | 0.8696 |
| 6. Teachers’ ability or strategy in helping the pupils in the transition period from the use of mother tongue to English as medium of instruction. | 3.5000 | 1.0138 |
| 7. Pupils’ critical thinking skills. | 3.9412 | 0.8725 |
| 8. Participation of the pupils during the Science/Math class discussion. | 3.5000 | 1.0138 |

**n=18; 1 - 1.79 = not a problem, 1.8 - 2.59 = not much a problem, 2.6 - 3.39 = sometimes a problem, 3.4 - 4.19 = much a problem, 4.2 - 5 = very much a problem*

1, grade 2, grade 3, ang pagsulat gyud anang 100 is usa ka gatos. So, pag abot na sa grade 4 is one hundred..."(*The learners were confused on the writing system of number words from MT to English.*)

"Pero ang ilaha gyud nga ginalisdan is kana gyung mga terminologies sa science nga solid. Naa gani to isa nangutana ug "Unsa ng solid, teacher?" Kay sa ilaha diay didto, wala diay na gi introduce ang solid. (*Pupils find it difficult to understand terminologies in Science as most of the terms are not introduced yet in the lower grades*)

Item 5 has the lowest mean ($M=3.2778$, $SD=0.8696$) equivalent to *sometimes a problem*. This implies that teachers' vocabulary in translating mathematics/science concepts from English (L2) to MT (L1) is not much of a problem because the majority of them share the same MT as that of the pupils. However, teachers who do not have the same MT as their learners see it as a challenge. Sample statements made by the participants relative to this follow:

"Usahay, ako puy dili kasabot sa ilang sinultihan" (*Sometimes, it is me who do not understand the pupils' MT.*)

"The problem ma'am kay the bisayan known to me is dili siya mao diay sa translation sa MTB-MLE. Basta ing-ana different siya ma'am so ako maglibog so usahay dili mi magkasinabot. (*The problem is my Bisaya is not the translation in their MT I am also confused as I do not know the exact term, so sometimes we do not understand each other.*)

Classroom Practices and Educational Strategies

Teachers perceive the teaching of mathematics/science to grade 4 pupils as

challenging. To address these challenges, teachers employed strategies they believe can help pupils transition. Teachers rely heavily on translation to facilitate the discussion. They initially present things in English and based on the pupils' response, verbal or non-verbal, they code-switch and/or translate the concepts presented in English to MT, which requires familiarity of the teacher on the MT of pupils.

Some grade 4 teachers suggested that the lower grade teachers introduce important concepts in mathematics/science in English. This will ensure better understanding of concepts in Grade 4 mathematics/science as terms are already familiar.

Other teachers integrate in the teaching of reading the concepts and terms used in mathematics/science to enhance the vocabulary of pupils and develop their reading and comprehension skill. Sample statements on classroom practices are as follows:

"Ako ma'am ang among strategy ma'am is during 1 to 1:30, spelling ug sa mathematical words and numbers tapos ma-challenge gyud ko ana every afternoon kay di gani ka spell ug twenty". (*In my case, every 1:00-1:30, I conduct spelling exercises especially on mathematical words and numbers. I am really challenged as they could not even spell twenty.*)

"... naa man gud part ma'am na competency na visualization so ang bata dapat maka picture-out siya kung unsa gyud ang fraction. Ah yes, labi nag visualization, mag prepare jud kag daghang IM's ana". (*The learner should be able to picture out what a fraction is. Yes, the teacher needs to prepare a lot of instructional materials.*)

Discussion of the Findings

The study was conducted to look into the teachers' experiences in teaching grade 4 pupils with MTB-MLE. This includes describing the language profiles of the schools and teachers; their perception on the language policy implementation; the problems they encountered and the educational strategies they employ in transitioning pupils from L1 to L2. All these are hoped to provide inputs for policy and practices.

Majority of the participants have taught mathematics and/or science subjects in grade 4 before and during the implementation of the MTB-MLE. They also have varied L1 backgrounds – some of them are not sharing the same L1 as that of their pupils. These imply that participants could provide a comparison of their experiences prior to and during MTB-MLE implementation. Not sharing the same L1 with their pupils was cited by participants to affect their capacity in managing the transition of pupils.

Participants are neutral on the idea that the use of MT in the lower grades provide a bridge in learning mathematics/science when instruction shifts to English; and on pupils being able to transfer the skills or knowledge they acquired from L1 to L2. They perceive that the teaching of mathematics/science in English is a challenge and the impact of MT in bridging learning is not felt. Pupils who were under RBEC were viewed as better at grasping concepts compared to pupils with MTB-MLE orientation. In general, the participants are not well-disposed of the assumptions on the implementation of MTB-MLE. This result may imply that teachers do not hold a good understanding on its concepts and working knowledge on how it is implemented specially during the transition.

Participants experienced that it takes time to cover the topics and noted that pupils have limited English vocabulary. They further

identified spelling, reading comprehension and solving word problems in mathematics as problematic areas. Translating concepts from L2 to L1 is also recognized as a problem for teachers who do not have the same MT as that of their learners. It can be inferred that teachers hold certain expectations from the pupils with MTB-MLE exposure in relation to the assumptions of its implementations. However, the MTB-MLE cited that “errors” are a normal part of second-language learning and thus, learners should be afforded with opportunities to receive feedback in a respectful and encouraging way. Accordingly, second-language (L2) acquisition indicates that it takes a minimum of two years to learn basic communicative skills in a second language when society supports that learning (K to 12 Mother Tongue Curriculum Guide, 2016).

Participants rely heavily on translation as a strategy to help pupils' transition. This requires familiarity of the teacher on the MT of pupils. They also employ certain strategies that develop the vocabulary, reading, and comprehension skills of the pupils. A new language is learned best when the learning process is non-threatening and meaningful. This is generally evident in the practices of the teachers. Teachers take “small steps” that help learners gain confidence in their ability to use the language meaningfully.

The idea of the MTB-MLE is that there should be a gradual transition to using the L2 as medium of instruction (K to 12 Mother Tongue Curriculum Guide, 2016). Researches say that most successful outcomes in English achievement occurred among students who received instructional support in MT over a longer period of time. This implies that the longer the English language learners had participated in bilingual education instruction, the more positive were the results in English when compared to groups who were in English mainstream programs.

The problems and challenges encountered by the participants may be attributed to their limited understanding of the program and the transition. To help them better transition pupils, participants suggest that they be trained in MTB-MLE and be equipped with transition strategies. As grade 4 teachers, they mentioned that they do not have a clear idea of how MTB-MLE is implemented in the lower grades. They also need to be knowledgeable of the MT of the pupils especially that translation from English to the pupils' MT is the most common strategy that teachers employ. Adequate knowledge on how things are done in the MTB-MLE will provide them insights on how to receive and manage the transitioning of pupils with MTB-MLE exposure. Teachers in Grade 4 should have understood the bridging stages and processes of an MLE program. Villaneza (2012) states that the success of starting from the Mother Tongue to Multilingualism (MTB-MLE) is greatly dependent on the quality of the transition process or the bridging program. Nolasco (2013) further suggested that the DepEd shall formulate a mother language transition program from Grade 4 to Grade 6 so that Filipino and English shall be gradually introduced as languages of instruction until such time when these two (2) languages can become the primary languages of instruction at the secondary level. The Department of Education can consider the conduct of training of grade 4 teachers to prepare them in handling transitioned learners.

As for the teacher training institutions (TEI's), revisiting the current curriculum and the integration of MTB-MLE concepts to certain Professional Education courses may be done. Since pre-service teacher education is a very good avenue to introduce and prepare would-be teachers on the challenges in the field, the inclusion of MTB-MLE concepts is suggested especially for future elementary teachers.

Conclusions

The main goal of the study is to describe the teachers' experiences as they manage the process of transitioning of grade 4 pupils from MTB-MLE to English. Specifically, it aimed to examine teachers' perception towards the MTB-MLE implementation and the practices as compared to the previous curriculum; document the problems met and the strategies used by the grade 4 in transitioning pupils. Though, perceptive in nature, the findings of the study hope to provide useful inputs for policy development and teacher training for MTB-MLE. Thus, improving the educational system.

Findings revealed that for teachers, Mother Tongue posed more of a problem - a barrier instead of being a bridge to learning concepts when taught in English. The highlighted importance of the MTB-MLE is it boosts the self-confidence of the pupils in expressing themselves though in MT. Teachers suggest that English should be used to teach Mathematics/Science in the lower grades. Teachers perceive the teaching of Mathematics/Science to grade 4 pupils as challenging because of the limited English vocabulary of pupils which leads to problems on spelling, reading comprehension, and solving word problems. These perceptions and experiences may be attributed to lack of knowledge and understanding of the MTB-MLE implementation from K to Grade 3 and the transition program from Grade 4 to Grade 6.

The translation is the most common strategy used by teachers to transition pupils from MT to English. With that, aspects for training on MTB-MLE for the transition teachers are identified together with the suggestion of integration of MTB-MLE concepts and transition strategies to the Professional Education courses of the TEI's.

Recommendations

The study acknowledges that teachers are the most important factor for a successful implementation of an educational program. They also are in a good position to say whether such program needs revisiting. The success of starting from the MT to multilingualism (MTB-MLE) is greatly dependent on the quality of the transition process or the bridging program. The study therefore recommends, based on its findings, that certain measures be implemented by the authorities of the education system (in-service and pre-service) such as training and/or retraining of teachers on MTB-MLE implementation with emphasis on how to transition pupils from MT to English with an understanding of how children learn language and content literacies.

The study focused on the perception of teachers and did not include that of the parents'. Parents' perceptions and experiences on their children being exposed to MTB-MLE can provide a much clearer picture of the phenomenon under study. Hence, it is recommended that a study should be conducted with the inclusion of parents. Similarly, since the study selected the school within the convenient reach of the researcher, it is encouraged to conduct similar studies on small and rural schools. The findings of the study are essential sources of information that can be utilized by the curriculum developers in enhancing the curriculum. Thus, it is also recommended that a copy of the research report shall be forwarded to respective offices.

• • •

References

- Ball, J. (2011). *Enhancing learning of children from diverse language backgrounds: Mother tongue bilingual or multilingual education in the early years*. Paris, France: UNESCO.
- Espada, J.P. (2012). The native language in teaching kindergarten mathematics. *Journal of International Education Research*, 8 (94), 359.
- Ferrer, R. C. (2019). Experiences of mathematics teachers handling grade four (4) pupils with Mother- Tongue Based-Multilingual Education exposure. (Unpublished Master's thesis). PNU Mindanao.
- McEachern, F. (2010). *Diversity shock. Starting where the children are: A collection of essays on Mother Tongue-Based Multilingual Education and language issues in the Philippines*, Quezon City, 170, 151-154.
- Mudenda, E. (2017). *Importance of language in the learning process*. Retrieved from <http://www.daily-mail.co.zm/importance-of-language-in-learning-process/>
- MTB-MLE Network (2016). *Mother Tongue-Based Multilingual Education Network*. Retrieved from <http://www/mlenetwork.org/event/2016/10/20/table/>
- Namanya, S.J. (2017). The effects of Mother Tongue -Based Multilingual Education on the English literacy of children in Silang, Philippines. *International Forum*,20(2), 160-177
- Nath, B. (2010). *Major language theorists influencing learning of mathematics*. Retrieved from <https://files.eric.ed.gov/fulltext/ED512896.pdf>
- Nolasco, R.(2013). *Castrated MTB-MLE*. Philippine Daily Inquirer. Retrieved from <https://opinion.inquirer.net/61025/castrated-mtb-mle>

Piper, B., Zuilkowski, S. S., Kwayumba, D., & Oyanga, A. (2018). Examining the secondary effects of mother-tongue literacy instruction in Kenya: Impacts on student learning in English, Kiswahili, and mathematics. *International Journal of Educational Development*, 59, 110–127. <https://doi.org/10.1016/j.ijedudev.2017.10.002>

Philippines Department of Education. (2009). *Institutionalizing mother tongue-based multilingual education (MLE)*. Retrieved from: <http://www.deped.gov.ph/orders/do-74-s-2009>

Ssentanda, M. (2014) *Mother tongue education and transition to English medium education in Uganda: Teachers' perspectives and practices versus language policy and curriculum*. Retrieved from https://www.google.com.ph/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=&&ved=0ahUKEwj2qOym6LVAhVGV7wKHW6dC3cQFggiMAE&url=https%3A%2Fscholar.sun.ac.za%2Fbitstream%2Fhandle%2F10019.1%2F95855%2Fs-sentanda_mother_2014.pdf%3D3&usg=AFQjCNH4Lml-rV0LqMbs8piDx2oZBw3VNuw

Villaneza, R.J. (2012). *The bridging process: the Philippine experience*. Retrieved from <https://2012-2017.usaid.gov/sites/default/files/documents/1865/Villaneza.pdf>