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Experiences of Parents and Teachers of Sinugbuanong Binisaya as a Medium of Instruction in Math Subject for Grade 2 Learners

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Abstract— *This study delved into the experiences of parents and teachers in the use of mother tongue as a medium of instruction in mathematics for the Grade 2 learners in three identified public elementary schools during the school year 2020-2021. The findings were the basis for implication for practice. It utilized a qualitative-phenomenological method through interview to 15 teachers and 30 parents from the three schools. An interpretative phenomenological analysis with the use of interview guide was performed in finding out the experiences of both the participants the parents and teachers. The result revealed that parents were more comfortable with using the local dialect and translating Sinugbuanong Binisaya terms to English while teaching their children at home since the learners can understand English more due to their exposure of the language on the internet. The advantages include familiarization of its own dialect while the disadvantages include lacks practicality. On the other hand, participants encountered challenges like unfamiliar words and various lengths of difficulties in understanding. Furthermore, the coping mechanism was to intensify home teaching using fitting strategy effect comprehension in math. It is concluded that teaching Sinugbuanong Bisaya as a medium of instruction in math subject greatly affects the learners. It is recommended that educational stakeholders, particularly curriculum developers and school administrators, consider a more flexible and context-sensitive approach in implementing the Mother Tongue-Based Multilingual Education (MTB-MLE) policy in mathematics instruction.*

Keywords— ***Early Childhood Education, Sinugbuanong Bisaya, Qualitative-Phenomenological Method, Cebu, Philippines***

I. INTRODUCTION

Language plays a fundamental role in education, serving as a medium through which knowledge is transmitted, social interactions occur, and learning is assessed (Swargiary, 2024). Both teachers and learners rely on spoken and written language to communicate, understand concepts, and engage in academic discussions. Shahaeian et al. (2018) stated that early exposure to language literacy significantly influences cognitive development and academic performance. Given its importance, the effective implementation of language policies in education is critical for enhancing learning

outcomes, particularly in mathematics, which requires precise comprehension and application of terminology.

Several countries, including Burkina Faso, Cameroon, China, Ethiopia, Guatemala, and South Africa, have explored mother-tongue-based bilingual education (MTB-BE) to address linguistic diversity and improve learning outcomes. However, implementing mother tongue as a medium of instruction presents challenges, particularly in multilingual settings. In South Africa, for example, teachers who are monolingual English speakers struggle to accommodate the linguistic diversity in their classrooms, often leading to difficulties in mathematics instruction (Robertson & Graven, 2020). Despite these challenges, educators have devised strategies to facilitate effective teaching and learning.

In the Philippines, the Mother Tongue-Based Multilingual Education (MTB-MLE) policy under the K–12 curriculum mandates the use of the mother tongue as both a medium of instruction and a learning area from Kindergarten to Grade 3 (Tenorio, 2024). This policy aims to enhance foundational learning by using the language most familiar to young learners. Notably, schools such as Ibabao-Estancia Elementary School, Marigondon Elementary School, and Mohon Elementary School have adopted Sinugbuanong Binisaya as the language of instruction for mathematics. However, despite being the learners' first language, challenges arise due to the complexity and unfamiliarity of specific mathematical terminologies in Sinugbuanong Binisaya. Teachers and students struggle with translating and comprehending these terms, affecting instruction and student performance. As a result, educators advocate for simplified terminologies in learning materials to improve understanding and retention.

This study aims to explore the experiences of teachers and parents regarding the use of Sinugbuanong Binisaya as a medium of instruction in Grade 2 mathematics. Specifically, it seeks to identify the challenges encountered, the strategies employed to facilitate learning, and the implications for teaching practices. By examining these aspects, the study contributes to the ongoing discourse on the effectiveness of MTB-MLE in mathematics education. It provides insights into optimizing instructional strategies to enhance student engagement and comprehension.

Furthermore, this study is grounded in Jean Piaget's Cognitive Learning Theory, Lev Vygotsky's Cognitive Development Theory, and Richard Anderson's Schema Theory. Piaget's theory posits that cognitive development occurs through reorganizing experiences, emphasizing the interaction between biological maturation and environmental influence (Piaget, 1936). Language, while fundamental to intellectual growth, serves as a tool for structuring thought and learning (Ellis, 2019; Felix, 2019).

Vygotsky's Cognitive Development Theory highlights the role of social interactions in cognitive development (Luong, 2022), suggesting that learning occurs within the Zone of Proximal Development (ZPD) (Margolis, 2020), where students benefit from guided support (Vygotsky, 1934). This perspective underscores the importance of culturally relevant instructional tools, such as the use of the mother tongue in education (Escarda et al., 2024; Moshaba, 2024).

On one hand, Anderson's Schema Theory emphasizes the role of prior knowledge in comprehension, asserting that new information is processed and understood in relation to existing cognitive structures (Meylani, 2024). In the context of MTB-MLE, this theory supports the notion that students learn mathematical concepts more effectively when instruction aligns with their linguistic and cognitive frameworks (Erath et al., 2021).

The study is also supported by legal frameworks such as the Kindergarten Education Act (Republic Act 10157) and the Enhanced Basic Education Act of 2013 (Republic Act 10533). These policies emphasize early childhood education's importance and language's role in facilitating foundational learning. With these theoretical and legal foundations, the study seeks to contribute to the broader understanding of MTB-MLE's impact on mathematics education and inform policy and practice for its effective implementation.

II. PURPOSE OF THE STUDY

This study explored the experiences of parents and teachers in using the mother tongue, Sinugbuanong Binisaya, as a medium of instruction in teaching mathematics to Grade 2 learners at the identified Elementary School in Cebu, Philippines, during the school year 2020-2021. The findings served as the basis for implications for practice. Specifically, the study sought to examine parents' experiences in assisting their children with mathematics using Sinugbuanong Binisaya, as well as the advantages and disadvantages identified by teachers in employing the mother tongue as the language of instruction. Moreover, it investigated the challenges faced by both parents and teachers in implementing mother tongue-based instruction during the new normal and the coping mechanisms they adopted to address these difficulties. Finally, the study aimed to draw relevant implications based on the findings to enhance the effectiveness of mother tongue instruction in early mathematics education.

III. RESEARCH METHODOLOGY

This section outlines the methodology employed to assess the impact of using Sinugbuanong Binisaya as a medium of instruction in mathematics on children's learning outcomes. It details the research design, describes participants, and specifies the instruments utilized for data collection.

3.1 Research Design

This research employed a qualitative-phenomenological research design. The researchers gathered the demographic profile of General Education teachers working at the identified Elementary School regarding their age, gender, civil status, number of years in teaching Math highest educational attainment, and relevant trainings attended. This also highlights personal opinions concerning mother tongue *Sinugbuanong Binisaya* as a medium of instruction in math, which involves investigating phenomena through people's experiences.

Thematic Analysis was used to collect Grade two parents' data in terms of their demographic profile, personal opinions concerning mother tongue *Sinugbuanong Binisaya* as a medium of instruction in math subject, problems and challenges in teaching math in the new normal. Moreover, teachers were interviewed online or one-on-one (face-to- face).

3.2 Research Participants

The research participants of this study are the 30 parents and 15 teachers were selected using convenience sampling. A total of 45 research participants participated in this study.

The researchers collected demographic data such as age, gender, civil status, number of years teaching Mathematics subject, highest educational attainment, and relevant trainings attended. The researchers also investigated concerning the use of mother tongue as a medium of instruction of those General Education teachers. The participants were interviewed about the challenges they encountered in handling Mathematics subject using Mother Tongue *Sinugbuanong Binisaya* and how they addressed those challenges.

3.3 Data Gathering Procedure

Upon verifying and validating the research instrument, the researchers sought written permission from the principals of the identified Elementary Schools, ensuring adherence to ethical standards and confidentiality in data handling. Once approval was granted, the researchers prepared and personally administered hard-copy survey questionnaires to guarantee clarity in instructions and the study's purpose. After completing the survey, participants responded to interview questions regarding the challenges teachers face in teaching Mathematics using Sinugbuanong Binisaya and their strategies for addressing these difficulties. The researchers assured participants of the confidentiality of their responses and subsequently transcribed all qualitative data for analysis**.**

Ethical Considerations. The researcher personally provided the participants with the informed consent form requesting to participate in the research with the research study. The participants were personally informed of the study's purpose and had ample time to think and talk to anyone they were comfortable with before deciding to participate. They had the freedom to ask questions to the researcher regarding the study's content if they could not understand it very well. The participants were also informed that their participation was purely voluntary. The researcher requested the participants to share their views regarding their difficulties and coping mechanisms in handling deaf children during the COVID-19 pandemic school year 2021-2022.

Data Privacy Act. This research adhered to the mandate of the National Privacy Commission in administering and enforcing the Data Protection Act of 2012, ensuring compliance with data protection laws and internationally recognized principles and standards concerning personal data. The researcher upheld individuals' fundamental right to privacy while promoting the free flow of information to support innovation, academic advancement, and national development. All personal data collected through government and private sector information systems was also secured and protected. The study-maintained dependability, ensuring that future findings would be consistent and replicable. Standard tools and procedures were utilized in conducting, analyzing, and presenting the research, with all procedural details documented for future reference, benchmarking, and validation. The accuracy of the findings was affirmed through thorough examination and verification of all collected data, ensuring that interpretations and conclusions were well-supported. A comprehensive description of the confirmability processes was provided to uphold the quality and standard-based rigor of the study.

Trustworthiness of Research. The trustworthiness of a qualitative study can be increased by maintaining high credibility and objectivity. A research definition of trustworthiness might demonstrate that the evidence for the results reported is sound and that the argument made based on the results is vital. The researchers invited the participants to participate in this study about their difficulties and coping mechanisms in handling their children with hearing impairments amidst the COVID-19

pandemic. To gain insights from people who will enrich and illuminate our understanding of actions, concepts, events, and practices.

Data Analysis. Thematic Analysis was utilized in the transcription of qualitative data as to the demographic profiling of the participants' opinion concerning the use of mother tongue *Sinugbuanong Binisaya* as a medium of instruction in teaching math, problems and challenges encountered by the participants in teaching math in grade two learners.

IV. RESULTS AND DISCUSSIONS

This section analyzes and interprets data pertaining to the experiences of parents and teachers in the use of mother tongue as a medium of instruction in mathematics for the Grade 2 learners in the identified Elementary Schools during the school year 2020-2021.

4.1 Experiences of Parent Participants in the Use of Sinugbuanong Binisaya to Help Their Children in Mathematics

The first question asked to the research participants pertains to their experiences as parents in the use of *Sinugbuanong Binisaya* to help their child in mathematics.

1. *Comfort of Using Sinugbuanong Binisaya in Teaching*. There were parents who expressed comfort in teaching their children at home using *Sinugbuanong Bisaya* dialect.

Informant 1 explained that she can tutor her child at home using the mother tongue as the medium of instruction curriculum simply said that:

"I can teach well and we can understand each other" (Informant 1).

In addition, informant 2 shared that her child can understand her during tutor sessions at home when she speaks the local dialect and opined that:

"Can understand because it's *Bisaya*." (Informant 2).

Informant 7 further expressed optimism about communicating her child while tutoring mathematics at home. She opined the following utterance:

"It's okay the instruction can be understood." (Informant 7).

Based on the narratives of the research participants, the parents who were obliged to tutor their children at home, including in mathematics, found ease in using Sinugbuanong Binisaya as the means of instruction since that is their everyday spoken language. It can be inferred that they were more comfortable with using the local dialect rather than English while teaching their children as a supplement to school learning.

The number of people learning a language other than their native tongue is rising quickly. Children must retain their first language when they start learning a foreign language since research shows that having a strong foundation in their mother tongue leads to a far better knowledge of the curriculum and a more positive attitude toward school (Tomblin, 2019).(Tomblin, 2019)

Furthermore, the DepEd has said that "the use of the learner's mother tongue or the language used at home is the most effective medium of learning," citing regional and global studies (Morales-Obod et al., 2020).(Morales-obod et al., 2020)

2. *The Hard Road of Teaching Using Sinugbuanong Binisaya*. Parents often complain that they find it more difficult to teach their children at home using Sinugbuanong Binisaya.

On the other hand, Informant 3 revealed her challenging experience teaching her child at home while speaking the Visayan language. She expressed that:

"There are difficult, there are easy, but they were more difficult Bisaya" (Informant 3).

Informant 4 also expressed hardships in using the *Sinugbuanong Binisaya* while tutoring her child at their house. She said that:

"Sometimes I experienced difficulty" (Informant 4).

Due to the comfort of the young learners with English as the medium of instruction, there are instances wherein they will no longer understand the local dialect during the learning session. Informant 5 expressed that:

"Most children cannot understand all Visayan terms" (Informant 5).

Teaching mathematics using the *Sinugbuanong Binisaya* caused great challenge for Informant 6 while teaching their child at home. She uttered the foregoing statement:

"Math in Visaya would be complicated for my son." (Informant 6).

The research participants indeed expressed their hardships in using Sinugbuanong Binisaya while having tutor sessions with their children at home. Explaining the numbers and the mechanism in mathematics to their children was hard for them since they were not so familiar with the local terms. Hence, using the mother tongue, like Sinugbuanong Binisaya, was hard for the parents, especially in mathematics, which is already a complex subject.

The way students learn in a multilingual environment is impacted by using their mother tongue in instruction (Trujillo, 2020). Aside from establishing a "universal kindergarten" and adding Grades 11 and 12 (senior high school) to basic education, the newly enacted Enhanced Basic Education Act of 2013, or the K to 12 Act, mandates the use of mother tongue-based multilingual education. The program, embracing the global 12-year education cycle, was rolled out in Grades 1 and 7 in public schools nationwide. Based DepEd order, the mother tongue (MT), or vernacular in the region, should be taught as a subject from Grades 1 to 3 and used as a medium of instruction from kindergarten to the first three years of grade school. In Grade 1, subjects in the native language include Math, Araling Panlipunan (AP), Music, Arts, Physical Education and Health (Mapeh) and Edukasyon sa Pagpapakatao (Values Education). A new kid in school would not have any problem if any of the two languages is what he uses at home (Morales-Obod et al., 2020).

The second question pertains to the research participants' experiences in helping their children in mathematics, especially regarding the advantages and disadvantages of using their mother tongue as a medium of instruction.

1. *Deeper Understanding in Math Using Mother Tongue, Yet Unfamiliar Local Terms are Hard to Fathom*. The parents revealed that it is advantageous for their children to be tutored at home using their mother tongue because they can understand the lesson well.

According to informant 1, the child can easily understand the lesson or topic when the language used is Cebuano. She said that:

"The advantage is he can understand the Visaya and able to answer" (Informant 1).

Also, informant 2 expressed that using the mother tongue benefits the child because he or she can easily understand the subject matter. It was shared that:

"Advantageous because the child can understand." (Informant 2).

Informant 3 shared that her involvement and exposure in teaching the mathematics subject is fitting. She said that:

"My experience in teaching math is appropriate." (Informant 3).

Informant 5 also discoursed that the learner can still comprehend the lesson using the *Sinugbuanong Binisaya* and directly opined that:

"*I* can still understand math." (Informant 5).

In addition, informant 7 explained that using the local dialect enabled the child to grasp the lesson immediately and be able to perform the assignments at home simply said that:

"So, it would not be hard to let them understand and enable to answer." (Informant 7).

Sinugbuanong Binisaya is the native dialect of the people in Cebu. So, the children speak this one on the daily basis at home and in the community where they live or reside. This is also a manifestation that they have deeper understanding and comprehension of this language. So, when the mother tongue was introduced as the medium of instruction for Grade 1 to 3, the children find ease in learning their subjects using this language. Hence, the parents are also more comfortable in using this while having tutor session with their children at home including the mathematics subject.

The word "mother tongue" refers to a person's first language learned at home. Furthermore, it is the language that the child has used for significant life-changing events since infancy. For instance, a child may grow up speaking a certain language at home with their parents, siblings, or other family members until they reach school age. Because they are living abroad, they may then start to pick up the language used in social situations, like play dates and the classroom (Tomblin, 2019).

2. *Getting Used to English Hinders Lesson Understanding using the Mother Tongue.* On the other hand, some parents experienced difficulty using the native dialect in teaching their children since they were already more comfortable with English as the medium of instruction.

Informant 4 expressed a problem with shifting to the mother tongue from English in teaching one's child. She shared that:

"I am used to using English in teaching." (Informant 4).

Even using the mother tongue, the child still cannot understand the lesson. This implies more problems with the child's learning ability, yet it still connects with the language used in teaching. Informant 6 expressed this problem by saying that:

"Even in *Visaya*, still the child does not know." (Informant 6).

Since English has been used as the medium of instruction, the parents are used to teaching their children at home using this language. So, when there was a shift to the use of mother language in Grade 1 to Grade 3. The parents find adjusting hard since they are not used to it. Many parents and communities in nations where English is not the

primary language think that by putting their kids "straight for English" and ignoring their native language, they will give them an advantage in school. Firstly, education does not start in the classroom. In the language of the learner, instruction begins at home. While the learning continues when school starts, there are also significant changes in how education is delivered (Nishanthi, 2020).

The third question as to the research participants relates to the difficult *Binisaya* words that they encountered.

1. *Unfamiliar Terms in Sinugbuanong Binisaya Complicate Home Teaching in Math*. The parents revealed that unfathomable terminologies in the Visayan language cause them confusion when teaching their children at home.

Informant 1 expressed difficulty in teaching her child, especially the mathematics subject at home, like the division, and said that:

*"*In division, it is complicated and the child cannot understand." (Informant 1).

Informant 2 shared that there are terminologies in the local dialect that she cannot comprehend. She opined that:

*"*There are Visayan terms that are hard to comprehend."

(Informant 2).

Informant 4 expressed that verbalizing the number using the *Sinugbuanong Binisaya* is really complex. She simply said that:

*"*One, two and ten and others." (Informant 4).

For informant 5, communicating with the usage of deep Cebuano words are hard for her to do and said that:

*"*Using the deep native word." (Informant 5).

It is very common in the Visayas region that people used code switching or mixture of the native dialect and English since the Americans liberalize education in the Philippines for several decades. This means that the people who had been educated in schools were product of English as the medium of instruction. Hence, they would naturally experience complexity in teaching their own children using the *Sinugbuanong Binisaya*.

The parents speak different languages. In the first scenario, it's possible that both the father and the mother would like to speak to their kids in their native tongue. The bilingual home environment is as follows. In the second scenario, even while their kids must be able to function in the world outside the front door, the parents might still wish to be able to speak to them in their native tongue at home. This is the current state of the bilingual setting (Linguistic Society of America, 2021).

2. *Native Language in Teaching Math Can be Carried Out*. The research participants shared that using the local dialect in teaching their children at home can be done with ease since they are familiar with the words since they speak these at home as well.

Informant 3 expressed that she did not encounter hardship with math and shared the foregoing statement:

*"*I did not experience more difficulty in math."

(Informant 3).

In the current generation of parents who had been exposed to English while learning in school, they rarely came across or spoke the native Cebuano dialect. However, they still find the language as easy to be used in teaching their children at home including the mathematics subject. This relates to the fact that they are familiar and comfortable with the language at home. Students can develop foundational literacy and communication skills in a language they are familiar with, which allows them to participate more fully in the classroom and gain confidence amongst their peers at a critical stage in their development. Parents can also be more fully engaged and supportive of their children's learning in a familiar language. Although there is overwhelming evidence that children learn best in and through a language they understand well.

For a child, the notion of mother tongue extends beyond language to include the child's social, cultural, and personal identity. Various cultures have various meanings for the same words and expressions. Convincing local communities to embrace the new schooling system and gaining government support are also major hurdles to establishing the school.

Research is done on the significance of mother language since children who acquire it also learn many other vital abilities, like literacy and critical thinking. These are the abilities that people carry over into formal schooling, and studies indicate that knowledge and abilities acquired in learner's native language do not need to be repeated when they switch to a second language (Tomblin, 2019). By the time children begin school, they have begun gaining confidence in their ability to communicate meaningfully in their mother tongue. They have built a foundation of knowledge and experience through observing and interacting with peers and adults in their community. The language, knowledge and experience that children bring to schools form an important foundation for their learning in the classroom.

COMMON THEMES EMANATING FROM THE PERCEPTION OF KEY PARTICIPANTS

This section presents the common themes developed out of the narrations of the research participants relating to the experiences of parents and teachers in the use

of mother tongue as a medium of instruction in mathematics for the Grade 2 learners

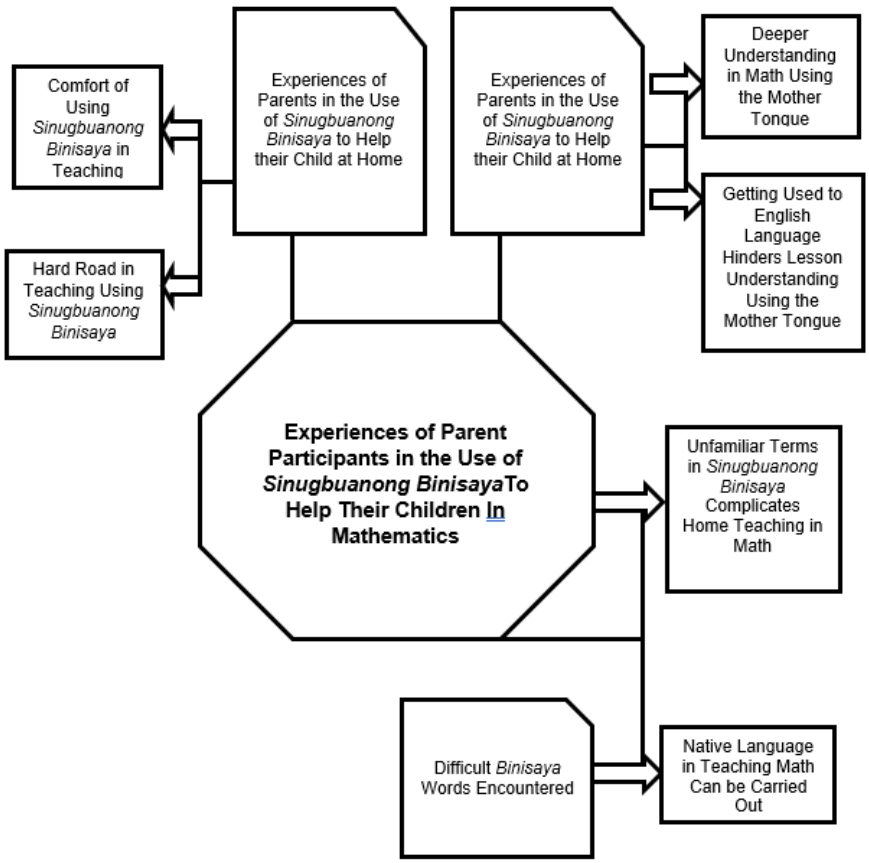

Figure 1.: Experiences of Parent Participants in the Use of Sinugbuanong Binisaya to Help Their Children in Mathematics

4.2 Advantages and Disadvantages of Using Mother Tongue as a Medium Of Instruction in Teaching Mathematics

The second question pertains to the research participants' experiences in helping their children in mathematics, especially in terms of the advantages and disadvantages of using their mother tongue as a medium of instruction.

1. *Deeper Understanding in Math Using Mother Tongue*. The research participants shared that using the native Cebuano dialect to teach their children math leads to better comprehension. These findings connect and support the results of the many previous studies, which reveal that teaching in the mother tongue is better for the children.

2. Getting Used with English Hinders Lesson Understanding using the Mother Tongue. In another context of the issue being investigated, parents expressed that they are more comfortable using English in teaching their children, as they have already experienced complexity in using the native dialect in teaching their children, since they are already more comfortable with English as the medium of instruction.

The third question as to the research participants relates to the difficult *Binisaya* words that they encountered.

1. *Unfamiliar Terms in Sinugbuanong Binisaya Complicates Home Teaching in Math*. The parents shared that they cannot grasp some uncommon terminologies in *Sinugbuanong Binisaya*, which hampered their ability to explain the topics in mathematics. There were also minimal reference materials that would help them understand those words, which makes home tutoring very challenging.

2. Native Language in Teaching Math Can be Carried Out. Well, there also research participants who expressed that teaching math to their children at home is manageable and within their existing capabilities. This means that they are more at ease with the native language in supplementary learning activity at home.

4.3 Challenges Encountered by Both Participants in the Use of Mother Tongue in the **New Normal**

The second part of this investigation pertains to the parents' knowledge and perceptions towards the MTB MLE.

The first question that was asked to research participants was about their understanding of MTB MLE.

1. *Enabled Profound Understanding of the Local Dialect Yet There are Unfamiliar Terms*. Using the *Sinugbuanong Binisaya* in the K to 12 Enhanced Basic Education Curriculum led the parents, who served as home tutors of the learners, to learn the true meanings of common words used in communicating with other people in the community. Although there are uncommon terms that they find hard to grasp.

According to informant 1, using the mother tongue enabled them to understand the native-based education method that applies different languages in the higher grade. The foregoing statement goes that:

"We were able to understand everything about MTB MLE." (Informant1).

Informant 2 expressed that she can understand the local dialect, yet there are terms that were hard to fathom. It was shared that:

"There are times that we can understand Visaya, sometimes it's difficult." (Informant 2).

"Its okey but there are difficult times." (Informant 4).

For informant 5, using the MTB MLE enabled the learner to appreciate and learn more of their local language. It was said that:

"Enabled the children to learn their own language." (Informant 5).

Based on the observation of informant 6, as time passed by, the child will be able to learn with the parent's guidance. She said that:

"Was able to learn, and later on I can guide." (Informant 6).

Informant 8 shared that she will teach those terms within her comprehension and asked her daughter to teach her younger sibling those lessons that were hard to teach. It was said that:

"Those that I can understand, if I cannot understand my eldest, Mary Grace will teach." (Informant 8).

The research participants divulged that the MTB MLE implemented in the Grade 1, Grade 2, and Grade levels in the school supervised directly by the Department of Education enabled the parents to learn various local terms that they usually use without knowing the true meaning. However, there were cases wherein they encountered some uncommon or unfamiliar terminologies in the *Sinugbuanong Binisaya* that they could not grasp easily.

In order to support the goal of "Every Child-A-Reader and A-Writer" by Grade 1, one of the changes made to the Basic Education Curriculum by the new K-12 program is the introduction of MTB-MLE in Kindergarten, Grades 1, 2, and 3. MTB-MLE stands for "first-language-first" education, which starts in the mother tongue and transitions to additional languages, particularly Filipino and English. It is intended to alleviate the high level of functional illiteracy among Filipinos, where language is a significant barrier. Children are encouraged to actively participate in the learning process because they comprehend the covered topics and the expectations placed on them. They can quickly construct and describe their environment, express their ideas, and incorporate new ideas into what they already know using their mother tongue (Capitol University, 2021).

The next question pertains to the feelings of the research participants about using their mother tongue as a medium of instruction in teaching mathematics.

1. *Use of Mother Tongue: Afforded Ease in Home Teaching*. Some parents opined that using their native tongue enabled them to teach their children properly at home, especially the math subject.

According to Informant 1, using the local dialect, she will be able to explain the lesson to her child swiftly, and understanding will also be nippy. She shared saying that:

"I can quickly explain, then we can easily understand each other, and the (child) will be able to embed in her mind." (Informant 1).

Informant 7 revealed that using the mother tongue affords happiness in teaching math properly to the learner. She said that:

"I'm happy so that my child can quickly learn." (Informant 7).

Based on the experience of informant 9, she learned more about the local dialect. She shared positive feelings by saying that:

"I'm happy because *Sinugbuanong Binisaya* is better because I learned a lot." (Informant 9).

Research participants who are competent in mathematics find it easy to teach the subject to their children at home. They can explain the various lessons or subject matter to their children in the local language.

Children who acquire proficiency in two or even three languages grow up with a stronger comprehension of sentence structure and expression, which enhances language use in general. In contrast, those kids with a single language have a definite idea about expressing their needs

and wants. Furthermore, children who spoke only one mother tongue were not as competent in the language as children who spoke two or more mother tongues, since they must consider how to phrase and apply the language of choice at that particular moment. Children who speak various languages can think more critically (Rommel & Tonelli, 2017).

2. *Use of Mother Tongue in Teaching Number: Both Easy and Difficult.* The research participants' experiences suggest they experience comfort and complexity in using their mother tongue while teaching numbers, figures, equations, and more.

Informant 2 opined that she can understand the local spoken dialect. However, there is a topic that experienced hardships. She shared this teaching struggle by saying that:

"It's okay, but sometimes I cannot understand." (Informant 2).

Ease and difficulty are present in teaching mathematics in the mother tongue. Informant 3 shared this experience by saying that:

"My feeling is there are those that I find it difficult, there are also easy." (Informant 3).

However, informant 4 emphasized her confusion in using the local spoken dialect in teaching math. She shared this issue by saying that:

"I sometimes feel confused." (Informant 4).

Likewise, informant 6 further shared that speaking the local dialect in teaching mathematics is very difficult. She shared this difficulty by saying that:

"It is tough to teach the children, math is the most difficult." (Informant 6).

A group of research participants experienced both the ease and hardships of using the local dialect while teaching various mathematics lessons with numbers that needed to be translated to the Sinugbuanong Binisaya. Although people commonly speak this dialect in the household and the community, other terminologies were hard to comprehend for some, leading to confusion and difficulty in effectively learning children at home.

In the language of the learner, learning begins at home. While this learning continues when school starts, there are significant changes in how education is delivered. When a child was learning by experience, the school system organized and managed the curriculum and how it was delivered. Children are placed in a new physical environment when they start school. Most of the students in the new classroom are strangers, and the instructor, who is the center of authority, is also unfamiliar. The method of structured learning is also new. The matter can become rather complex if, on top of these, there is an unexpected change in the language used in the contact. It can hinder a child's development. Schools can assist students in adjusting to their new surroundings and bridging the gap between what they learn in the classroom and what they experience at home; nevertheless, by utilizing the learners' native tongue (García et al., 2017).

Then the research participants were asked about their understanding of barriers to learning.

1. *Time off Learning Barriers*. Some research participants did not encounter obstacles in learning based on their experience as home tutors, including math.

Informant 1 shared that she did not face a problem in learning and said that:

"Nothing, I understand everything." (Informant 1).

Informant 3 further opined that she was able to understand everything about math. She shared this experience by saying that:

"I understand and no barriers." (Informant 3).

Further Informant 5 opined that she was able to learn more about the local spoken dialect. She shared this by saying that:

"The children nowadays have so many things to do." (Informant 5).

Informant 7 opined that she was able to learn more about the local spoken dialect. She shared this by saying that:

"There is no reason that the child cannot understand." (Informant 7).

The research participants did not reveal any barriers to learning despite using their mother tongue as the medium of teaching in grades 1 to 3. However, they consider it advantageous because they can quickly explain the math lesson to their children at home.

Mathematics is an important subject in human existence and holds a prominent role in science and technology. Because of its greater importance, students are required to learn mathematics from childhood. Lack of mathematical knowledge cannot make a student progress in life since it is required in everyday life. However, not every student performs equally well in mathematics because of its conceptualization (Ankita & Richa, 2017).

2. *Presence of Learning Obstacles*. On the other hand, both internal and external antecedents caused hindrances in learning.

Informant 6 opined that there were terminologies in the local dialect that were hard to grasp. She shared this by saying that:

"Sometimes there were words that were hard to understand, it is hard for my child." (Informant 6).

On the part of informant 9, the obstacles to learning took place when the child failed to study. She shared this problem and uttered:

"The hindrance of learning now is the study habit of the child." (Informant 9).

Informant 10 further shared that there would always be obstructions that learners would experience to learn. She shared this idea and said that:

"There are struggles along the way before you achieve your goal." (Informant 10).

Their parents shared that there are other factors that prevent the children from learning, especially mathematics, despite the parents' supplementary teaching at home. One of these is the lack of study habits, difficulty understanding other Cebuano words, and many others, which are common in the journey of learning.

Students face various types of problems while learning mathematics. The present paper focuses on the various types of problems faced by students. These problems are broadly classified into student-related, school-related, and family-related factors. These problems became barriers to learning mathematics. Therefore, these barriers should be reduced so that the roots of teaching and learning mathematics should be firmly kept since a lower age (Schoenfeld, 2022).

The research participants were asked to identify the barriers to learning that they encountered in the classroom and within their school in teaching mathematics using their mother tongue.

1. *Unacquainted Sinugbuanong Binisaya Stiff to Figure Out*. One of the problems faced by the parents while teaching mathematics to their children at home is that they encounter unfamiliar words in Cebuano that were hard to understand. So, they would find it hard to teach this subject to their children at home.

Informant divulged that she encounters hard-to-understand *Sinubuanong Binisaya* terms in the learning material while coaching math at home and shared the foregoing statement:

"Hard to understand Visayan term used in the book."

(Informant 1).

Informant 2 also expressed a problem in comprehending with the terms Cebuano dialect, which were complicated to understand: She shared this hardship by saying this statement:

"There were terms that even us, cannot understand."

(Informant 2).

Informant 6 also opined that the terminologies in the Cebuano dialect were difficult to figure out. She expressed this by saying:

"There are lots of words and terminologies in the module that were hard to understand." (Informant 6).

At the era of technology and the presence of Internet, the languages heard by the people are already mixed and lead towards the loss of local language identity. Informant 8 expressed that:

"The child nowadays cannot commonly understand pure Visayan terms." (Informant 8).

The research participants identified that the main obstacle in enabling learning in the lessons in mathematics to their children at home relates to the words and terminologies in *Sinubuanong Binisaya* that were difficult to figure out. So, if they cannot understand those terms, they would also find it hard to explain the contents in the module to their children at home.

Current studies show the growing movement of the Mother Tongue (MT) instruction in the elementary years of a child 's education worldwide. This is apparent in the rising number of efforts in the educational programs in the Philippines that utilize this approach. Nonetheless, the Philippines is the only country in Asia to have instituted a national policy calling for the mother tongue-based multilingual education (MTB-MLE) in the elementary years. While studies have long supported the use of mother tongue as the language of instruction (MOI), they have been primarily conducted in selected schools rather than being employed all over the country, down to the local community settings. As such, little is known about how a national policy for the MTB-MLE can be contextualized in the local situation. Teachers, parents, and pupils were supportive of the program. However, they were skeptical due to the growing challenges brought by the lack of MT learning materials and books, which they considered MTB- MLE's most significant challenge (Pillos et al., 2020).

2. *Dearth of Personal Capacity and Assistance in Teaching Math Using MTB*. Some parents revealed their shortcomings in understanding some mathematics lessons that have to be taught in the local language.

Further, regarding lessons in math and teaching them to the learner, she shared the following statement. Informant 4 shared that the lack of higher educational attainment is a hindrance in understanding the:

"It is tough, especially since we did not finish school."

(Informant 4).

Informant 5 also expressed the complexity of comprehending and teaching math without someone to help and assist. She shared the foregoing statement:

"It is hard, especially since nobody can help my child to learn." (Informant 5).

Aside from the difficult-to-fathom local terms, the parents noted that their deficiency in higher learning caused

obstacles in their understanding of the lesson contained in the supplementary learning materials. They also did not have somebody at home to help them understand such lessons.

The MTB-MLE reform in the Philippines contains ambiguity and conflict. In terms of ambiguity, the DepEd orders specified what should be done but offered little support on how it should be done. For example, the orders called for instruction in the mother tongue, yet government-provided resources are only available in the twelve primary regional languages ("Binisaya" is one) in kindergarten and for Grades 1- 3 nationwide. Given the lack of preparation and suitable MT learning materials and books, it is unclear how to implement the policy to align with the desired mother tongue approach (Piper & Zuilkowski, 2016). Mathematics is foundational in many ways that inform our decisions in various areas of our lives. Teaching and learning mathematics is at the heart of education. Learning mathematics aims to link school to everyday life, provide skill acquisition, prepare students for the workforce, and foster mathematical thinking. Mathematics involves learning to problem-solve, investigate, represent, and communicate mathematical concepts and ideas, and making connections to everyday life (Sinay & Nahornick, 2016).

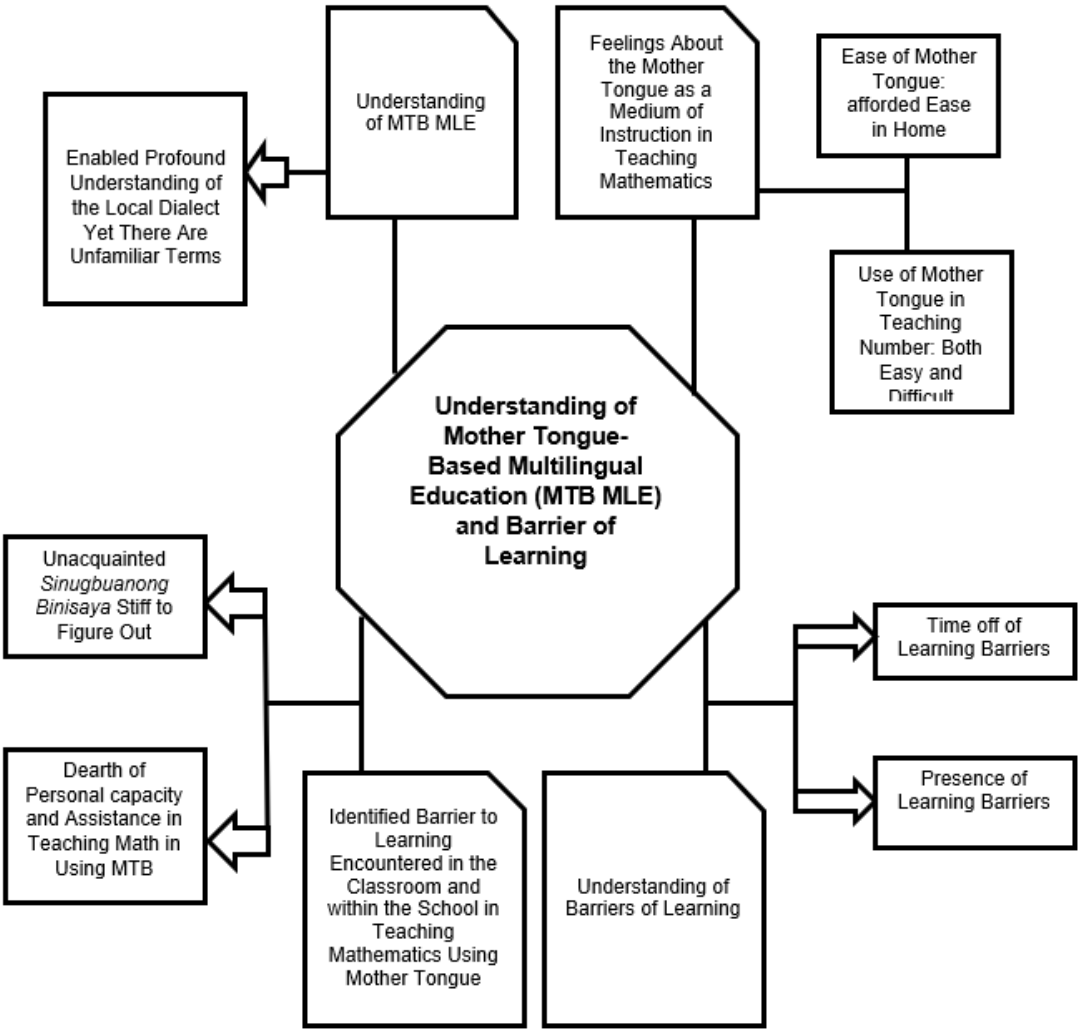

Fig.2: Understanding of Mother Tongue-Based Multilingual Education (MTB MLE) and Barrier of Learning

4.4 Experiences of Teacher Participants in Using Mother Tongue as a Medium of Instruction in Teaching Mathematics

This part of the study shows the data on the teachers' experiences in using the mother tongue as the medium of instruction in teaching mathematics. The data are based on the narrations of the research participants during the interview.

This section presents the data relating to the profile of the teachers in terms of years of service.

Table 1: Research Participants' Years of Service

Respondent No.	Years of Service
1	3
2	Less than 2 years
3	13
4	11
5	12
6	7
7	7
8	3
9	19
10	19
11	3 years and 10 months
12	3 years
13	3 years
14	4 years
15	3 years

Among the research participants, informants 9 and 10 had the longest years of service in teaching. This data indicates that the teacher had spent almost two (2) decades of teaching mathematics in the elementary level, wherein in-depth knowledge on determining the most appropriate teaching approach that would enable the learners to understand the subject matter or topic had been developed.

On the other hand, informant 2 had only served as teacher for less than 2 years in the public school. It can be inferred that she is still in the adjustment period in aforementioned profession and still the stage of developing appropriate strategy that would work with the learners well.

It is true that some instructors are naturally adept at classroom management. But training and years of experience in the field are necessary to acquire classroom management skills. It is not a gift given to some teachers (Agbaria, 2021).

The second question asked to the research participants pertaining to their perspectives in the use of *Sinugbuanong Binisaya* as a medium of instruction in math subject.

1. *Speaking the Native Dialect Benefits the Learners*. According to the teachers, learning while using the native language is beneficial to the children because they are very familiar with the terms and even pronunciation.

According to informant 1, enabling the children to study the mathematics subject in school is better for the children since they are conversant with it. She expressed that:

> "It is good for pupils that are used in speaking *Bisaya"* (Informant 1).

The advantage brought by using the native language is not one side because might experience problems with it. She shared this thought by saying that:

> *"*Good for some pupils but disadvantage to some*"* (Informant 2).

Moreover, informant 4 expressed that she did not encounter hardship with teaching math using the mother tongue and shared the foregoing statement:

> "It will benefit pupils to be aware of their mother tongue.*"* (Informant 4).

The children's familiarity with their own spoken language connects to their ease in learning mathematics using it. The children will understand the subject matter or lesson better when it is taught by the teachers using their mother tongue in school. This is why this mandate is included in the K to 12 Enhanced Basic Education Program of the Department of Education.

Based on a DepEd Order, the mother tongue (MT), or vernacular in the region, should be taught as a subject from Grades 1 to 3 and used as a medium of instruction from

kindergarten to the first three years of grade school. The Inquirer's interviews with teachers and parents showed that children were enthusiastic about embracing the use of Filipino, at least in Metro Manila (Ganuza & Hedman, 2019).

2. *Translating the Numbers in Math to the Cebuano Dialect is Complex*. The research participants opined that teaching numbers while using the *Sinugbuanong Binisaya* is multifarious for them due to some unaccustomed words to both the teachers and learners in schools

Translating the number using the *Sinugbuanong Binisaya* was hard for the teachers who are not used to it. Informant 3 expressed this problem by stating the following statement:

"Using *Bisaya* in Math is kind of difficult especially translating number to *Bisaya"* (Informant 3).

On the other hand, there are instances wherein the teachers cannot easily translate the number words to the native Cebuano dialect since they are also unfamiliar with the different terminologies. Hence, preparing the lesson entails more time and research, which actually adds to the teachers ' burden.

The teachers employed strategies like translating the target language to the mother tongue, using multilingual teaching, leveraging lingua franca, improvising instructional materials in the mother tongue, providing remediation, and incorporating literary works in the mother tongue for motivation. However, challenges they faced included a shortage of books in the mother tongue, limited vocabulary, and insufficient teacher training (Songbatumis, 2017).

The third question asked of the research participants pertains to some alternative math activities applied during classes.

1. *Simplified and Interactive Instructional Materials*. The teachers used instructional materials that were easily understood by the students and enabled the learners to take a proactive role and participate in the learning activities.

In the advent of technology, the students were more attentive if the teachers' instructional materials were in the audio-visual form. Informant 1 shared that she used the foregoing and said that:

"I let them watch educational videos like addition, subtraction and etc*."* (Informant 1).

To train the learner about teamwork, the instructor 3 as a teacher undertakes that entails participation in a group to achieve a certain goal of winning the game collectively. It was uttered that:

"Group activities using popsicle sticks" (Informant 3).

On the part of informant 4, as a grade two teachers, the activities undertaken in the class entails partnership between learners. It was further shared that:

"Think, pair, share, and learn through peers learn by doing". (Informant 4).

To be updated with the trends in the pedagogical world, the teachers used high-technology teaching and learning materials to catch and retain the learners' attention towards specific subject topics in mathematics. So, interactive activities were done in both the online synchronous and asynchronous class sessions so that the pupils in the grade would be more participative in the activities. Also, they will learn how to coordinate and cooperate with others to achieve specific goals and win educational games. Hence, videos and other interactive class activities have significantly fostered learning.

Students gain knowledge by actively participating, gathering information, solving problems, and articulating their discoveries. Each class activity allows students to enhance their understanding by applying concepts and expressing new insights, while also giving instructors feedback on the students' learning progress. (Brown University, 2021).

The fourth question asked of the research participants pertained to their strategies in dealing with difficult *Binisaya* words.

1. *Seek Understanding on the True Meaning of Unknown Terms*. The teachers would research the profound meaning of the local terms they encounter in teaching.

Informant 1 shared that she refers to the dictionary in comprehending the meaning of some local Cebuano terms and said that:

"I look up the meaning in the dictionary and explain to them" (Informant 1).

Using audio-visual tools, Informant 2 studied more about the mother tongue and shared the foregoing statement:

"Study more *Binisaya* words. Teach the pupils in a video presentation and send it to them" (Informant 2).

Interpreting the true meaning of the local terms was done effectively using materials that can be viewed and watched. Informant 3 opined that:

"Using visual materials to interpret the correct meaning" (Informant 3).

In addition, informant 4 used cognitive-based class activities. She shared this statement by saying that:

"Consistent in drill and spelling bee". (Informant 4).

One of the effective ways to gain an in-depth understanding of unfamiliar terminologies in *Sinugbuanong Binisaya* is to find ways to know their meaning before using them, such as looking at the dictionary or watching video presentations. Moreover, the teachers employed various audio-visual instructional materials that enabled the learners to have a visual grasp of the different meanings of the words in their mother tongue. Others used interactive group and collaborative learning activities so that through participation and group cooperation, the pupils in grade will learn the math lessons, which are usually cognitive-based.

"Binisaya" was used by the three teachers in the class to give instructions and to explain the meaning of words, complex ideas, and complex grammar points. The teacher uses "Binisaya" only when she explains abstract or culturally-specific words. All three teachers first attempted to explain the words, grammar points, and meanings of complex ideas in English, but resorted to "Binisaya" when they thought the students could not understand their explanations (Pillos et al., 2020).

The second part of the teachers' experience in using Sinugbuanong Binisaya as the language of instruction concerns their understanding of the MTB MLE.

The first question was about their understanding of the MTB MLE.

1. *MTB MLE Used the Native Language as the Medium of Instruction*. The research participants explained that MTB MLE is about the usage of the local dialect or the standard dialect spoken by the people in the locality or community to teach the children lessons in schools.

Informant 1 elucidated that MTB is about using the local dialect in teaching the subjects in the basic education curriculum to the pupils. She shared the foregoing statement:

"Teaching the subjects using mother tongue-based or native languages". (Informant 1).

Moreover, informant 2 also explicates that MTB MLE applied the *Sinugbuanong Binisaya* to educate children at the basic education level. It was shared that:

"A subject using the *Binisaya*". (Informant 2).

In addition, simply discoursed that this teaching approach used the Cebuano language in teaching the pupils in grade two and uttered that:

"*Sinugbuanong pinulungan".* (Informant 3).

For informant 4, MTB MLE is about utilizing the commonly spoken dialect or language by the people in the community. She directly clarified that:

"Using the terms commonly used in the community" (Informant 4).

The grade two teachers explained that MTB MLE pertains to using the local dialect in teaching the various subjects to the learners in grades 1 to 3. This means that the intended competencies of the learners will be achieved well when the subject matter or lesson is explained using the first language. This means that the learners will have better performance in the mathematics subject when the teaching starts in the language that they first hear and learn.

Mother Tongue is a language that a person: 1) has learned first; 2) ascertains with or is recognized as a native speaker of by others; 3) recognizes best; and 4) practices most. MTB-MLE program is more than just using MT as the language of instruction when elucidating the curriculum but also conducting research and evidence-based policies, adequate teaching and learning materials, and thorough teachers' training which are now continuously conducted by the DepEd (Castaño, 2021).

The next question was about the research participants' feelings towards using their mother tongue as a medium of instruction in teaching mathematics.

1. *Using Mother Tongue Enabled Learners to Understand Better*. The teachers observed that using the local dialect enabled a pupil in grade 2 to understand the lessons better than if they were taught in another language.

Moreover, informant 1 shared that the pupils could comprehend the math lessons better when they were taught using the native dialect. She uttered that:

"It is easy for them to understand the lessons". (Informant 1).

Informant 2 also observed that the learners could answer the performance tasks, quizzes, and other assessment activities when they are explained using the mother tongue. She shared the foregoing statement:

"Fine because pupils can easily communicate or answer immediately, but pupils or children nowadays become bad at it" (Informant 2).

The grade two teachers who served as research participants in this investigation felt that using the mother tongue to educate the learners at the beginning of the basic education ladder is beneficial since the pupils could learn the lessons in mathematics better. This was possible because the learners acquired their mother tongue as their first language. Thereby, they can understand the words. Also, this was the language the children first heard and kept on hearing from other people in the environment.

Republic Act No. 10533, also known as the Enhanced Basic Education Act, mandates that DepEd follow the principles and framework of MTB-MLE in curriculum development. Kindergarten and Grades 1 to 3 students must receive instruction, teaching materials, and assessments in their regional or native language (DepEd, 2020).

Then the research participants were asked on their understanding of "barriers to learning".

1. *Barriers to Learning is About Obstacles to Attainment of the Intended Learning Competencies*. In every teaching and learning methodology, there is always an obstacle that hindered the children to gain deeper grasp of the lessons in each subject.

Informant explained that barriers to learning are about those aspects that block the learning of new knowledge to take place. She said that:

"A hindrance to learn something new".

(Informant 1).

Informant 2 also elucidates that the abovementioned topic expressed obstacles to comprehending the lesson. It was shared that:

"The hindrance of learning" (Informant 2).

Informant 3 explained that the barrier to learning is the incomplete use of the Cebuano dialect in learning. She opined that:

"It is not comprehensive *Sinugbuanon"* (Informant 3).

The research participants discussed that the topic, barriers of learning, pertained to the various obstructions that the learners encountered that hindered them from acquiring the intended learning outcomes as specified in the K to 12 Enhanced Basic Education curriculum. These pertain to the child's personal obstacles to acquiring new knowledge and the loopholes in the educational system that led to the failure to maximize the aims of education. Many people find that common barriers are impeding their ability to access learning. These include social and cultural, practical, personal, emotional, and workplace barriers. Learning disabilities affect how people understand information, communicate, or learn new skills, and include difficulty reading, difficulty writing, and difficulty with mathematics. The extent of a learning disability differs from person to person (Union Learn Organization, 2021).

Then, they were also asked to identify the barriers to learning that they encountered in the classroom and within their school when teaching mathematics using their mother tongue.

1. *Ambiguity in the Terminologies*. The teachers observed that many factors block the children's learning or their propensity to learn more and new knowledge, especially in mathematics.

Informant 1 revealed that some terms in the mathematics subject and the language used in the instructional materials are hard to comprehend. Hence, it made the pupils confused and shared that:

"Some words are difficult to understand. No definition of difficult words at the last part of the book". (Informant 1).

Informant 3 also explained that the children would find it difficult to understand some terminologies in the local dialect used in the teaching and learning materials, which were hard to understand. It was shared that:

"Most learners cannot understand other Sinugbuanon words, no materials used to interpret the sinugbuanon words*"*. (Informant 3).

Informant 4 enumerated the various aspects of learning that became the obstacles to obtaining knowledge and competencies. She explained that:

"Number words, spelling, terminologies". (Informant 4).

Based on the utterances of the research participants, the peculiarities of the various words and texts in the learning materials hindered the children's understanding of the lessons in the mathematics subjects. So, the challenges in learning have now doubled. One is the jargon inherent in the math discipline and the language used.

Saneka and de Witt (2019) defined barriers as factors that hinder or prevent people from engaging in activities. In this study, barriers refer to rules, policies, or other issues that obstruct mathematics teachers from effectively using their knowledge of students' learning styles. The reviewed literature highlighted a lack of research on barriers related to teachers' understanding of students' learning styles in mathematics teaching. However, it did identify several general barriers to mathematics instruction. They found that mathematics teachers faced various obstacles, categorized into societal, pedagogical, and systematic barriers. Societal barriers involved negative perceptions of mathematics, including the belief that boys excel more than girls. Pedagogical barriers to teaching strategies, such as using severe punishment for failure, led to negative attitudes towards math. Systematic barriers included the lack of appropriate resources, such as textbooks and mathematical tools.

4.5 Challenges Encountered by the Parents and Teachers in the Use of Mother Tongue in the New Normal

The research participants were asked questions about the challenges encountered in using their mother tongue in the new normal.

1. *Parents' Myriad of Difficult Moments in Home Teaching*. Some parents experienced difficulties using the Cebuano dialect to teach their children at home. The type and degree of difficulty are related to their competency to teach and their educational backgrounds.

Informant 1, a parent in grade 2 expressed that it was tough to understand and answer her child's assignment or home-based performance task. She shared this hardship by saying that:

"It is tough, but I tend to understand so that we will be able to answer." (Informant 1).

Also, as a parent, informant 2 expressed hardship in teaching one's child at home due to the lack of higher educational attainment. She shared her struggle by saying the foregoing statement:

It is especially when I did not finish school." (Informant 2).

For Informant 3, the unfamiliar Cebuano terminologies were complicated to understand. She discoursed on the foregoing statement:

"*I* experienced the deep Cebuano." (Informant 3).

Since mother tongue is something parents know as the means to teach their children at home, they experience different facets of rigidity in effecting the learning of the various lessons in the mathematics subject. Also, following the K to 12 Enhanced Basic Education curriculum, the topics in the subject were considered hard for the children's learning ability based on the parents' viewpoints, since they even find some topics hard to understand. Aside from the difficulty of teaching mathematics, using the mother tongue with unfamiliar terms would make the role of the parents to teach at home harder.

In an investigation about the parents' experiences and practices supporting children's mathematics learning, a conceptual framework distinguishes school-centered and parent-centered approaches to parental involvement in children's learning. The topics of discussion included parents' level of confidence and perceived ability in mathematics, their experience of doing mathematics with their children out-of-school, and their interactions with school about mathematics, in which the findings revealed some specific adverse effects of school-centered approaches, and suggested that school-centered approaches may in fact restrict parents' understanding of how they can support mathematics learning in the home (Jay et al., 2018).

2. *Parents' Affluence in Using Mother Tongue in Teaching Math at* Home. On the other hand, some parents find it easy to utilize the local language in teaching their children, especially in mathematics subjects.

For informant 7 shared that her child at home can understand math using the mother tongue and shared the following utterance:

"It is okay since the child can understand." (Informant 7).

Informant 10 expressed that she recognized the value of learning the Cebuano language and shared the foregoing statement:

"For me, having the Sinugbuanong Binisaya is so okay for the children to learn to analyze and those words omitted in Cebuano." (Informant 10).

The research participants revealed that applying the mother tongue to teach the different mathematics lessons was easy and could be done at home. These groups of parents have either higher competence in Mathematics and have children who have higher learning capacities with number and abstract reasoning, regardless of the language being used in instruction.

The emergence of COVID-19 has significantly altered many facets of life worldwide, including education. Implementing social distancing measures to curb the virus's spread has led to profound changes in the educational system. The students have been forced to learn at home. Authentic contexts are essential to designing practical learning activities. Therefore, the teaching and learning process must adapt to teachers and students being physically separated and interacting virtually from their homes. In this context, the availability of technology and the collaboration between teachers and parents as facilitators are crucial to the learning process. Teachers guide the educational activities due to their expertise, while parents play a significant role in supporting students as they learn individually at home (Hwang & Hariyanti, 2021).

The question pertains to the coping mechanism employed by the research participants to address the identified challenges.

1. *Intensify Home Teaching Using Fitting Strategy to Effect Comprehension in Math*. The research participants ensured that they were able to explain the lessons to their children at home so that they would be able to gain comprehension of the topic or subject matter with the application of the correct teaching approach. Also, they emphasized the significance of learning the local language.

Informant 1 expressed that she ensured that her child could learn the topic or lesson through careful teaching at home, considering that the role of parents is to reinforce learning to the children, aside from school instruction. She said that:

"I will teach the child properly and I will explain so that the child will be able to gain understanding." (Informant 1).

In addition, informant 2 also shared that she will strive hard so that she can teach her child at home. Although there was a recognition that teachers can teach well, especially since mathematics is complex for her. She opined that:

*"*We tried hard for the child to understand, but it is still better if the teacher.*"* (Informant 2).

Informant 3 also said that she made sure she would teach her how to learn the math lesson. She said the following statement:

"(I explained to them properly on the part they were not able to understand so that they will be able to understand." (Informant 3).

In times when Informant 8, as a parent-teacher at home, could not understand the mathematics lesson, she would ask for assistance from the neighbor who knew better. She expressed this by saying that:

*"*Teach properly, and if I do not understand, I will ask our neighbor who can understand." (Informant 8).

Informant 9 shared that she would learn the local language to be able to teach her child appropriately. She shared the foregoing statement:

"I will endeavor to learn the Cebuano Visaya for my child to learn properly." (Informant 9).

Out of the narratives of the research participants, they did their best to ensure that they could teach their children at home appropriately, which requires time and effort. Also, to attain the parents' goal to supplement more learning of supplementing their children's learning in the mathematics subject, they needed to find the most fitting teaching approach, which includes emphasizing the importance of learning the mother tongue so that comprehension of the lesson will be better.

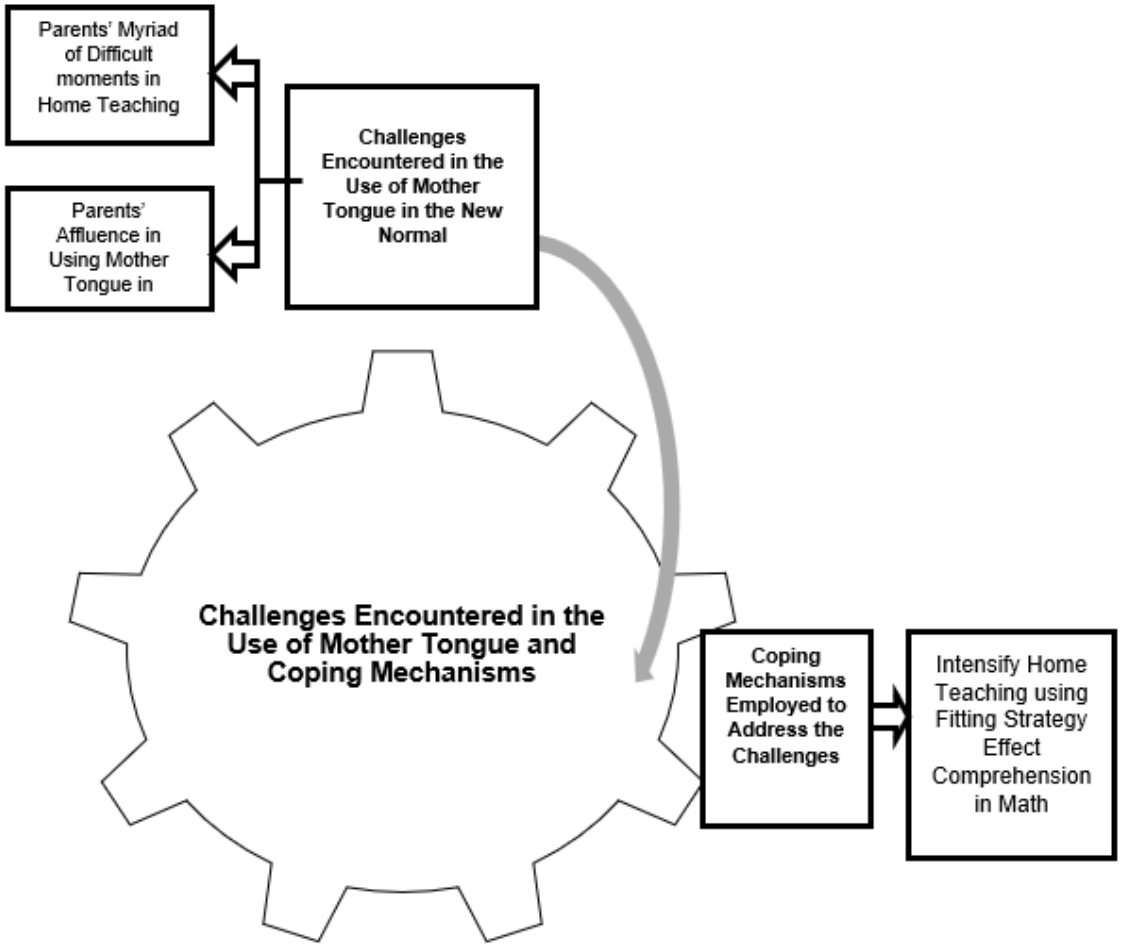

Fig.3: Challenges Encountered by Teachers in the Use of Mother Tongue and Coping Mechanisms

In addition, the carrier role of language in the formation of thinking is also reflected in its expression and understanding of thinking content. People use language to transform complex ideas and concepts into communicative forms, promoting a deeper understanding of these ideas and concepts. As Vygotsky pointed out, thinking is conducted through language, which expresses and shapes thinking. Across the world, the COVID-19 outbreak has led to the closure of schools. Children are staying home and are expected to continue their learning remotely. Digital tools

will help teachers to communicate with children, but parents and other family members will need to support these new ways of learning. Teachers will turn to digital technology to ensure that children do not miss out on learning opportunities, providing work that can be completed at home. There is likely to be a difficult adjustment period while tools are established, family schedules are instituted, and work is circulated (Häkkilä et al., 2020).

This part displays the discussions on the thematic categories, challenges encountered in using mother tongue in the new normal, and the corresponding coping mechanisms to address the identified challenges. Figure 3 reveals the thematic categories.

V. FINDINGS

Based on the data gathered, the following were the study's findings.

The study revealed that the experiences of parent participants of the identified schools can be inferred that they were more comfortable with the use of local dialect rather than using English while teaching their children as a supplement to school learning. However, they indeed expressed their hardships in using the *Sinugbuanong Binisaya* while having tutor sessions with their children at home. Explaining the numbers and the mechanisms in mathematics was difficult for them since they were unfamiliar with the local terms. They encountered difficult *Bisaya* words, unfamiliar terms, and some barriers that complicate home math teaching. In addition, they also stated the advantages and disadvantages of using the mother tongue as a medium of instruction in teaching mathematics. One advantage is that learners can familiarize themselves with their dialect. On the contrary, using the Mother Tongue in teaching and learning Math lacks practicality. Some words are hard to fathom, and there are many barriers to teaching the mother tongue. Some of those are a lack of vocabulary, teacher preparation, and an absence of publications written in the mother tongue.

Parents and Teachers encounter challenges in using the Mother Tongue, such as unfamiliar words and various difficulties in understanding. The type and degree of difficulty is somehow related to their own competency to teach, their educational backgrounds, and the limited resources they have. On the other hand, there are parents who experience ease in utilizing the local language in teaching their children, especially in mathematics subjects.

The coping mechanism to address the challenges ensured that they could explain the lessons to their children at home so that they would be able to gain comprehension of the topic or subject matter with the correct teaching approach. Also, they emphasized the significance of learning the local language.

VI. CONCLUSION AND RECOMMENDATION

Based on the study's findings, it was determined that most of the parent participants were more comfortable and found it easier to use the local dialect and translate local terms to English while teaching their children math subjects as a supplement to school learning. Hardships and challenges were encountered in using *Sinugbuanong Binisaya* while the research participants had tutor sessions with their children at home. There is not much of an advantage compared to the disadvantages. *Sinugbuanong Binisaya* in the teaching and learning process at home is more impractical than helpful. Adopting the Mother Tongue is irrelevant and causes teaching difficulty among parents and teachers.

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