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MOTHER TONGUE-BASED MULTILINGUAL EDUCATION IN THE PHILIPPINES: A STUDY OF LITERACY TRAJECTORIES

USAID/PHILIPPINES BASA PILIPINAS PROGRAM

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EXECUTIVE SUMMARY

Reading is a fundamental goal of primary education and a foundational skill for lifelong learning. Consistent with a global increase in the priority placed on ensuring that children leave early primary school with solid foundational literacy skills, the government of the Philippines has committed to an ambitious, research-based policy reform entitled the Mother Tongue-Based, Multilingual Education (MTB-MLE) policy to promote Mother Tongue (MT) instruction and support early grade literacy development. This MTB-MLE policy is informed by global research on the importance of children learning to read first in their MT.

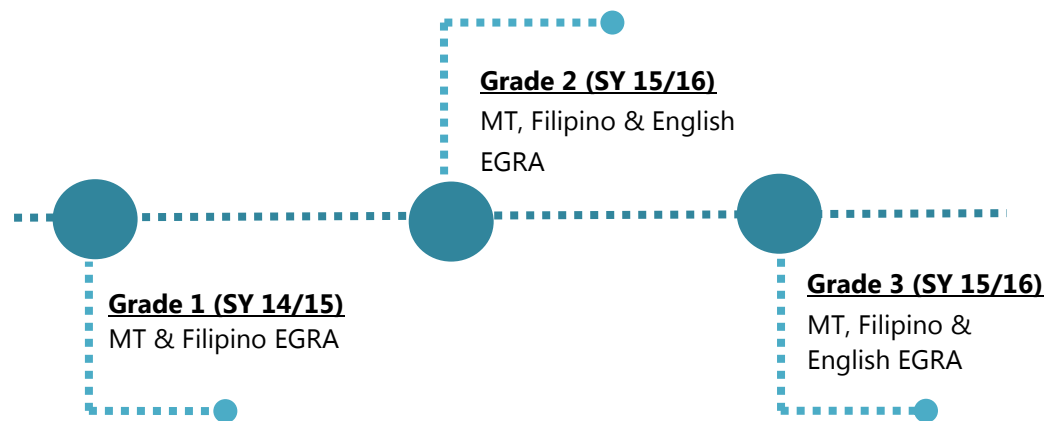
The MTB-MLE policy launched in the 2012-13 school year requires that children in Grade 1 be taught to read in the MT identified for their region, while Filipino and English are treated as oral language subjects. In Grade 2, students are introduced to reading and writing in Filipino and English. The official language of instruction (LOI) remains the MT through Grade 3. In Grade 4, there is a transition to English as the LOI for Math and Science and to Filipino for other content subjects.

This study examines the learning trajectories, under the MTB-MLE policy, in reading development in MT, second language (L2) Filipino and third language (L3) English from Grade 1 to Grade 3. Further, the study aims to determine whether the assumption that improved literacy instruction and outcomes in MT in Grade 1 will lead to similar improvements in students' L2 (Filipino) and L3 (English) literacy skills by the end of Grade 3 is holding true. This research was conducted at the request of the Philippines Department of Education (DepEd) and aims to explore the implementation of the MTB-MLE policy. This research study was conducted in fifteen schools in three regions of the country: Ilocos, Cebu, and Laguna. Although this research study included Basa and non-Basa-assisted schools, the study was not intended to evaluate the effectiveness of the Basa intervention; rather it is intended to explore overall literacy trajectories across three school years under DepEd's MTBMLE policy. Specifically, the study aimed to answer the following research questions:

1. What is the reading learning trajectory from Grade 1 to 3 in MT, Filipino and English, under the MTB-MLE policy?
 - a. Do learners in Cebu and Ilocos "catch up" to Tagalog MT speakers from Laguna in Filipino by Grade 3?
 - b. Is the change to Filipino (L2) and English (L3) as the language of instruction (LOI) in Grade 4, under the MTB-MLE policy, too soon?
2. What is the relationship among literacy acquisition between the different languages in this study?
 - a. What predictive power does L1 literacy have for L2 and L3 in the MTs specific to this study?
3. Are there other characteristics besides grade level that affect literacy in MT, Filipino and English?

In order to answer these questions on students’ reading skill acquisition under the MTB-MLE policy, the study followed a longitudinal design. Fifteen schools from Regions 1, 3, and 7—six in each of Regions 1 and 7, and three in Region 4—were selected to participate in this study. Over the course of three years (Grades 1, 2, and 3), data was collected from the 245 students from three regions: Cebu (where Sinugbuanong Binisaya¹ is the MT), Ilocos Norte/ Sur (where Ilokano is the Mother Tongue), and Laguna (where Tagalog is the MT). Each year, Basa conducted early grade reading assessments (EGRA) to measure students’ oral reading fluency in their MT², Filipino, and English.³ To assess reading trajectories of learners from Grade 1 to Grade 3, reading proficiency standards⁴ were developed for each language – Sinugbuanong Binisaya, Ilokano, Filipino, and English. Reading proficiency standards used in this study were developed according to existing proficiency standards, extensive research in literacy and data-supported relationship between oral reading fluency and comprehension. Additionally, to obtain contextual data on teachers and classroom practices, teachers were interviewed, as well as observed.

Timeline of Study Data Collection



This study contributes to the evolving picture of early grade literacy in the Philippines in several important ways. It is the first study to track a cohort of students longitudinally from Grade 1 through 3, to study the progression of reading skills among languages. Second, it assesses

¹DepEd’s official designation for this Mother Tongue language is Sinugbuanong Binisaya. This Mother Tongue is spoken in many regions in the country, including Mindanao. While there may be some differences in vocabulary or usage across the different areas where Sinugbuanong Binisaya is spoken, it is by and large the same language spoken across these locations.

² Tagalog is the dominant MT in the Laguna region. The Tagalog language is the MT that formed the primary basis for the national language Filipino. As there is no Tagalog language version of the EGRA assessment, Tagalog MT students received the Filipino version of the EGRA assessment. Consequently, in this study, Filipino was treated as the MT for Tagalog MT students in the analysis. For more information on the differences between the Tagalog and Filipino languages, see Annex 1. Methodology.

³ English was only assessed in Grades 2 and Grades 3.

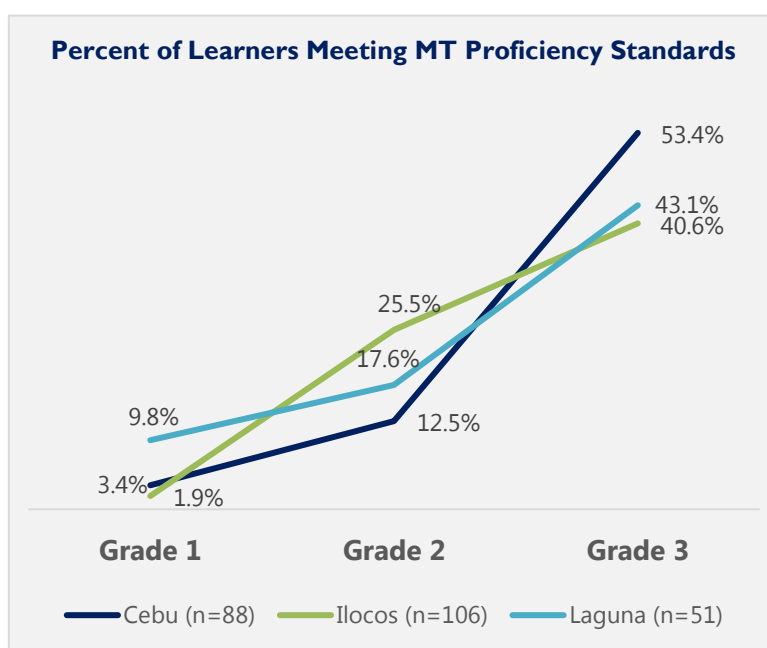
⁴ Reading proficiency standards were established using combined fluency and reading comprehension thresholds by language. Proficiency standards were proposed based on existing research and standards and data-supported relationship between oral reading fluency and comprehension. Details on how proficiency standards were established can be found in the Methodology Section.

children in all languages in which they have received literacy instruction in a particular grade, which allows for a more complete understanding of students' reading skills as a whole, rather than just in one language.

This report presents the finding from the longitudinal study. Given the limitations of the study design, conclusions and generalizations from this study are cautioned. Learning trajectory results from this study are not intended to be generalized beyond the sample in this study; rather findings are intended to identify potential trends in MT, L2 and L3 literacy acquisition under the MTB-MLE policy.

MT (L1) LEARNING TRAJECTORY IN READING FROM GRADE 1 TO GRADE 3

Overall, students from all regions showed considerable improvements in MT reading achievement between Grade 1 and Grade 3. The largest increase from Grade 1 to Grade 3 in the percent of students who could read with fluency and comprehension in their MT was seen in Cebu in which 50.0% more students met Sinugbuanong Binisaya reading proficiency standards⁵ in Grade 3 than in Grade 1 ($h=1.27$).



Additional analysis was conducted to examine in which grade level learners tend to make the jump from “learning to read,” in which learners are still developing pre-reading skills to “reading to learn,” in which learners can read proficiently. Analysis showed that **there is significant improvement between Grades 1 and 2, and then another, smaller, but substantial improvement from Grade 2 to Grade 3.** From all regions, the percentage of students meeting reading proficiency standards in their respective MTs increased from Grade 1 to Grade 2. Nevertheless, the majority of students across all MTs were unable to read with proficiency by the end of Grade 2.

⁵ The following proficiency standards were used in this report: Filipino (40wcpm & 80% comprehension); Sinugbuanong Binisaya (50 wcpm and 80% comprehension); Ilokano (50 wcpm & 80% comprehension) and English (60 wcpm and 80% comprehension).

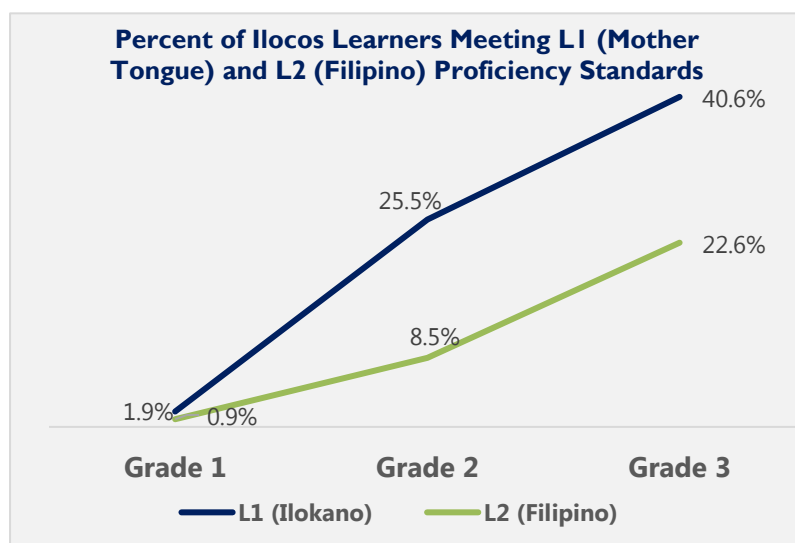
In Grade 3, the rates of students meeting reading proficiency standards continued to increase for all MTs, although the majority of students were unable to read with proficiency. Just over half of Sinugbuanong Binisaya MT students (53.4%), the highest rate among the MTs, were reading with proficiency in Grade 3. Overall 40.6% of students from the Ilocos and 43.1% of students in the Laguna region were able to read with fluency and comprehension in their respective MTs at the end of Grade 3. **MT reading proficiency rates in Grade 3 were largely similar across MT language.**

LANGUAGE 2 (L2) AND LANGUAGE 3 (L3) READING TRAJECTORY RESULTS FROM GRADE 1 TO GRADE 3

Research has shown that MTB learning can benefit students’ L2 and L3 language acquisition. Studies have shown that students can draw on the knowledge of language and literacy concepts, such as text decoding and comprehension strategies, learned in their MT (L1) when they begin to read in an L2 or L3.⁶ Under the MTB-MLE policy, from Grade 1 to Grade 3 Filipino and English are treated as language subjects. Filipino is taught as a second language and English is taught as a third language.

FILIPINO (L2) READING RESULTS

Results showed that students from the Ilocos and Cebu regions begin with comparable levels of reading ability in both their MT (L1) and L2 (Filipino); less than 5% of students are able to meet MT or Filipino reading proficiency standards. **However, although the percent of students demonstrating reading proficiency in their L2 (Filipino) increases from Grade 1 to Grade 3, the rate at which learners are acquiring reading proficiency in L2 (Filipino) is much slower than in their MTs (Sinugbuanong Binisaya and Ilokano).** In Grade 3, Ilocos students’ reading ability in Filipino (L2) is substantially lower than their reading ability in their



MT (Ilokano). Similarly, in Grade 3, Cebu students’ reading ability in Filipino (L2) is significantly lower than their reading ability in their MT (Sinugbuanong Binisaya).

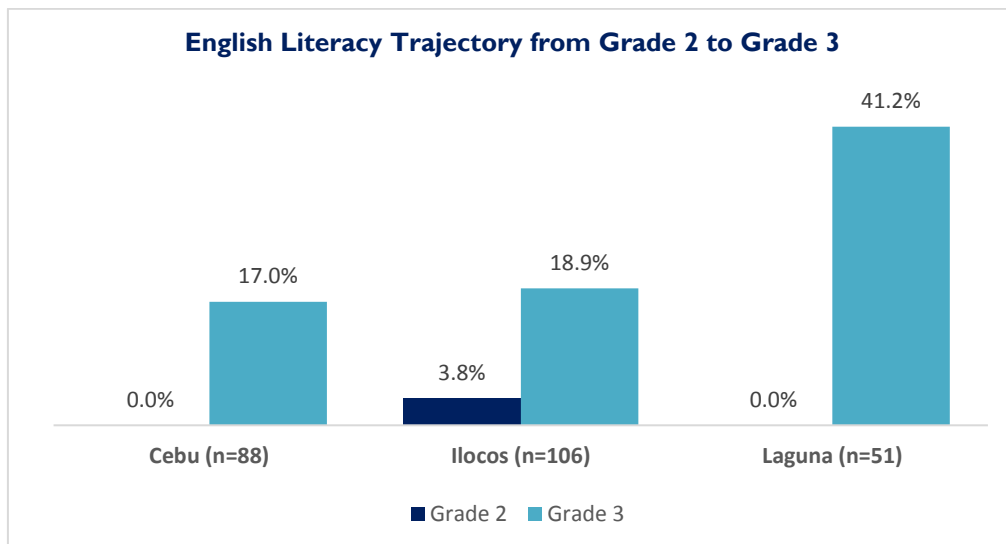
Of interest, Ilocos students’ improvement in their L2 (Filipino) follows a different trend to that of their Mother Tongue. Students showed greater improvement in MT

⁶ Comings 2014. p.3.

reading ability between Grades 1 and 2, while greater improvement for L2 (Filipino) occurred between Grades 2 and 3, where about 14.2% more students were able to meet the Filipino reading proficiency standard compared to 7.5% improvement between Grades 1 and 2. This improvement from Grade 2 to Grade 3 in L2 (14.2%) is similar to the improvement in MT from Grade 2 to Grade 3 (15.1%). This suggests that initially, Ilocos **learners show improvement in reading proficiency at a faster rate in MT compared to their L2, however, by Grade 3, improvements in the percent of proficient readers occurs at a similar rate in both MT and L2**. Comparisons of L1 and L2 literacy trajectories for Sinugbuanong Binisaya MT learners were inconclusive given different timing of the EGRA assessments in Grade 1 and Grade 3 (January/February) and Grade 2 (November/December). Further research is needed.

ENGLISH (L3) READING RESULTS

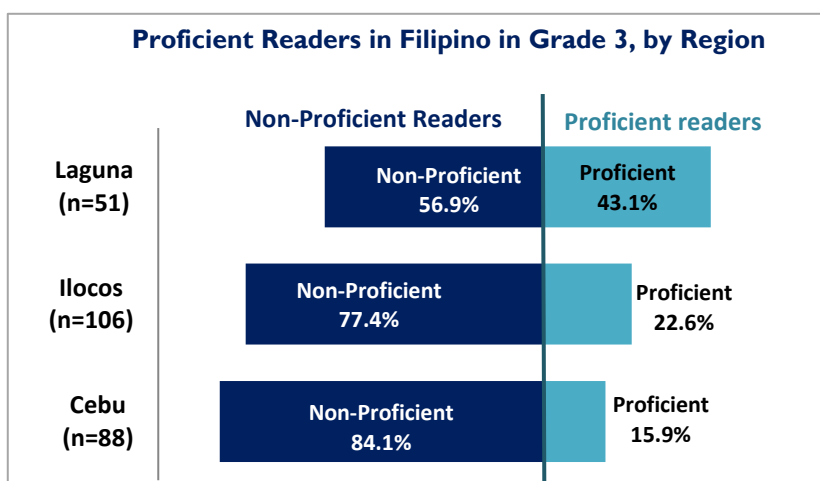
The results from the English EGRA administered to students in Grades 2 and 3 demonstrate that students in all three regions increase their English reading ability between Grades 2 and 3. The improvement in the percent of proficient readers in English between Grades 2 and 3 are considerable for all regions and show a medium effect size difference for students from the Ilocos ($h=0.51$) region, and large effect size differences for students from the Cebu and Laguna regions ($h=0.85$ and $h=1.39$, respectively). In Grade 3, a larger percentage of students from the Laguna region were able to read with fluency and comprehension in English compared to Ilocos and Cebu regions with 41.2% of students meeting the English fluency/comprehension standard compared to 17.0% in Cebu and 18.9% in Ilocos.



DO LEARNERS FROM THE CEBU AND ILOCOS REGIONS “CATCH UP” TO TAGALOG MT SPEAKERS IN FILIPINO (L2) BY GRADE 3?

Tagalog, one of the official MTs under the DepEd curriculum, is the primary basis of the Filipino language. As such, native Tagalog speakers have an advantage over learners who speak other MTs when it comes to learning Filipino (L2). The results from the Filipino EGRA administered to L2 Filipino students from the Cebu and Ilocos region demonstrate that **while the percent of students who are proficient readers in Filipino improves between Grades 1 and 3, they do not “catch up” to Tagalog MT students in Filipino by Grade 3.**

By the end of Grade 3, Tagalog MT speakers continue to significantly outperform non-Tagalog MT speakers from the Ilocos and Cebu regions in Filipino reading proficiency. **In fact, results suggest that instead of “catching up” to Tagalog MT speakers by the end**



of Grade 3 in Filipino reading proficiency, L2 Filipino learners from the Ilocos and Cebu regions are falling further behind. Overall 43.1% of Tagalog MT students were able to read in Filipino with fluency and comprehension by the end of Grade 3. This rate is much greater than the rates of students from the Cebu and Ilocos regions, where 15.9% and 22.6% of students meet the Filipino fluency/comprehension standard, respectively.

ARE LEARNERS PREPARED FOR THE TRANSITION FROM MTB INSTRUCTION TO FILIPINO AND ENGLISH INSTRUCTION IN GRADE 4?

Grade 3 is an important year for learners in the Philippines. In Grade 4, students transition from MTB instruction to primary instruction in Filipino and math and science instruction in English. As such, measuring Filipino and English reading outcomes at Grade 3 is crucial to understanding the preparedness of learners to begin instruction in these languages as they proceed to Grade 4.

Overall, learners are not prepared for the transition from MTB instruction to Filipino in Grade 4. In Grade 3, the overwhelming majority of students from the Cebu and Ilocos regions do not meet the Filipino fluency/comprehension standard, with only 15.9% of Sinugbuanong Binisaya MT students and 22.6% of Ilokano MT students meeting the fluency/comprehension

standard. Even Tagalog MT learners, who have an advantage over learners who speak other MTs given the similarities between Filipino and Tagalog, are largely not prepared for the transition; only 43.1% of learners met Filipino proficiency standards at the end of Grade 3. This likely indicates that only roughly one-out-of-five non-Tagalog MT students and two-out-of-five Tagalog MT students are ready for the transition to Filipino instruction in Grade 4.

By the end of Grade 3, the majority of students, from all regions, are not prepared for the transition to English instruction in Grade 4. Results by region showed that in Cebu and Ilocos, only 17.1% and 18.9% of learners, respectively, could read in English with fluency and comprehension. A larger percentage of learners in the Laguna region demonstrated English reading proficiency skills, with 41.2% of students who met the English fluency/comprehension standard, however, nearly 60% of learners were still unable to read with fluency and comprehension in English.

These findings suggest that students from all regions may not be prepared for instruction in Filipino and English in Grade 4, and would likely benefit from continuing instruction in their MTs.

PREDICTIVE POWER OF L1 ON L2/L3 FLUENCY

Research suggests that early achievement in a student's MT facilitates achievement in secondary languages such as Filipino and English. To explore this theory, a model that predicted Filipino fluency in Grade 2 using gains in MT was developed for both native Ilokano and Sinugbuanong Binisaya speakers. After controlling for Filipino fluency in Grade 1, higher gains in MT fluency between Grade 1 and Grade 2 are associated with higher achievement in L2 (Filipino) fluency in Grade 2. **The results provide preliminary support for the theory that fluency preparation in a student's MT is associated with higher L2 (Filipino) fluency achievement.**

Models were also developed to explore the relationship between student gains in MT fluency between Grades 1 and 2 and L3 (English) fluency achievement in Grade 2. Results indicate that higher gains in MT fluency between Grade 1 and Grade 2 are associated with higher achievement in L3 (English) fluency in Grade 2. **The results provide preliminary support for the theory that fluency preparation in a student's MT is associated with higher L3 (English) fluency achievement.**

IMPACT OF CONTEXTUAL FACTORS ON FILIPINO AND ENGLISH READING ACHIEVEMENT

This study examined various factors from the student context interview, collected in 2017, for association with key outcomes: meeting the Filipino and English reading proficiency standards. **The strongest relationship found was between Filipino reading proficiency and the number of household possessions of learners in the Cebu region.** The number of household possessions is a proxy for socioeconomic status, and findings showed that there was a moderate significant relationship between learners with more household possessions and higher rates of meeting the Filipino fluency/comprehension standard in Grades 2 and 3 in the Cebu region. Other positive relationships included teachers using multiple languages in the classroom and the number of languages spoken at home, where both had significant positive associations with a student's Filipino reading ability.

For English achievement, the analysis revealed fewer associations with learner characteristics. The strongest relationship found was a small positive and significant association between English being spoken at home and English achievement for Grade 3 students in the Ilocos region. For Grade 3 students in the Cebu region, receiving instruction in English also had a small positive and significant relationship with meeting the English fluency/comprehension standard.

CONCLUSIONS

The results from this study provide preliminary support for the theories that a strong literacy foundation in a student's MT is associated with higher L2 (Filipino) and L3 (English) fluency achievement. Additionally, findings suggest that students do not acquire reading proficiency in their L2 (Filipino) at the same rate as their MT (L1). Findings from the Ilocos region showed greater improvement in MT reading ability between Grades 1 and 2, while greater improvement for L2 (Filipino) occurred between Grades 2. In other words, this suggests that initially learners show improvement in reading proficiency at a faster rate in MT compared to their L2. However, from Grade 2 to Grade 3, improvements in the percent of proficient readers occurs at a similar rate in both MT and L2. Further research is needed to better understand the L1 and L2 learning trajectories in the early grades. Given that existing research has shown that L2/L3 learning can be influenced by students' L2/L3 oral ability, additional research on learners' L2/L3 oral language development in the early grades is needed to better understand the literacy acquisition between L1, L2 and L3.

While the percent of non-Tagalog MT students who are proficient readers in Filipino improves between Grades 1 and 3, they do not "catch up" to Tagalog MT students by Grade 3. Tagalog is the primary base of the Filipino language, and Tagalog MT speakers have a distinct advantage in Filipino proficiency compared to students with non-Tagalog MTs.

Tagalog MT students consistently have greater Filipino reading ability from Grades 1 to 3. In fact, results suggest that instead of “catching up” to Tagalog MT learners by the end of Grade 3 in Filipino reading proficiency, non-Tagalog MT students are falling further behind. This indicates that more must be done to help prepare L2 Filipino learners to improve their Filipino reading proficiency so that can better transition to Filipino-based instruction at a pace comparable to their Tagalog MT peers.

Overall, findings suggest that learners cannot be introduced to three languages in the early grades and be proficient in all of them by the end of Grade 3. The majority of learners were unable to read with proficiency in Filipino or English by the end of Grade 3. These results suggest that L2/L3 learners are likely not prepared for instruction in Filipino and English in Grade 4. Students from all regions would likely benefit from continuing instruction in their Mother Tongues rather than a transition to Filipino and/or English instruction in Grade 4.

While the study confirmed that strong L1 fluency gains are predictive of higher L2 and L3 fluency achievement, there are other aspects to L2 and L3 proficiency that need to be strengthened before students can successfully learn in these languages. Strategies for bridging learners’ L1 vocabulary and comprehension skills to additional languages, as well as other second language learning strategies, may need to be more deliberately incorporated into Filipino and English language instruction so that the students’ stronger proficiency in their L1 can be better used as a springboard for gaining L2 and L3 proficiency.

Additionally, given that the majority of L2 and L3 learners are unable to read proficiently in their L2 (Filipino) and L3 (English) by the end of Grade 3, additional research on L1, L2 and L3 reading proficiency in Grade 4 is recommended. Findings from the study showed that teachers code switch, or alternate between languages, during lessons. More research is needed on the actual language of instruction used by teachers in Grade 4, particularly whether instruction in fact switches entirely to Filipino and English in Grade 4 or whether teachers use code switching and using other techniques given the low reading proficiency levels of L2/L3 learners in Filipino and English.

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ACRONYMS

DepEd	Department of Education
EDC	Education Development Center
EGRA	Early Grade Reading Assessment
L1	First Language
L2	Second Language
L3	Third Language
LOI	Language of Instruction
MT	Mother Tongue
MTB	Mother Tongue-based
MTB-MLE	Mother Tongue-Based, Multilingual Education
SCOPE-L	Standards-Based Classroom Observation Protocol for Literacy
USAID	United States Agency for International Development
WCPM	Words Correct Per Minute

INTRODUCTION

Reading is an essential skill and one of the most fundamental instructional goals for children in the primary grades. In recent decades, increased global emphasis on best practices for early literacy has, in turn, increased emphasis on the optimal language of instruction for literacy acquisition. Many educational systems around the world have limited early grade instruction to one or two national languages, despite research that concludes that children learn best acquiring foundational literacy skills, when the language of instruction (LOI) is their Mother Tongue (MT).⁷ In addition to the benefits of MT -based instruction for MT reading skills, studies have also shown that there is a positive correlation between MT (L1) and second language or third language (L2/L3) learning.⁸ Through MT-based instruction, students acquire the foundational literacy skills, such as text decoding, in their MT. Findings show that students are then able to apply these skills in their L2/L3 learning for faster language acquisition, even when the languages have different alphabets or writing systems.⁹

The impact of L1 reading acquisition on L2/L3 learning has also been shown to be influenced by students' L2/L3 oral ability, although the findings are less established. While some argue that early education should emphasize L1 reading ability, some studies suggest that the transfer of reading skills from L1 to L2 is predicated on a sufficient oral language threshold in L2/L3.¹⁰ In other words, even if students are excellent readers in their L1, they may not be able to transfer the reading skills acquired from their L1 to L2/L3 without sufficient L2/L3 oral skills. Nevertheless, field-based evidence is encouraging and shows that countries are making efforts to better plan the transition from L1 to L2. Field evidence has shown that students can transfer foundational literacy skills, learned for L1, to successfully acquire L2.¹¹

Despite these promising findings, there are still many gaps around early literacy best practices, particularly around 1) the implementation of Mother Tongue-Based (MTB) instruction in multilingual contexts and 2) the optimal point at which transfer of reading skills from L1 to L2 should occur. This study aims to contribute to the body of research presenting a case study of the implementation of the MTB instruction in the Philippines.

Consistent with a global increase in the priority placed on ensuring that children leave early primary school with solid foundational literacy skills, the government of the Philippines has committed to an ambitious, research-based policy reform to promote MT instruction and

⁷ UNESCO 2008: UNESCO (2008a). *Mother Tongue Matters: Local Language as a Key to Effective Learning*. Paris: UNESCO

⁸ John P. Comings. *An Evidence-Based Model for Early-Grade Reading Programmes*. UNESCO IBE 2014.

⁹ Ibid, p. 3.

¹⁰ Ibid, p. 3.

¹¹ Aglaia Zafeirakou. "The Power of Mother Tongue and Multilingual Education." Global Partnership for Education. February 20, 2015.

support early grade literacy development. The Mother Tongue-Based, Multilingual Education (MTB-MLE) policy, which was launched in the 2012-13 school year, requires that children in Grade 1 are taught to read in the MT identified for their region, while Filipino and English are treated as oral language subjects. In Grade 2, students are introduced to reading and writing in Filipino and to reading in English. However, the official language of instruction (LOI) remains the MT through Grade 3. In Grade 4, there is a transition to English as the LOI for Math and Science and to Filipino for other content subjects. The MTB-MLE policy is informed by global research on the importance of children learning to read first in a language they speak and understand, and it assumes that improved literacy instruction and outcomes in MT in Grade 1 will lead to similar improvements in students’ Filipino and English literacy skills by Grade 4.

Table 1. Introduction of Filipino and English by Grade Level and Quarter

	GRADE 1				GRADE 2				GRADE 3			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
MT	Reading/Writing and Language of Instruction for All Subjects											
Filipino Language	Oral Language				Reading/Writing							
English Language					Oral Language				Reading/Writing			

At the request of the Philippines Department of Education (DepEd), this study examined the implementation of the new Mother Tongue Based—Multi-Lingual Education (MTB-MLE) policy in three regions of the country. It aims to explore the learning trajectories in reading development in MT, Filipino and English from Grade 1 to Grade 3. It also looks into whether improved literacy instruction and outcomes in MT in Grade 1 will lead to similar improvements in students’ Filipino and English literacy skills by end of Grade 3.

This study contributes to the evolving picture of early grade literacy in the Philippines in several important ways. It is the first study to track a cohort of students longitudinally from Grade 1 through 3, to study the progression of reading skills among languages. Second, it assesses children in all languages in which they have received literacy instruction in a particular grade, which allows for a more complete understanding of students’ reading skills as a whole, rather than just in one language.

STUDY DESIGN

This research is intended to explore the implementation of the new MTB-MLE policy in three regions of the Philippines. The study aims to explore the learning trajectories, under the MTB-MLE policy, in literacy development in MT (L1), Filipino (L2) and English (L3) from Grade 1 to Grade 3 as well as to determine whether the assumption that improved literacy instruction and outcomes in Mother Tongue (L1) in Grade 1 will lead to similar improvements in students' L2 and L3 literacy skills. This study examines the reading outcomes, over time, of learners in MT, Filipino and English, specifically exploring whether children become proficient in their MT language while laying the foundation for learning in additional languages (Filipino and English).

The study established the following research questions to examine the trajectory of reading skill acquisition for learners under the MTB-MLE policy.

1. What is the reading learning trajectory from Grade 1 to 3 in MT, Filipino and English, under the MTB-MLE policy?
 - a. Do learners in Cebu and Ilocos "catch up" to Tagalog MT speakers from Laguna in Filipino (L2) by Grade 3?
 - b. Is the change to Filipino (L2) and English (L3) as the language of instruction (LOI) in Grade 4, under the MTB-MLE policy, too soon?
2. What is the relationship among literacy acquisition between the different languages in this study?
 - a. What is the predictive power does L1 literacy have for L2 and L3 in the MTs specific to this study?
3. Are there other characteristics besides grade level that affect literacy in MT, Filipino and English?

METHODOLOGY

In order to answer these questions on students' reading skill acquisition under the MTB-MLE policy, the study followed a longitudinal design. Over the course of three years (Grades 1, 2, and 3), data was collected from the same group of students from three regions: Cebu (where Sinugbuanong Binisaya¹² is the MT), Ilocos Norte/ Sur (where Ilokano is the MT), and Laguna (where Tagalog is the MT). Each year, Basa conducted early grade reading assessments (EGRA)

¹²DepEd's official designation for this Mother Tongue language is Sinugbuanong Binisaya. This denotes that Sinugbuanong Binisaya is the primary basis of this Mother Tongue spoken in many regions in the country, including Mindanao. While there may be some differences in vocabulary or usage across the different areas where Sinugbuanong Binisaya is spoken, it is by and large the same language spoken across these locations.

to measure students’ oral reading fluency in their MTs¹³, Filipino, and English.¹⁴ Additionally, teachers were interviewed in order to obtain demographic and contextual data, as well as observed in order to gather data on classroom practices.

The study aimed to implement assessments at the end of each school year, which runs from June to the end of March. In the first round, data was collected from Grade 1 students over a two-month period (February-March 2015). In the second round, Grade 2 data collection was divided with data collected in Cebu and Laguna in November-December 2015, and then in Ilocos in February 2016. In the third round, data was collected from Grade 3 students in January/February 2017.

Table 2. EGRA Assessment Schedule

	EGRA Assessment	Feb/ March 2015	Nov/ Dec 2015	February 2016	February 2017
Grade 1	MT, Filipino	Cebu, Ilocos, Laguna			
Grade 2	MT, Filipino, & English		Cebu, Laguna	Ilocos	
Grade 3	MT, Filipino, & English				Cebu, Ilocos, Laguna

STUDY SAMPLE

Sampling was conducted at three levels: 1) school, 2) classrooms, and 3) student. The school and classroom samples were drawn through separate selection processes with regional educational officials. The students were randomly drawn from the selected classrooms.

In Year 1 (2015), a sample of fifteen schools were selected through a consultation process with regional education officials to participate in the study. Six schools were selected from each of the Cebu and Ilocos regions, and three schools were selected in the Laguna region. Schools were selected to intentionally include an equal number of Basa and non-Basa schools. As the Laguna region does not have Basa schools, three non-Basa schools were selected for the study.

¹³ The Tagalog language is the primary basis for the national language, Filipino. For this reason, majority of the words in the Filipino language are intelligible to the Tagalog language speaker. Because of this, the Tagalog MT students were assessed using the Filipino version of the EGRA assessment, as there is no Tagalog language version of the EGRA assessment. For additional information on the differences and similarities between the Tagalog and Filipino languages, refer to Annex 1-Methodology.

¹⁴ English was only assessed in Grades 2 and Grades 3.

As this is a longitudinal study, the same selected schools were visited and included in all three years of data collection.

LEARNER SAMPLE

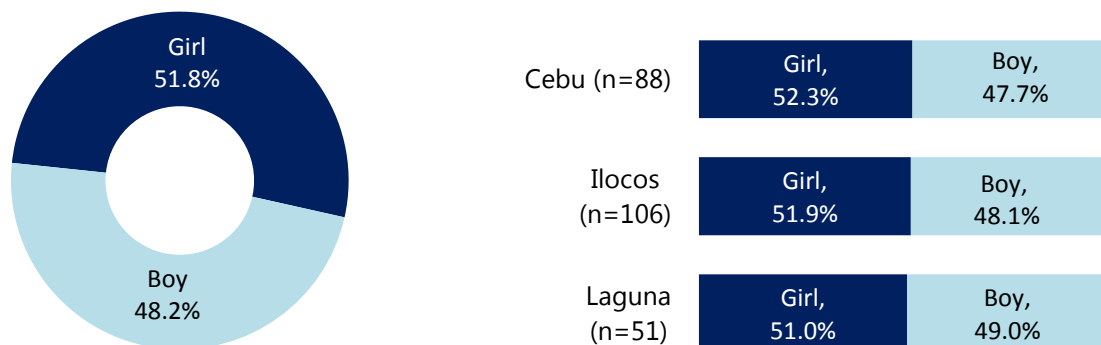
Data collectors randomly selected 10 students from two selected Grade 1 class rosters for a total of 20 Grade 1 students per school. Overall, a total of 300 students were included in the initial cohort in 2015. The subsequent year, the same students were tracked longitudinally and tested again in 2016 when they were enrolled in Grade 2, as well as in the following year, 2017, when they were enrolled in Grade 3. The study includes results only for learners who tracked and tested in all three grades (Grade 1-3) and who were not found to be repeating a grade. In total, due to attrition and grade repetition, this study's analysis is based on 245 longitudinal non-repeater students who were tracked and tested from Grade 1 to Grade 3. Table 3 provides a breakdown of the total students assessed in each region.

Table 3. Learner Sample

Region	Number of schools	Grade 1 (2015)	Grade 2 (2016)	Grade 3 (2017)
Region 1 - Ilocos Norte, Sur	6	119	111	106
Region 4 - Laguna	3	60	52	51
Region 7 - Cebu	6	121	100	88
TOTAL	15	300	263	245

The sample was designed to select an identical number of boys and girls. The final distribution of longitudinally tracked learners was nearly perfect across region.

Figure 1. Breakdown of Student Sample, by Sex (n=245)



TEACHER SAMPLE

To obtain information on teacher literacy practices and the environment for the implementation of MTB-MLE, each year, a sample of teachers of learners included in the study were interviewed. In 2015, 28 Grade 1 teachers were interviewed. Subsequently in 2016, 26 Grade 2 teachers were interviewed and in 2017, 30 Grade 3 teachers were interviewed. In total, 84 teachers were interviewed.

The majority of Grade 1 and Grade 2 teachers interviewed were male, while the majority of Grade 3 teachers were female. The majority of teachers fell under the Teacher designation (92.7%) and 7.3% were designated as Master Teachers. The majority of teachers (about 73%) also held a master's degree or higher. Teachers from the Laguna region had the highest educational attainment with only 12% reporting a BA/BS, 84% of teachers attaining a master's degree, and 4% attaining a PhD.

Additionally, to provide context of the instructional environment in schools, in 2017, a sample of Grade 3 teachers in each school were observed during data collection. A total of 30 Grade 3 teachers were observed during MT, Filipino and English reading lessons.

RESEARCH TOOLS

In order to gather data needed to answer the specified research questions, several tools were used in this study. Two standardized measurement tools were used for the study: the *Early Grades Reading Assessment (EGRA)* and the *Standards-Based Classroom Observation Protocol for Literacy (SCOPE-Literacy)*. Additionally, demographic and contextual information was collected from both teachers and students using tailored interview protocols.

- **Early Grade Reading Assessment (EGRA):** In order to assess student reading proficiency, this study utilized an adapted EGRA. EGRA is a standardized reading test that assesses early reading skills. This study used a shortened version of the EGRA tool. Students were assessed in all languages in which they have received literacy instruction during the school year. In Grade 1, students were assessed in their regional MT, and Grades 2 and 3 students were assessed in MT, Filipino and English.¹⁵ The EGRA subtests included: Letter Sounds (Filipino only), Oral Passage Reading and Comprehension (MT, Filipino and English), and Dictation (MT, Filipino and English). For the purposes of this

¹⁵ There are two notable exceptions. First, we assessed Grade 1 students in Filipino, although they received only oral language instruction – and not formal literacy instruction – during the school year. This was done in order to generate a baseline understanding of Filipino reading skills before literacy instruction is formally introduced. The second exception pertains to students in Laguna, where Tagalog is the regional Mother Tongue. A Tagalog version of the EGRA tool has not yet been validated by the developers. Given the similarities between Tagalog and Filipino, in this study, Filipino is treated as the MT for Laguna.

study, analysis focuses only on the Passage Reading and Comprehension subtest. The Passage Reading subtest assesses three early reading skills: oral reading fluency and accuracy, and reading comprehension. Given the importance of reading comprehension as the ultimate goal of reading and its relationship to oral reading accuracy and fluency, the Passage Reading subtest was a natural selection and focus for inclusion in the study.

- **Standards-based Classroom Observation Protocol for Literacy (SCOPE-L):** To address the research questions regarding teacher instruction, we utilized the EDC designed SCOPE-Literacy tool. SCOPE-Literacy is designed to capture teacher practice in domains that research identifies as crucial to supporting student literacy acquisition. SCOPE-L assesses classroom reading and writing instruction along thirteen dimensions of practice and is organized into two major subsections: 1) Classroom Structures and 2) Language and Literacy Instruction.
- **Teacher Interviews:** In addition to being observed during classroom language instruction, teachers were also asked a series of questions using a semi-structured interview protocol. Teachers were asked to provide details about their teaching experience and background. They were also asked open-ended questions about their current teaching practices, including lesson planning and preparation, how they bridge languages in their reading instruction, and what challenges they have faced in implementing the MTB-MLE policy and resulting curriculum.

To assess reading trajectories of learners from Grade 1 to Grade 3, reading proficiency standards were developed for each language – Sinugbuanong Binisaya, Ilokano, Filipino and English. Reading proficiency standards used in this study were developed according to existing proficiency standards, extensive research in literacy and data-supported relationship between oral reading fluency and comprehension. The table below details the reading proficiency standards, by language, used in this study. For detailed explanations on the how the reading proficiency standards were established, see Annex 1 – Methodology.

Table 4. Reading Proficiency Standards

Language	Reading Proficiency Standard	
	Words correct per minute	% Reading Comprehension
Filipino	40 wcpm	80% Comprehension
Sinugbuanong Binisaya	50 wcpm	80% Comprehension
Ilokano	50 wcpm	80% Comprehension
English	60 wcpm	80% Comprehension

LIMITATIONS

This study had some limitations in its design and implementation. The study design did not include the random assignment of schools or classrooms. Consequently, the generalizability of the differences or similarities found between the learning trajectories or other conclusions reached in this study are limited since other factors may have contributed to these findings. Conservatively, study findings can be generalized to the classrooms from which a random sample of students was drawn.

Limitations also stem from the availability of validated assessment tools. A validated Tagalog version of the EGRA tool was unavailable, and consequently, given that Tagalog is the primary basis of the Filipino language, students from the Laguna region (Tagalog MT students) received the Filipino version of the assessment rather than a Tagalog version.

Another limitation originates from the study's sampling strategy. The study design aimed to include an equal number of Basa and non-Basa schools, while also disaggregating by the Cebu, Ilocos, and Laguna regions. However, there are no Basa schools in the Laguna region. As a result, the number of schools selected from the Laguna region is half (3) of the number of schools selected from the Cebu and Ilocos regions (6). This has translated into a student sample in Laguna that, from the beginning, was half the size of the student samples of other regions. Additionally, longitudinal designs are particularly vulnerable to sample size attrition. In this study, the conceptualized sample size of 300 students decreased to 245 students. Student sample attrition is largely attributable to student dropout, moves, or grade repetition. Although attempts were made to track students that had moved to a different school or repeated a grade in order to assess them at a later date, staff and logistical constraints made this process inconsistent.

Staff and constraints also limit the findings of this study relating to the timing of Grade 2 data collection. Data collection in Grade 2 was designed to occur in the same months (Jan-Feb) as Grade 1, however, at that time, the Basa staff (with whom this study shared data collection staff) was in the midst of data collection for the Basa impact evaluation. Consequently, data was collected from students in Ilocos region 2 to 4 months later than students from those in Cebu and Laguna regions. As explained in the findings, this is the likely cause of the Ilocos students' greater reading ability in Grade 2 compared to students from other regions; Ilocos students had an additional 2-4 months of schooling at the time of data collection. The MT reading ability of students in Grade 3 is roughly similar across all regions. This may imply that students from Cebu and Laguna would have had similar learning trajectories to students from the Ilocos region if data collection had occurred at the same time for all regions.

For more details on the methodology used in this study, please refer to Annex 1, which includes detailed description of methods and data collection tools. Annex 2 includes detailed assessment results.

I. WHAT IS THE CONTEXT FOR MTB-MLE INSTRUCTION IN THESE SCHOOLS?

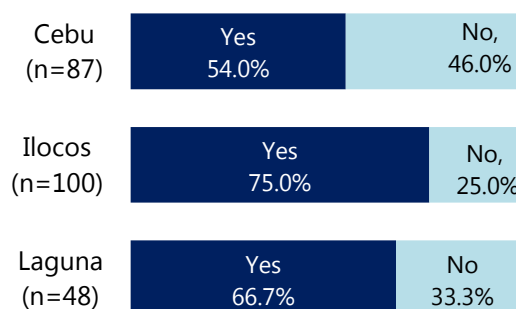
STUDENT CONTEXT INTERVIEW FINDINGS

It is widely recognized in the field of education that contextual factors, such as supportive home environments, adequate nutrition, and early exposure to literacy, play prominent roles in helping children succeed academically. Additionally, school factors such as teachers assigning homework or teachers reading to children have been found to be associated with improved performance. To assess these contextual factors, students were asked a series of questions about their home environment, student/teacher practices and their socioeconomic status. Below are results from the Grade 3 student context interview conducted for all longitudinally tracked students (non-repeaters). Most of the data collected is presented by student region (Ilocos, Cebu, and Laguna). In the instances where the results were similar, they are presented in aggregate.

SCHOOL AND TEACHER ENVIRONMENT

Nearly all (97.6%) students reported that they have been attending their school since the beginning of the school year. While the majority of students from all regions reported attending kindergarten (overall 65.5%), a statistically higher percentage of students from the Ilocos region reporting attending kindergarten than those from the Cebu region ($p < .01$).

Figure 2. Kindergarten Attendance (n=235)



Language Use in the Classroom

Under the MTB-MLE policy, students are taught in their respective MTs through Grade 3. Reading and writing in Filipino, the national language of the Philippines, is introduced gradually beginning in the second quarter of Grade 1. English is introduced as a subject in the third quarter of Grade 2. As seen in Figure 3 below, students report a variety of languages being used for classroom instruction.¹⁶ Not surprisingly, students from each region report high

¹⁶ Note, given that learners may receive instruction in more than one language at school, respondents were allowed to report multiple responses. As such, the figure above does not add up to 100%.

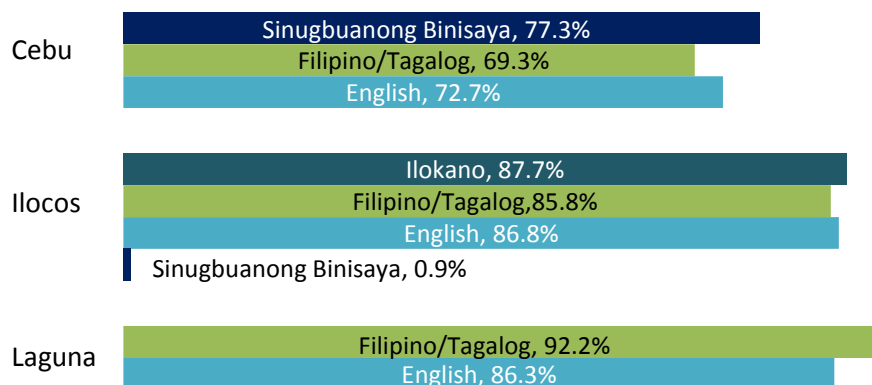
rates of their teacher using the dominant MT language of the region in the classroom. In the Cebu region, most students (about 77%) reported Sinugbuanong Binisaya was used by their teacher in the classroom.¹⁷ In the Ilocos region, this trend continued with nearly 90% of students reporting that Ilokano, the dominant MT language of the region was used by their teacher. In the Laguna region, roughly 92% of students reported that their teacher used Tagalog in class.¹⁸

Significantly different numbers of students from the Ilocos region (85.9%) reported that Filipino was used by their teacher in class compared to 69.3% in the Cebu region ($p < .01$). Interestingly, a similar number of students from the Ilocos and Laguna regions reported receiving instruction in Filipino.

Across all regions, the overwhelming majority of students reported that their teacher used English in class. Roughly 86% of students from the Laguna and Ilocos regions reported that their teacher used English in the classroom. Significantly fewer students in Cebu reported that their teacher used English in the classroom (72.7%) ($p < .05$). Of interest, Sinugbuanong Binisaya MT students had the lowest rate of meeting the English EGRA assessment fluency/comprehension standard.

Students reported that the number of languages used ranged from one to four, with regional differences observed. More students from the Ilocos region reported that more languages were used by their teacher in the classroom than students from the Cebu or Laguna regions ($p < .01$). About 83% of students from the Ilocos region reported their teachers used 3 or more languages in class, compared to 49% of Cebu students. No students from the Laguna region reported that their teacher used more than 2 languages, with about 86% of students reporting that they receive instruction in 2 languages.

Figure 3. What Languages Does Your Teacher Use in the Classroom?



¹⁷ DepEd's official designation for this Mother Tongue language is Sinugbuanong Binisaya. Mother Tongue is spoken in many regions in the country, including Mindanao. While there may be some differences in vocabulary or usage across the different areas where Sinugbuanong Binisaya is spoken, it is by and large the same language spoken across these locations.

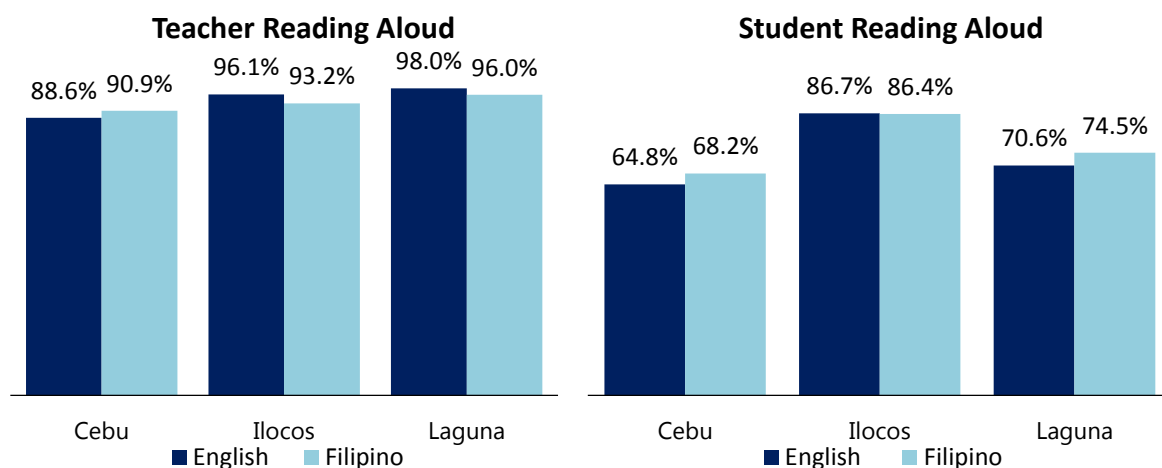
¹⁸ Tagalog is a dialect similar to Filipino. Filipino and Tagalog are treated as one (Filipino/Tagalog) for the purposes of this analysis.

Teacher and Student Classroom Reading

Opportunities in the classroom to develop oral reading fluency are important for the literacy development of early readers. Best practices suggest that an effective way to develop early readers oral reading fluency is through the modeling of fluent reading by teachers through reading aloud as well as drawing learners' attention to specific features of fluency (e.g. pausing at punctuation) through discussion. Similarly, providing learners with opportunities to read aloud is an effective approach to support the development of oral reading fluency skills. The overwhelming majority of students from all regions reported that their teachers read aloud in the classroom in English and Filipino. Slightly fewer students from the Cebu region (about 90%) reported that their teachers read aloud in the classroom in either English or Filipino, while more students from the Laguna and Ilocos regions reported the same. The difference in the number of students that reported that their teachers read aloud in English is statistically significant between the Cebu and Laguna regions ($p < .05$). The differences in the rates of teachers reading aloud in Filipino are not statistically significant.

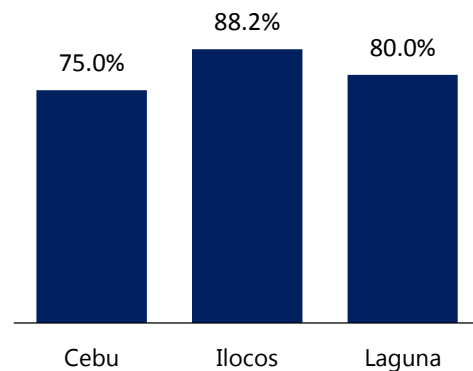
Students were also surveyed on whether their teacher asks them to read aloud in Filipino and English. The large majority (roughly 87%) of students in Ilocos reported that they were asked to read aloud in Filipino and English by their teacher. Fewer students (about two-thirds) from the Cebu region reported being asked to read aloud in either English or Filipino. Significantly fewer students from the Cebu and Laguna regions reported that they were asked by their teachers to read aloud in English in the classroom than students from the Ilocos region ($p < .05$). Significantly fewer students from the Cebu region reported that teachers asked them to read aloud in Filipino in the classroom than did students from the Ilocos region ($p < .01$).

Figure 4. Teachers Reading Aloud in the Classroom and Students Reading Aloud in the Classroom (n=241)



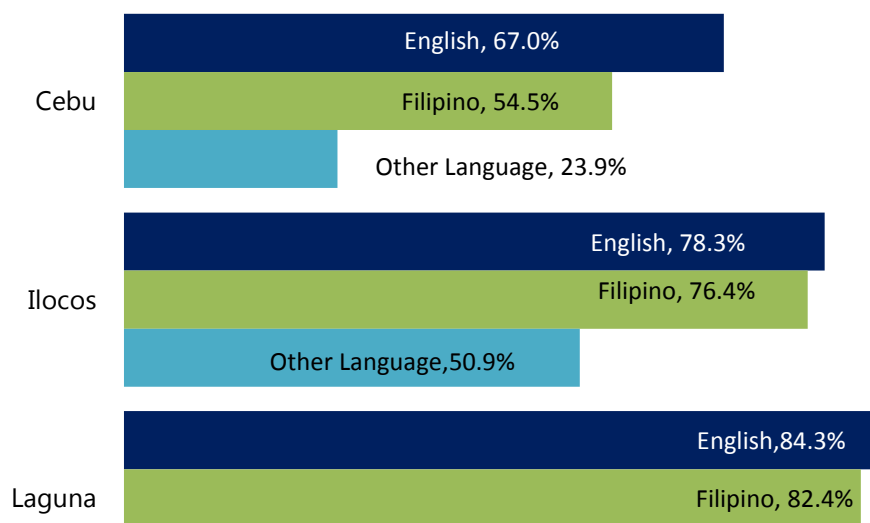
The majority of students reported being able to choose storybooks to read at school. Students from Ilocos reported the highest rate (88.2%) of being able to choose storybooks, which is significantly higher than the rate of students in the Cebu region (75.0%) ($p < .05$).

Figure 5. Students Allowed to Choose Storybook at School (n=240)



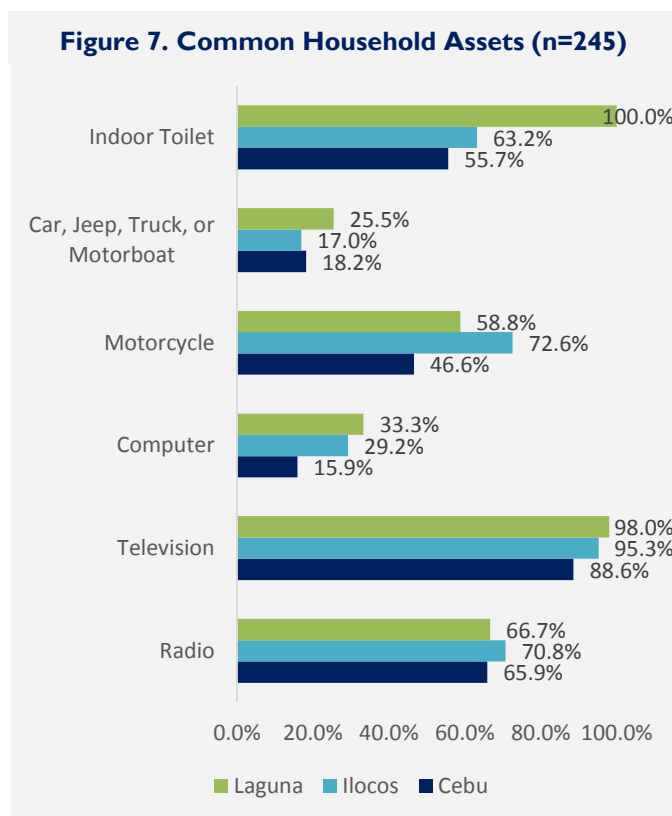
The large majority (93.0%) of students from all regions reported receiving reading homework at school; however, differences emerge when examining the type of reading homework students reported receiving. Students from the Cebu region reported receiving English and Filipino homework at a significantly lower rate than students from the Laguna or Ilocos regions ($p < .05$). Students from the Cebu and Ilocos regions also reported receiving homework in their regional MT: Sinugbuanong Binisaya for the Cebu region and Ilokano for the Ilocos region.

Figure 6. Languages of Reading Homework Assigned (n=245)



SOCIO-ECONOMIC FACTORS

Reports of common higher priced household items are commonly used as a proxy for household income as well as overall socio-economic status. The majority (90.6%) of students said that their families had between two and five of the surveyed household possessions, with a median of three out of the six possessions listed in the survey. A television, a radio, and an indoor toilet were the most commonly reported household possessions with the majority of students from all regions reporting having these in their households. Students from the Cebu region reported the lowest amount of household possessions, an average of 2 to 3 possessions, while students from the Laguna and Ilocos regions reported a significantly higher average number of household possessions, an average of 3 to 4 household possessions ($p < .01$).



HOME ENVIRONMENT

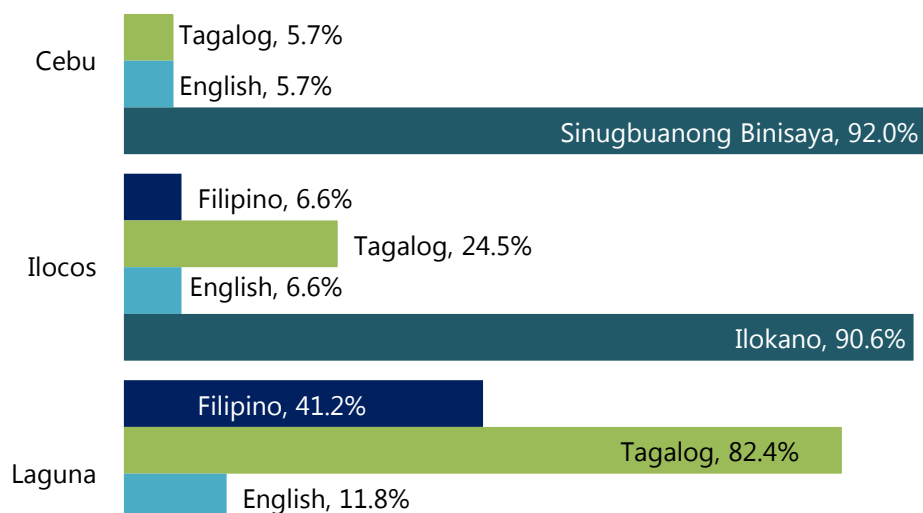
The overwhelming majority of students reported speaking the dominant MT language of the region. In addition to their MTs, some students reported additional languages at home.¹⁹ In the Ilocos region, the second most commonly reported language, after the MT Ilokano, was Filipino (30%). Only about 6% of students from the Cebu region reported that they spoke Filipino at home, which is significantly lower than students from Ilocos ($p = .000$). English was not widely reported being spoken at home across all regions with similar numbers of students (about 6-12%) reporting that they speak English at home.

The majority of students (roughly 84%) from all regions reported only speaking one language at home, while about 14% of students reported speaking two languages at home, and 2.1% of students reported speaking three languages at home. More students in Ilocos, about 26%,

¹⁹ Note, given that learners may speak more than one language at home, respondents were allowed to report multiple responses. As such, the table below does not add up to 100%.

reported speaking two or more languages at home, which is significantly higher than the 7.2% of students from Cebu and 10.0% of students from Laguna who reported the same ($p < .01$).

Figure 8. What Language Do You Speak at Home? (n=245)



Students were also asked to report their parents' occupations. Across all regions, the most common responses for surveyed students when asked about their mother's work were either informal worker or unemployed, with about 40% of students reporting that their mothers worked in the informal sector and about 47% reporting that their mothers were unemployed. The overwhelming majority (74.2%) of students from all regions reported that their fathers were employed in the informal economy, with only 11.1% reported that their fathers were unemployed. These results must be interpreted with caution since it is likely that children are not always aware of the occupation of their parents.

Table 5. Where Do Your Parents Work? ²⁰

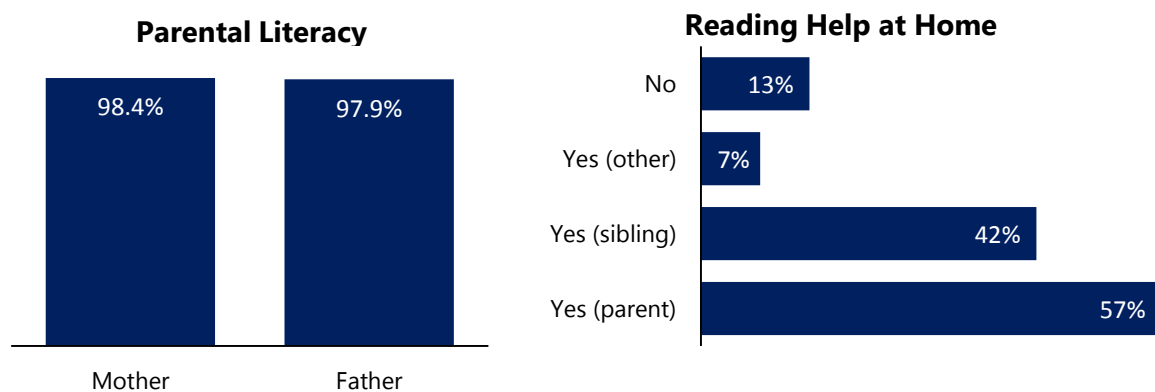
Parental Occupation	Mother (n=238)	Father (n=225)
Overseas Foreign Worker	5.9%	4.4%
Professional	7.6%	10.2%
Informal/Manual/Self	39.5%	74.2%
Unemployed	47.1%	11.1%

²⁰ Students who responded "Do not Know" or "No response" are excluded from the percentages presented in these paragraphs. Percentages only include students who responded to the question.

Parental involvement is a key predictor in early literacy success as well as future academic achievement of children. As such, the student context interview also aimed to find whether students receive any help with reading at home. The large majority of students from all regions reported that both their parents were literate though slightly more mothers (98.4%) than fathers (97.9%) were reported as literate.

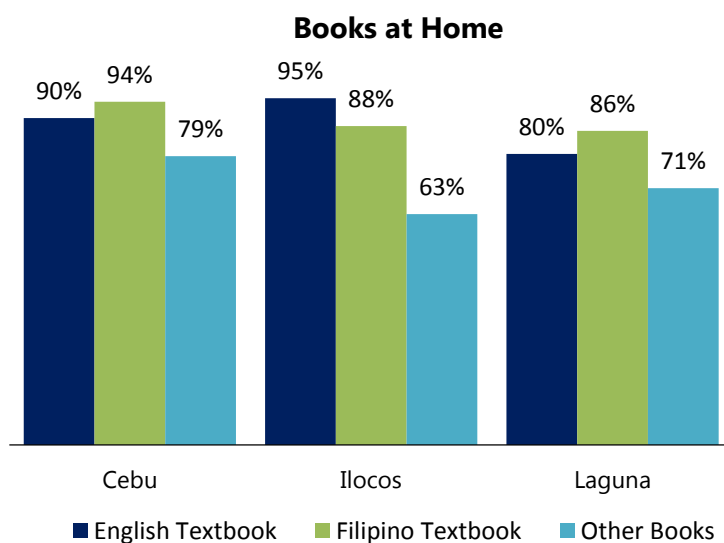
The majority of students from all regions (86.5%) said that they receive help at home with reading in Filipino or English, either from a parent or from a sibling. Others also reported receiving reading help from grandparents or aunts/uncles. About 13% of surveyed students said they do not receive help at home with reading.

Figure 9. Parental Literacy and Help with Reading at Home (n=245)



Students largely reported having books at home with the majority of students reporting that they have textbooks and other books in their homes. English and Filipino textbooks were overwhelmingly reported and more commonly reported than Mathematics textbooks (about 60-80%). Students from the Ilocos and Cebu regions reported similar rates of having English

Figure 10. Percentage of Students Having Books in Their Household (n=245)

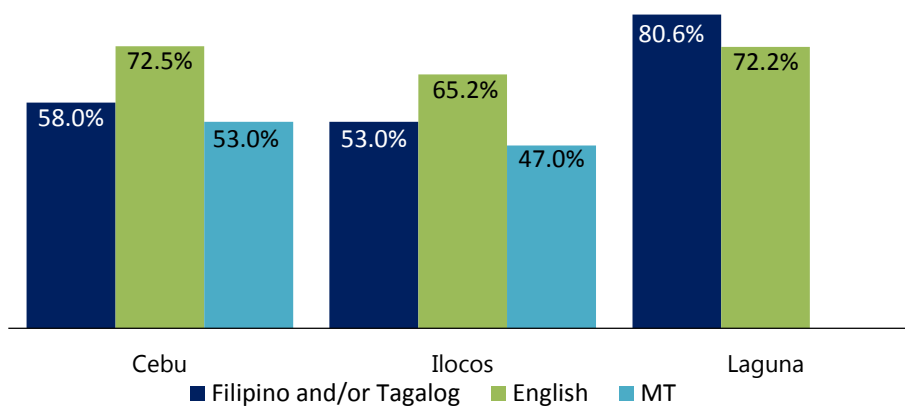


textbooks in their households. However, more students from the Ilocos region reported having English textbooks than students from the Laguna region ($p < .05$). Students from all regions reported similar rates of having Filipino textbooks in their households. There was greater variation among rates of students having Mathematics textbooks and other books in their households. Significantly more students from the Ilocos and

Cebu regions each reported having Mathematics textbooks in their households than students from the Laguna region ($p < .05$). Students from the Cebu region reported having other books in their households at higher rates than students from the Ilocos region ($p < .05$). Students from the Ilocos and Laguna regions reported similar rate of having other books in the household.

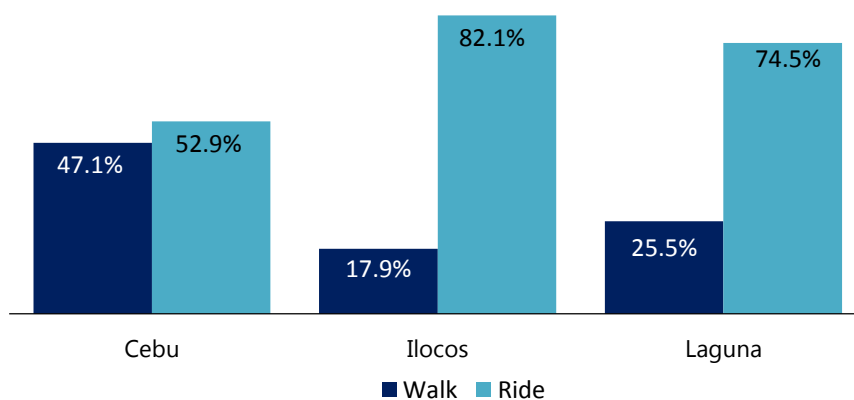
Of those students that reported owning other types of books, the majority of students from all regions reported owning books in English and Filipino/Tagalog. Interestingly, more students from the Cebu and Ilocos region reported owning English and Filipino/Tagalog books than books in their respective MTs. Significantly more students from the Laguna region reported owning books in Filipino/Tagalog, their own MT, than students from the Ilocos and Cebu regions ($p < .05$). A similar number of students from all regions reported owning English language books.

Figure 11. Percentage of Students Having “Other Books” in Their Household (n=171)



Students were also asked how they get to school. The majority of students in all regions reported that they ride to school, although there were regional differences. Significantly more students in the Ilocos and Laguna regions reported riding to school than did students from the Cebu region ($p < .01$).

Figure 12. How Students Get to School (n=242)



TEACHER INTERVIEW AND CLASSROOM OBSERVATION FINDINGS

LEARNING ENVIRONMENT

Over the course of the study, each year, students' reading subject teachers were interviewed to understand the learning environment in the classroom, specifically around teachers' own language backgrounds and their use of MT, Filipino, and English languages in the classroom. In total 84 teachers were interviewed: 28 Grade 1 teachers, 26 Grade 2 teachers and 30 Grade 3 teachers.

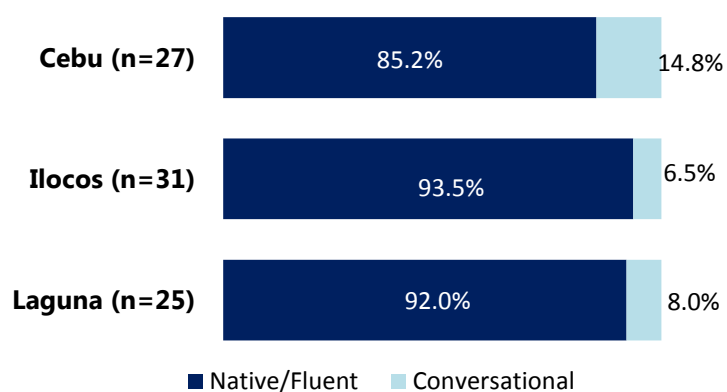
Teachers were asked to report the types of specific trainings they received in teaching reading. Across all regions, the majority of teachers in Grades 1 and 3 reported receiving training in how to teach reading in the early grades. However, no Grade 2 teachers in either Cebu or Laguna, and only about 27% of Grade 2 teachers from the Ilocos region reported receiving training in teaching reading in the early grades. Teachers also had the opportunity to receive training in early grade reading. In Cebu, the majority of Grade 2 (75%) and Grade 3 (64%) teachers and about half (46%) of Grade 1 teachers reported that they received such trainings. In Ilocos, the majority of teachers of all grades reported receiving training in early grade reading. In Laguna, 50% of Grade 1, no Grade 2 teachers, and 25% of Grade 3 teachers received such training.

The majority of Grade 1 teachers across all regions reported receiving specific training in MT instruction. More Grade 1 teachers reported receiving MT instruction training in Cebu (92%) and Ilocos (88.9%) than in the Laguna region (66.7%). Fewer Grade 2 and Grade 3 teachers reported receiving specific MT instruction training compared to Grade 1 teachers. Grade 2 teachers had the lowest rates of receiving such instruction with 50% of Cebu, 36% of Ilocos, and no Laguna teachers reporting that they received MT instruction. Interestingly, more Grade 3 teachers received MT instruction than Grade 2 with about 73% of Cebu, 73% of Ilocos, but only 13% of Laguna teachers reporting that they received such instruction.

During the interview, teachers were asked about their levels of proficiency in the dominant language of the region (MT), Filipino, and English. Teacher's proficiency in the languages of instruction is essential to proper and effective classroom pedagogy.

Under the MTB-MLE policy, students are taught to read in the MT (MT) identified for the region in Grade 1. In Grades 2 and 3, the MT remains the

Figure 13. Teachers' Mother Tongue Proficiency (n=83)

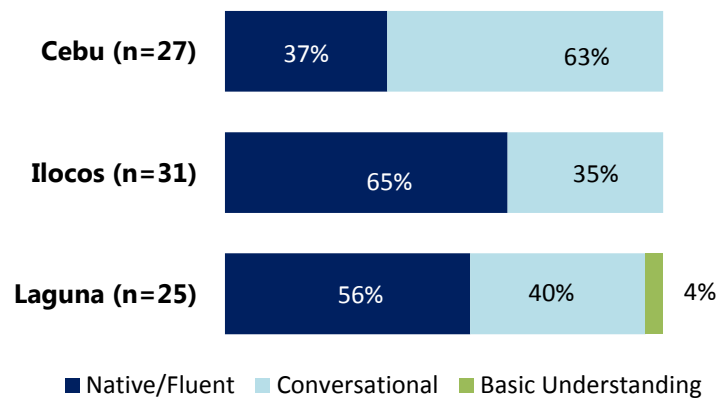


official language of instruction, although students are introduced to reading and writing in Filipino and English. As visible in Figure 13, all teachers were reported to be either conversational or fluent in the MT, with the overwhelming majority (about three-quarters or more) of teachers in each grade found to be fluent.

Filipino proficiency was also reported to be high by teachers from all regions. Filipino is introduced as a formal second-language subject in Grade 2, and in Grade 3, Filipino continues to be emphasized in preparation for the transition to Filipino-based instruction in Grade 4. During the teacher interview, while almost all teachers reported to be either conversational or fluent in Filipino, there was more variation

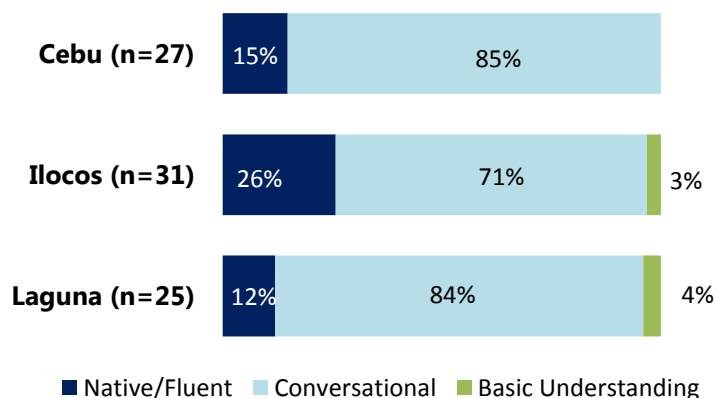
found in Filipino language proficiency levels than in MT levels. In Cebu, the majority of Grade 1 and Grade 3 teachers had conversational level Filipino proficiency, while all of the Grade 2 teachers in Cebu had fluency. In Ilocos, about three-quarters of Grade 2 and 3 teachers, and about 44% of Grade 1 teachers had Filipino fluency. In Laguna, all of Grade 1 and Grade 3 teachers had Filipino fluency. In Grade 2, however, no teacher reported to be fluent in Filipino. The majority of teachers stated being conversational and one Grade 2 teacher (9.1% of the sample) reported to have only a basic speaking and understanding of Filipino.

Figure 14. Teachers' Filipino Proficiency (n=83)



English language is introduced as a reading subject in Grade 2 in preparation for the transition to English as the language of instruction (LOI) for Math and Science subjects in Grade 4. The majority of teachers reported conversational proficiency in English, with about 50% or fewer teachers found to be fluent in English. Grade 2 teachers in Cebu reported having the highest rate of English fluency (50%). About 10% of Grade 2 teachers in Laguna and Grade 1 teachers

Figure 15. Teachers' English Proficiency (n=83)

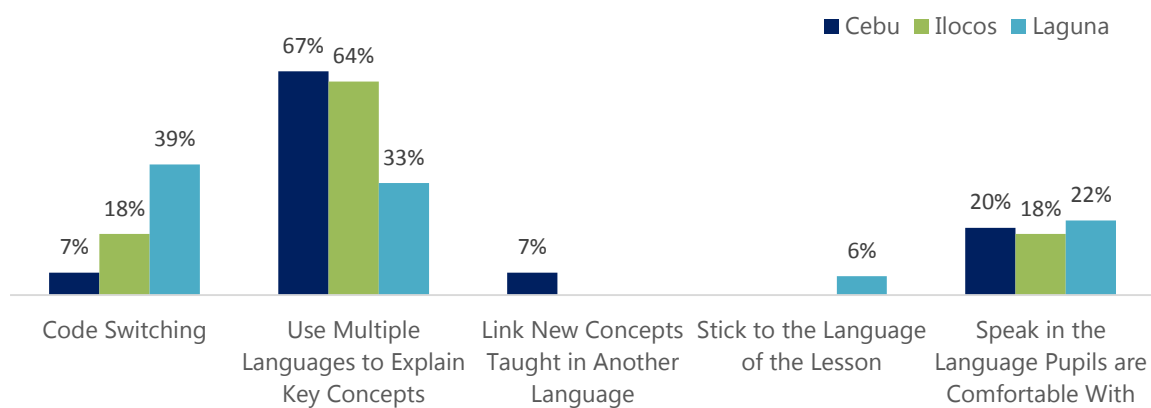


in Ilocos reported to only have a basic speaking and understanding level of English proficiency.

Under the MTB-MLE policy, teachers integrate Filipino and English into MT classroom instruction in preparation for the Grade 4 transition into Filipino and English as the LOIs. Grade 2

and Grade 3 teachers were asked how they incorporate multiple languages into their teaching. As seen in Figure 16 below, teachers most commonly used multiple languages to explain key concepts, with about two-thirds of teachers from the Cebu and Ilocos regions indicating that they use this method. Fewer Laguna teachers responded that they used multiple languages in their lesson (about 33%), with slightly more Laguna teachers (about 39%) indicating that they “code switch” or use terms in another language unintentionally during their lesson. No teachers from the Cebu or Ilocos regions, and only about 6% of Laguna teachers, responded that they stick to the language of the lesson. This indicates that the overwhelming majority of teachers do incorporate multiple languages into their lessons.

Figure 16. How Teachers Incorporate Multiple Languages (n=55)



READING INSTRUCTION PRACTICES IN THE CLASSROOM

An examination of teaching explores how teachers support the reading and writing environment in their classroom. A sample of 30 Grade 3 teachers in study schools were observed in February/March 2017 during a MT, Filipino or English reading lessons and scored using the *Standards-based Classroom Observation Protocol for Educators (SCOPE)* tool, which assesses teacher practices in 13 domains of Classroom Structure and Language and Literacy Instruction. It should be noted that reading teachers follow an instructional sequence in which not all 13 domains are taught everyday but over a period of several days. Depending on the lesson plan for the day, it would not be expected that teachers teach all domains during a reading lesson.

Classroom Structure Teaching Practices

Grade 3 teachers were observed for effective classroom structure and teaching practices such as creating a supportive learning environment, using effective grouping strategies, ensuring the participation of all learners, providing opportunities for reflection, ensuring accessible classroom materials, and managing reading and writing instruction.

Classroom observation showed that some structure was provided within the classroom with regard to a **positive learning environment**. Many lessons started with a song. Some observations noted that students internalized rules and routines such as raising their hands to answer questions or becoming quiet when the teacher raised her/his hand. In other observations, however, it was noted that while there were rules, students did not always follow them. Students called out and were not always on task. It was noted that teachers used calm, soft voices. There were no observations of teachers yelling, although there were instances of students not following teacher directions to stay on task and pay attention.

CLASSROOM STRUCTURE PRACTICES

*Observed teachers had adequate and **accessible classroom materials** for their learners. Teachers were largely observed, “ensuring a **positive learning environment**,” and “ensuring **participation of all learners**”. Teachers struggled with using “effective grouping strategies” in the classroom and “ensuring time for reflection on learning.”*

Effective grouping strategies seemed to be the most challenging. It could be that the particular lessons themselves did not lend to grouping or that the teachers were not experienced enough to plan and execute effective lessons that incorporated grouping. Whole class was the dominant observation. At times, students were paired for reading or completing an assignment or the class was divided into two groups with one reading silently while the other read/worked with the teacher. Grouping is difficult for teachers who are still learning the curriculum and instructional practices for whole group instruction. Until these fundamentals are mastered, it will be difficult for teachers to be effective in developing and executing meaningful learning experiences for varying ability groups.

Some positive practices observed regarding **participation of all learners** were teachers standing in close proximity to some students (even those with special needs) to better engage them and keep them on task. Directions were repeated/restated. Extra wait time was given, although this was also noted in some cases as creating a disruption as other students lost interest due to prolonged wait time. Some areas that could be approved upon relate to teachers focusing on the fast learners and those who regularly and actively participate while others are less or not at all engaged. There were several instances where girls were called upon/engaged more than boys, as well as students near the front of the room more than those seated further away. Eliciting prior knowledge was sometimes a strategy used to engage all level learners, but this was not consistent or observed as regular practice.

There were very limited **opportunities for reflection** observed. There were some instances where students were encouraged to reflect on the answers of other students – whether whole class or within a group activity, but there was no structure for self-reflection. Correct responses were simply given without elaborating on process.

With respect to **classroom materials**, printed material was observed. Alphabet charts appeared to be the most common print displayed with word walls/lists, sentence strips and pocket charts also observed. Pencils and paper varied from sufficient to limited supply, however, there is no record of whether that was because they weren't observed or it simply was an omission in recording. Learner displayed work was not commonly observed.

With regard to **managing reading and writing instruction**, it was noted that the teacher had a lesson plan. There were some instances where it was noted that the teacher was using the Basa Teacher Guide as the plan but more often noted that the DepEd Curriculum Guide or Teacher Guide was used as the lesson plan. It was noted less than 50% of the time that teachers followed a regular pattern of instruction. This does not mean that it was not present otherwise, just not noted. Except in rare instances, there was no elaboration given to provide evidence to support connections to prior lessons. Evidence such as reviewing previous day's lesson was typically cited in such observations. With regard to directions to support learners, instructions were observed to be clearly stated in most cases and understood by learners. At times, instructions were repeated, teachers employed code switching to MT to ensure learners understood directions. There were observations where teachers gave explicit instructions, but students were observed not to understand how to complete assigned task.

Language and Literacy Instruction Teaching Practices

The language and literacy instruction practices utilized by teachers in the classroom were also observed; particularly, how effectively teachers provide opportunities for oral language development, meaningful reading, decoding and spelling words, learning reading vocabulary, developing fluency and reading comprehension, and practicing authentic writing.

While there were several observations of students having the **opportunity to engage in oral language** through sharing opinions, providing descriptions through responding to literal (Who, What, When, Where and Why) questions, responding to questions prior to reading, during reading, and post-reading, overall, limited opportunities were observed for students to express themselves. There were some opportunities for students to express themselves from

LANGUAGE AND LITERACY INSTRUCTION PRACTICES IN THE CLASSROOM

*Providing opportunities for **oral language development** was the most frequently observed language and literacy practices. Teachers struggled with providing opportunities for meaningful reading, and developing reading comprehension.*

open-ended questions, but this was not typical. The majority of lessons appeared teacher dominant. There were instances where teachers allowed/encouraged students to respond in MT if that was more comfortable for them to express themselves. There were few observations of direct instruction in oral language, although some teachers code switched to facilitate student understanding.

With respect to **opportunities for meaningful reading**, the majority of observations indicated that the teacher chose the text. (It is important to note that some lesson plans were designed around a specific story dictated by the curriculum, which may have contributed to the low scores for this item.) There were some observations of reading corners and mini libraries. Rarely were reading corners or libraries observed in use during the lessons observed and the majority of observations stated there was no opportunity for independent reading. However, this may be due to the lesson plan design for that particular day. The few instances cited were mainly children reading an assigned text or sentence silently. It appeared there were few print materials available in most observations.

Opportunities for learning to decode and spell words was also a weak skill area. Overwhelmingly, there was no or little evidence of strategies for decoding. However, in some of these observations, it appeared the lesson was not necessarily focused on decoding but rather other skills, such as making a graph or comprehension. Observations documented that teachers “unlocked the difficult words”. One teacher was observed demonstrating decoding through adding prefix, infix, and suffix to a root word. There was mention of teachers helping students who had difficulty with spelling, but it was also noted that some teachers called on other students when the students couldn’t respond rather than coaching them and using the opportunity as a teachable moment. Direct instruction of teaching spelling skills was limited.

Developing reading fluency was another weak area. There was a mix of no evidence or no modeling of fluency to teachers reading with fluency, and there were limited observations of instructional strategies and activities to build automaticity. Occasionally, it was observed that the teacher paused or used expression. Whole class and choral reading was observed but otherwise limited activities.

With respect to **opportunities for developing vocabulary**, in some observations, teachers used pictures to introduce and explain meanings of new words. Some teachers translated the words into MT language to support understanding. There were a number of observations where it was stated that there was no opportunity to develop vocabulary or no unlocking of new words during the lesson. In rare instances, teachers were observed to use context of the story or real objects to build vocabulary meaning.

In terms of **opportunities for developing reading comprehension**, there were a few observations where teachers asked deeper/higher level questions. Overall, the teacher explaining and modeling “thinking” strategies was very limited. The main strategy used to foster comprehension was questioning, although questions were often literal/factual. There did not seem to be an integrated set of instructional strategies noted. Vocabulary and high frequency words being highlighted was a strategy noted.

For **writing instruction**, very few instances were observed. In the majority of cases, there was no evidence of writing or it was limited to completing exercises like filling in the blanks or spelling. Some observations noted the teacher sharing a picture and having students write about it or having students write the answers to comprehension questions based on a story read together. There was little to no evidence of authentic writing activities.

2. LEARNING TRAJECTORY IN READING FROM GRADE 1 TO GRADE 3

Under the MT Based-Multi-Lingual Education (MTB-MLE) Policy, during Grades 1 through 3, MT is the main language of instruction in the classroom, with Filipino and English introduced as subjects during these grades. Filipino and English are treated as oral language subjects in Grade 1, while in Grade 2 and Grade 3 students are introduced to reading and writing in Filipino and English. By Grade 4, however, MT is phased out as both a subject and language of instruction and students are taught all subjects in Filipino, except math and science, which are taught in English.

In conjunction with DepEd, Basa’s research seeks to assess student developmental reading trajectories from Grades 1 to 3 within the context of the MTB-MLE policy. To assess students’ literacy development from Grade 1 to Grade 3, students were assessed on their ability to read with fluency and comprehension in their MT, Filipino (L2) and English (L3). The EGRA assessment was administered annually at the end of the school year to a longitudinal sample of 245 students from the Ilocos, Cebu, and Laguna regions as they progressed from Grade 1 to Grade 3. The EGRA assessment was administered in students’ MT languages²¹ and in Filipino all three years. An English version of the assessment was also administered in Grades 2 and 3.

Students’ literacy development is measured through students’ increasing rates of meeting reading proficiency standards,²² which are combined fluency and reading comprehension thresholds, on EGRA assessments in their respective MTs, Filipino, and English. The following section highlights the findings on students’ literacy development from Grade 1 to Grade 3 from this assessment.

Table 6. Reading Proficiency Standards

EGRA Language	Reading Proficiency Standard	
	Words correct per minute	% Reading Comprehension
Filipino	40 wcpm	80% Comprehension
Sinugbuanong Binisaya	50 wcpm	80% Comprehension
Ilokano	50 wcpm	80% Comprehension
English	60 wcpm	80% Comprehension

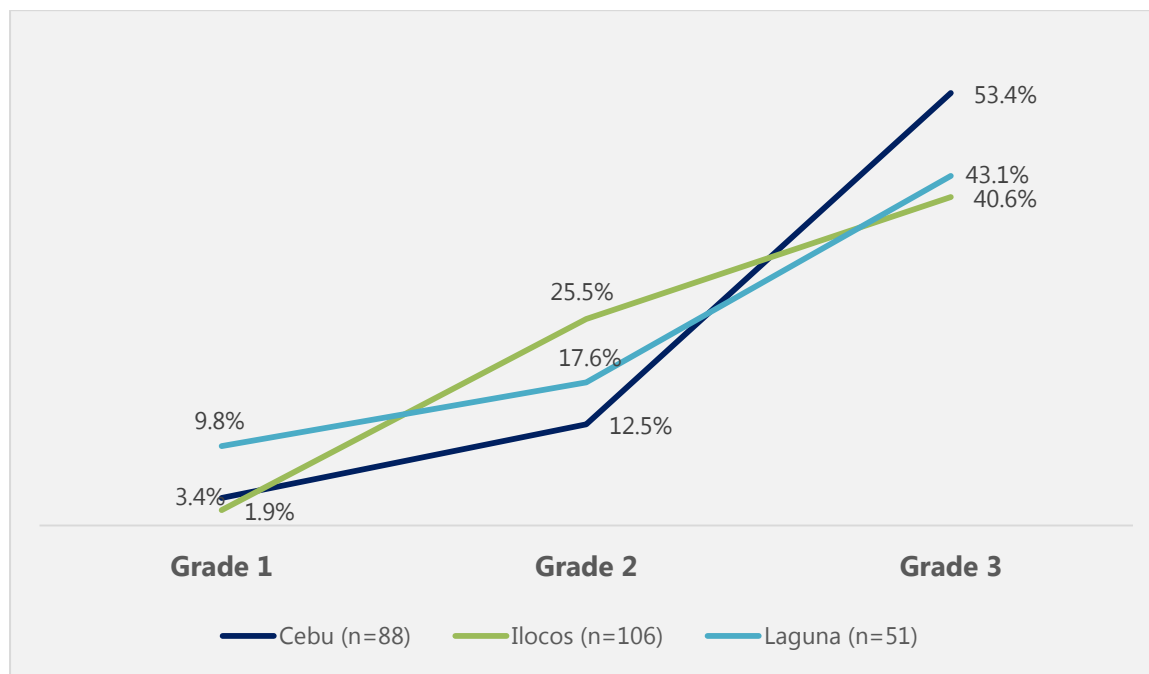
²¹ In this study, Tagalog MT students (from the Laguna region) were assessed in Filipino due to the significant similarities between Tagalog and Filipino. This is because there is no Tagalog language version of the EGRA assessment.

²² Reading proficiency standards were established using combined fluency and reading comprehension thresholds by language. Proficiency standards were proposed based on existing research and standards and data-supported relationship between oral reading fluency and comprehension. Details on how proficiency standards were established can be found in the Methodology Section.

WHAT IS THE MT LEARNING TRAJECTORY IN READING FROM GRADE 1 TO GRADE 3 BY LANGUAGE?

MT READING RESULTS FROM GRADE 1 TO GRADE 3

Figure 17. Percent of Learners Meeting MT Reading Proficiency Standards (n=245)



Grade 1 EGRA results indicated that the overwhelming majority of students were not able to read with fluency and comprehension in their MT by the end of Grade 1. Analysis of the percentage of students meeting MT reading proficiency standards²³ showed that although very few learners were able to read with proficiency in Grade 1, across region, a slightly higher percentage of Tagalog MT students (9.8%) from the Laguna region were demonstrating reading proficiency in Grade 1 compared to the other regions. This rate is slightly higher than the rates of students from the Ilocos or Cebu regions, where less than 5% of students met their respective MT fluency/comprehension standards. This finding was corroborated by effect size calculations²⁴ which showed small to medium effect size differences between the rate of

²³ Language fluency/comprehension standards were calculated for each language. For students to meet the fluency/comprehension standards they must meet the following scores on the EGRA oral fluency (measured in words correct per minute) and reading comprehension (measured in percentage of questions answered correctly) subtests. For Sinugbuanong Binisaya, students must score at or above 50 wcpm on oral fluency and 80% on reading comprehension. For Ilokano, students must score at or above 50 wcpm on oral fluency and 80% on reading comprehension. For Filipino, students must score at or above 40 wcpm on oral fluency and 80% on reading comprehension. For English, students must score at or above 60 wcpm on oral fluency and 80% on reading comprehension.

²⁴ Effect size is a statistical measure that is used to estimate the magnitude of difference between two measures. Cohen's *h* estimates the magnitude of difference between two proportions (*p*). It is computed by taking the difference between the "arcsine transformation" of the two measures. Arcsine transformation is defined as

students meeting fluency and comprehension standards in Laguna compared to students in Ilocos and Cebu ($h=0.36$ and $h=0.27$, respectively).

Notable improvements in students' MT reading achievement were noted by the end of Grade 2. From all regions, the percentage of students meeting reading proficiency standards in their respective MTs increased from Grade 1 to Grade 2. Nevertheless, the majority of students across all MTs were unable to read with proficiency by the end of Grade 2. Ilokano MT students had the highest rate of meeting MT reading proficiency standards among Grade 2 students in which 25.5% of tested students were able to read with fluency and comprehension in Ilokano. In Grade 2, Ilokano MT students appear to have much higher reading ability than Sinugbuanong Binisaya MT or Tagalog MT students; however, this difference is likely due to the fact that Grade 2 data was collected in the Ilocos region approximately 2-4 months later than in the Cebu and Laguna regions, meaning that Ilokano MT students had received an additional 2-4 months of schooling at the time of the assessment. The additional schooling likely resulted in the larger percentage of learners meeting fluency and comprehension standards in Ilokano in Grade 2.

In Grade 3, the rates of students meeting reading proficiency standards continued to increase for all MTs. Just over half of Sinugbuanong Binisaya MT students (53.4%), the highest rate among the MTs, were reading with proficiency in Grade 3. Overall, 40.6% of students from the Ilocos and 43.1% of students in the Laguna region were able to read with fluency and comprehension in their respective MTs at the end of Grade 3. MT reading proficiency rates in Grade 3 were largely similar across MT language. Results showed that slightly more Grade 3 Sinugbuanong Binisaya MT students were reading with proficiency at the end of Grade 3

compared to Ilokano MT students, showing a small effect size difference of $h=0.26$.

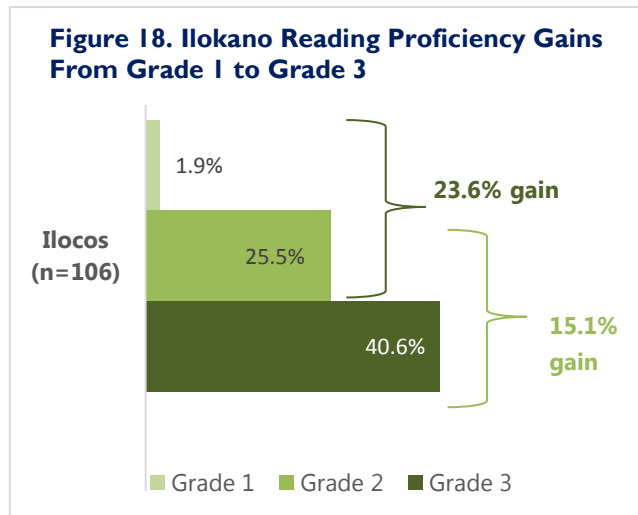
MOTHER TONGUE (L1) LITERACY TRAJECTORY FROM GRADE 1 TO GRADE 3

Overall, students from all regions showed considerable improvements in reading achievement between Grade 1 and Grade 3, reflected in large effect sizes ($h \geq 0.8$). The largest increase from Grade 1 to Grade 3 in the percent of students who could read with fluency and comprehension in their Mother

Overall, students from all regions showed considerable improvements in reading achievement between Grade 1 and Grade 3, reflected in large effect sizes ($h \geq 0.8$). The largest increase from Grade 1 to Grade 3 in the percent of students who could read with fluency and comprehension in their MT was seen in Cebu in which 50.0% more students met Sinugbuanong Binisaya reading proficiency standards in Grade 3 than in Grade 1 ($h=1.27$).

$\phi=2\arcsin\sqrt{p}$. Effect sizes are interpreted as follows, according to Cohen (1998): "small, $d = .2$," "medium, $d = .5$," and "large, $d = .8$ ". (reference: Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.)

Although, the percent of learners reading with fluency and comprehension in their MT improved across all regions from Grade 1 to Grade 3, additional analysis was conducted to examine in which grade learners tend to make the jump from “learning to read” to “reading to learn.” Analysis showed that there is significant improvement between Grades 1 and 2, and then another, smaller, but substantial improvement from Grade 2 to Grade 3.



The greatest gains for Ilokano MT students occurred between Grades 1 and 2, with an additional 23.6% of Ilokano MT students meeting the reading proficiency standard ($h=0.78$). Between Grades 2 and 3, Ilokano MT students had additional gains with 15.1% additional students meeting the reading proficiency standard ($h=0.32$). The greatest increase in the percent of learners meeting fluency and comprehension standards for Sinugbuanong Binisaya and Tagalog MT students occurred between Grades 2 and 3, where the reading proficiency rate increased by 39.6% for Sinugbuanong Binisaya MT students and 25.4% for Tagalog MT students from Grade 2 to Grade 3 ($h=0.92$ and $h=0.57$, respectively). Conclusions around when Tagalog and Sinugbuanong Binisaya MT learners make the jump from “learning to read” to “reading to learn” in their MT should be cautioned. Given that Grade 2 data was collected in Cebu and Laguna two to four months earlier in the school year than data was collected in Grade 1 and Grade 3 in these regions, this may have resulted in lower percentages of students meeting MT standards in Grade 2 in Cebu and Laguna. Additional research is needed to delve deeper into when learners make the largest improvements in MT literacy.

WHAT IS THE LANGUAGE 2 (L2) AND LANGUAGE 3 (L3) READING TRAJECTORY RESULTS FROM GRADE 1 TO GRADE 3?

Research has shown that MT learning can benefit students’ L2 and L3 language acquisition. Findings suggest that students can draw on the knowledge of language and literacy concepts, such as text decoding, learned for their MT (L1) to learn to read in an L2 or L3.²⁵ Furthermore, students’ L1 abilities may allow for faster L2 and L3 literacy acquisition as students with the necessary literacy skills in one language (their L1) are able to apply those skills more readily in an L2 or L3 setting.

Under the MTB-MLE policy, from Grade 1 to Grade 3 Filipino and English are treated as oral language subjects. Filipino is taught as a second language and English is taught as a third language. The study aimed to document the reading development of learners in their L2 and

²⁵ Comings 2014. p.3.

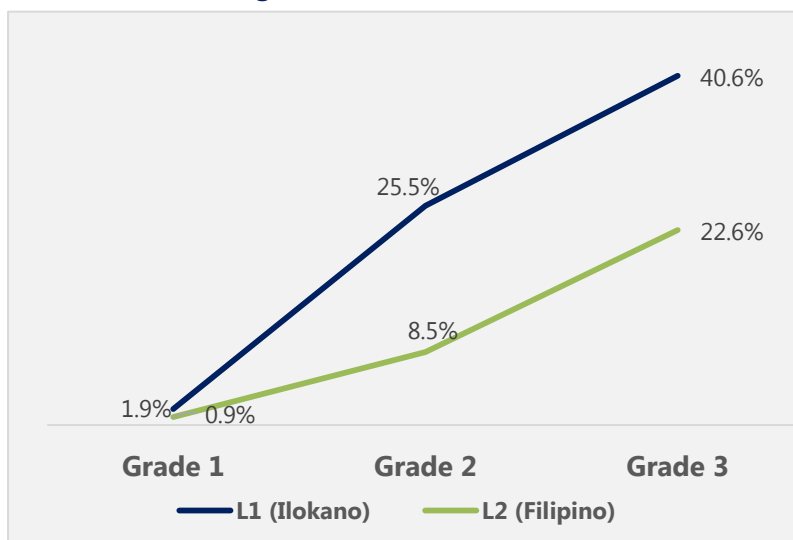
L3. Particularly whether students show improvement in their L2 and L3 reading development at the same rate as they do in their MTs.

FILIPINO (L2) READING RESULTS FROM GRADE 1 TO GRADE 3

From Grade 1, students are introduced to Filipino, as a second language (L2) as a language subject in preparation for the transition to Filipino-based instruction in Grade 4. The results from the EGRA administered to students demonstrate that students from the Ilocos and Cebu regions began with comparable levels of reading ability in both Filipino and their MTs; less than 5% of students were able to meet MT or Filipino reading proficiency standards. However, by Grade 3, while both MT and Filipino reading ability had improved greatly, a considerably higher percentage of students met reading proficiency standards in their respective MTs than in Filipino.

Ilocos Region

Figure 19. L1 and L2 Reading Trajectory From Grade 1 to Grade 3 - Ilocos Region



In Grade 1, students in the Ilocos region had similar reading proficiency rates in their MT (Ilokano) and their second language (Filipino) with about 1-2% of students meeting reading proficiency standards. Larger improvements from Grade 1 to Grade 2 were seen in MT reading proficiency than in Filipino ($h=0.47$). By the end of Grade 2, 8.5% of students from Ilocos met the Filipino fluency/comprehension

standard, while 25.5% of students met the MT (Ilokano) fluency/comprehension standard. By the end of Grade 3, students from Ilocos continued to meet reading proficiency standards at a substantially lower rate in their L2 (Filipino) (22.6%) than in their MT (40.6%) ($h=.39$). This indicates that although the percent of students demonstrating reading proficiency in their L2 (Filipino) increases from Grade 1 to Grade 3, the rate at which learners are acquiring reading proficiency in Filipino is much slower than in their MT (Ilokano). However, despite higher reading proficiency rates in MT than in their L2, learners in the Ilocos improved in reading proficiency in their MT and Filipino at a similar rate from Grade 2 to Grade 3.

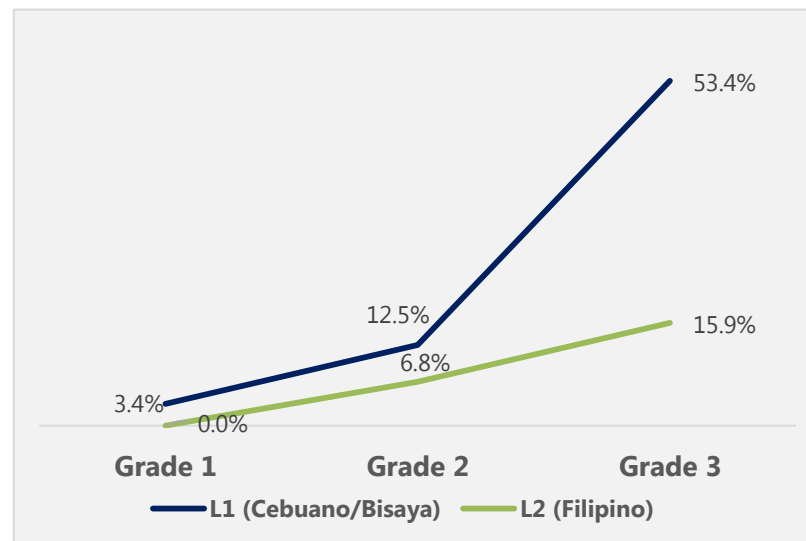
Of interest, Ilocos students' improvement in their L2 (Filipino) follows a different trend to that of their MT. Students showed greater improvement in MT reading ability between Grades 1

and 2, while greater improvement for Filipino occurred between Grades 2 and 3, where about 14.1% more students were able to meet the Filipino reading proficiency standard compared to 7.6% improvement between Grades 1 and 2. This suggests that initially Ilocos learners show improvement in reading proficiency at a faster rate in MT compared to their L2, however, by Grade 3, improvements in the percent of proficient readers occurs at a similar rate in both MT and L2.

Cebu Region

In Grade 1, slightly more students were able to read proficiently in their MT (3.4%) than in Filipino (0.0%), which is not surprising given that Filipino is only introduced to learners in the second quarter of Grade 1 as an oral language subject; reading and writing instruction is not introduced until Grade 2. Students' greater Grade 1 reading ability in their MT is corroborated by a small to medium effect size difference of $h=0.37$.

Figure 20. L1 and L2 Reading Trajectory From Grade 1 to Grade 3 – Cebu Region



Similar to Ilokano results, from Grade 1 to Grade 2, reading proficiency rates improved in both students' MT and L2; however, larger improvements were seen in MT. By the end of Grade 2, 6.8% of Cebu students met the Filipino fluency/comprehension standard; while in their MT, nearly twice as many (12.5%) Cebu students met the MT fluency/comprehension standard.

From Grade 2 to Grade 3, the reading proficiency rate in MT and Filipino continued to widen, in which significantly more learners were meeting reading proficiency standards in MT compared to their L2. In Grade 3, 15.9% of students from the Cebu region met the Filipino fluency/comprehension standard, compared to 53.4% of Cebu students that met the fluency/comprehension standard in their MT. This difference is corroborated by a large effect size of $h=0.82$.

Despite less overall improvement and lower reading ability, students' improvement in Filipino follows a similar trend to that of their MT. Students had greater improvement in MT and Filipino reading ability between Grades 2 and 3. Conclusions around when Sinugbuanong Binisaya MT learners show the largest improvement in the percent of proficient readers in their Filipino (L2) should be cautioned. Given that in Grade 2 data was collected in Cebu two to four

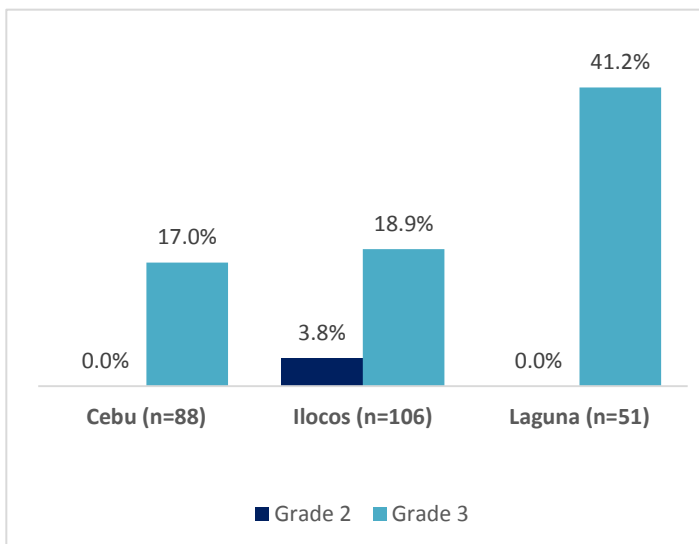
months earlier in the school year than data was collected in Grade 1 and Grade 3. Additional research is needed to delve deeper into when Sinugbuanong Binisaya MT learners make the largest improvements in second language (L2) literacy in Filipino.

ENGLISH (L3) READING RESULTS FROM GRADE 2 TO GRADE 3

In Grade 1, students are introduced to English as an oral language subject during third quarter of the school year. Beginning in the third quarter of Grades 2, learners are introduced to reading and writing in English as a subject, which is continued in Grade 3. To explore the learning trajectory of learners in English (L3), English Grade 2 and Grade 3 EGRA results from learners in Cebu, Laguna, and Ilocos were compared.

The results from the English EGRA administered to students in Grades 2 and 3 demonstrate that students from all three regions increase their English reading ability greatly between Grades 2 and 3.

Figure 21. L3 (English) Reading Trajectory from Grade 2 to Grade 3, by Region (n=245)



By the end of Grade 2, slightly more students from the Ilocos region (3.8%) demonstrated English reading proficiency compared to students from the Cebu or Laguna region, where no students were able to meet the English reading proficiency standards.²⁶

Between Grades 2 and 3, the percent of students from all three regions demonstrating English reading proficiency improved. The differences in rates between Grades 2 and 3 are considerable for all regions and show

a medium effect size difference for students from the Ilocos ($h=0.51$), and large effect size differences for students from the Cebu and Laguna regions ($h=0.85$ and $h=1.39$, respectively).

In Grade 3, a larger percentage of students from the Laguna region were able to read with fluency and comprehension in English compared to Ilocos and Cebu regions with 41.2% of students meeting the English fluency/comprehension standard compared to 17.0% in Cebu

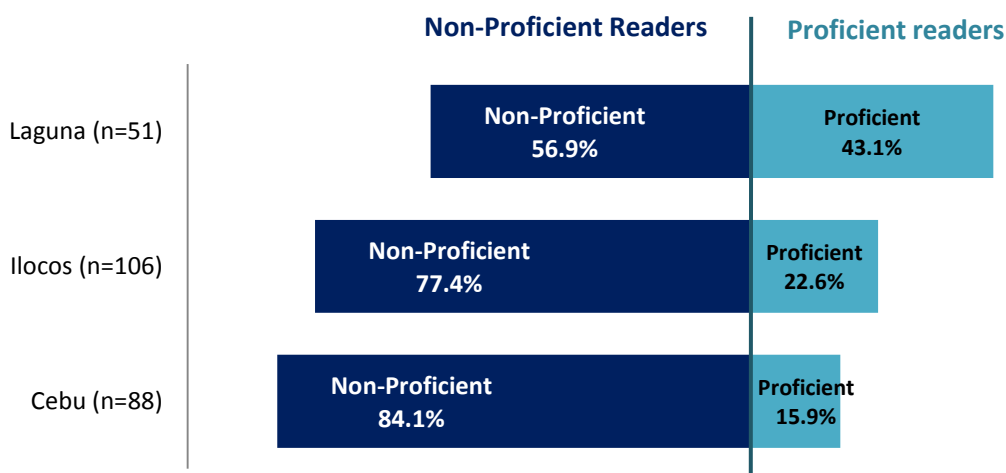
²⁶ Ilocos students' greater English reading ability is likely due to the fact that Grade 2 data was collected later in the school year in the Ilocos region (in Q4) than in the Cebu or Laguna regions (in Q3). Learners are introduced to English reading and writing in Q3 of the school year, so students from the Ilocos regions had more English reading and writing instruction than students from the Cebu and Laguna regions.

and 18.9% in Ilocos. Ilokano and Sinugbuanong Binisaya MT students meet the English fluency/comprehension standard at similar rates.

DO LEARNERS IN CEBU AND ILOCOS “CATCH UP” TO TAGALOG MT SPEAKERS IN FILIPINO BY GRADE 3?

Tagalog MT speakers in Laguna may be seen as native Filipino speakers due to the significant similarities between Tagalog, their MT, and Filipino, the national language. They thus have an advantage over non-Tagalog MT speakers in Cebu and Ilocos in terms of acquiring proficiency in the national language. The results from the Filipino EGRA administered to students from the Cebu and Ilocos region demonstrate that while the percent of these non-Tagalog students who are proficient readers in Filipino improves between Grades 1 and 3, they do not “catch up” to Tagalog MT students by Grade 3. In contrast, Tagalog MT students consistently have greater Filipino reading ability from Grades 1 to 3.

Figure 22. Proficient Readers in Filipino in Grade 3, by Region (n=245)



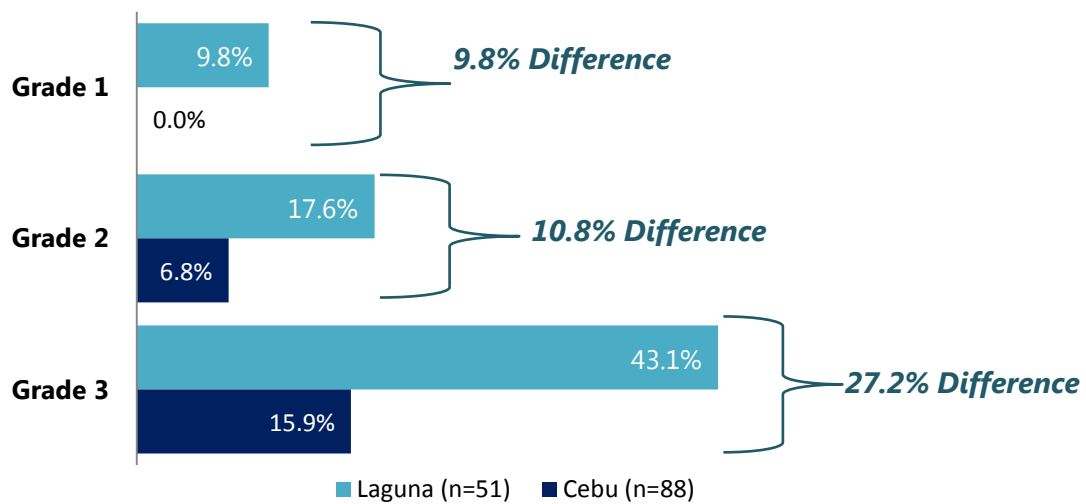
Results show that beginning in Grade 1, Tagalog MT students are more likely to be proficient readers in Filipino at the end of Grade 1 than non-Tagalog MT students. A larger percent of Grade 1 students in the Laguna region (9.8%) can read with fluency and comprehension in Filipino than students in Cebu (0.0%) or Ilocos (0.9%).

These differences persist in Grade 2, where 17.7% of Laguna students meet the Filipino reading proficiency standards compared to only 6.8% of Cebu and 8.5% of Ilocos students, respectively.

By the end of Grade 3, Tagalog MT learners continue to significantly outperform non-Tagalog speakers in Filipino reading proficiency. In fact, results suggest that instead of “catching up” to Tagalog MT learners by the end of Grade 3 in Filipino reading proficiency, Filipino learners in Cebu and Ilocos are falling further behind. Overall, 43.1% of Tagalog MT students were able

to read in Filipino with fluency and comprehension by the end of Grade 3. This rate is much greater than the rates of students from the Cebu and Ilocos regions, where 15.9% and 22.6% of students meet the Filipino fluency/comprehension standard, respectively. This considerable difference in reading abilities is shown in medium effect size differences between Tagalog MT students and Ilokano MT students ($h=0.44$) and Sinugbuanong Binisaya MT students ($h=0.61$).

Figure 23. Percent of Learners in Laguna and Cebu Meeting Filipino Proficiency Standards, by Grade (n=139)



ARE LEARNERS PREPARED FOR THE TRANSITION FROM MT INSTRUCTION TO FILIPINO AND ENGLISH IN GRADE 4?

Grade 3 is an important year for learners in the Philippines. In Grade 4, students transition to primary instruction in Filipino and math and science instruction in English. As such, measuring Filipino and English reading outcomes at Grade 3 is crucial to understanding the preparedness of learners for instruction in these languages as they proceed to Grade 4.

TRANSITION TO FILIPINO INSTRUCTION

L2 Filipino students are not prepared for the transition to Filipino instruction in Grade 4.

In Grade 3, the overwhelming majority of students from the Cebu and Ilocos regions do not meet the Filipino fluency/comprehension standard, with only 15.9% of Sinugbuanong Binisaya MT students and 22.6% of Ilokano MT students meeting the fluency/comprehension standard (Table 7). Although Tagalog MT speakers, who are at an advantage given the similarities with Filipino, only 43.1% of learners were able to meet the Filipino proficiency standard. This likely indicates that only roughly one-out-of-five non-Tagalog students and two out of five Tagalog MT students are ready for the transition to Filipino instruction in Grade 4.

Students show much greater reading ability in their MTs at Grade 3, in which 53.4% of Sinugbuanong Binisaya MT students and 40.6% of Ilokano MT students are able to meet MT reading proficiency standards. The differences between the percent of learners demonstrating Filipino and MT reading proficiency are considerable for non-Laguna L2 Filipino students, and show a small effect size difference for Ilokano MT students ($d=0.39$) and a large effect size difference for Sinugbuanong Binisaya MT students ($d=0.82$). This finding suggests that L2 Filipinos students from the Cebu and Ilocos regions are likely not prepared to switch to Filipino as the language of instruction in Grade 4 given that the majority of learners are still “learning to read” in Filipino and have not progressed to “reading to learn;” as a result, learners may benefit from another year of MTB instruction.

Table 7. Percentage of Students Meeting Fluency/Comprehension in MT and Filipino in Grade 3

Region	MT	Filipino
Cebu	53.4%	15.9%
Ilocos	40.6%	22.6%
Laguna ²⁷	--	43.1%

TRANSITION TO ENGLISH INSTRUCTION

By the end of Grade 3, the majority of students, from all regions, are not prepared for the transition to English instruction in Grade 4. Results by region showed that in Cebu and Ilocos, only 17.1% and 18.9% of learners, respectively, could read in English with fluency and comprehension. A larger percentage of learners in the Laguna region demonstrated English reading proficiency skills, with 41.2% of students who met the English fluency/comprehension standard, however, nearly 60% of learners were still unable to read with fluency and comprehension in English.

These findings suggest that students from all regions may not be prepared for instruction in English in Grade 4, and would likely benefit from continuing math and science instruction in their MTs rather than a transition to English instruction in these subjects in Grade 4.

Table 8. Percentage of Students Meeting Reading Proficiency Standards in MT and English in Grade 3

Region	MT	English
Cebu	53.4%	17.1%
Ilocos	40.6%	18.9%
Laguna	--	41.2%

²⁷ Tagalog MT students received the Filipino version of the EGRA assessment, as there is no Tagalog language version of the EGRA assessment.

3. WHAT IS THE RELATIONSHIP BETWEEN MT AND SECOND/THIRD LANGUAGE LITERACY?

WHAT IS THE PREDICTIVE POWER OF L1 LITERACY ON L2 AND L3 LITERACY?

Previous research strongly suggests that early achievement in a student’s MT leads to achievement in secondary languages such as Filipino and English. To explore this theory, a model that predicted Filipino fluency in Grade 2 using gains in MT was developed for both native Ilokano and Sinugbuanong Binisaya speakers. The results in Table 9 indicate that, after controlling for Filipino fluency in Grade 1, higher gains in MT fluency between Grade 1 and Grade 2 are associated with higher achievement in Filipino fluency in Grade 2.²⁸ The results provide preliminary support for the theory that fluency preparation in a student’s MT is associated with higher Filipino fluency achievement.

Table 9. MT Fluency Predicting Filipino Fluency

	Unstandardized Coefficient		Standardized Coefficient	t	p
	B	Std. Error	Beta		
Constant	2.64	1.25		2.10	0.038
Filipino fluency (Gr. 1)	0.92	0.04	0.72	22.05	<0.001
Gain in Sinugbuanong Binisaya fluency	0.86	0.06	0.46	14.15	<0.001
Note: Dependent variable is Filipino fluency in Gr. 2; r squared =0.91					
	Unstandardized Coefficient		Standardized Coefficient	t	p
	B	Std. Error	Beta		
Constant	1.86	1.97		0.94	0.35
Filipino fluency (Gr. 1)	0.79	0.05	0.62	15.44	<0.001
Gain in Ilokano fluency	0.94	0.07	0.52	13.00	<0.001
Note: Dependent variable is Filipino fluency in Gr. 2; r squared =0.84					

²⁸ The model predicting Filipino fluency achievement in grade 2 from gains in Sinugbuanong Binisaya and Ilokano fluency between grades 1 and 2 (after controlling for Filipino fluency in grade 1) accounted for 91% and 84%, respectively, of the variance in the outcome.

Models were also developed to explore the relationship between student gains in MT fluency between Grades 1 and 2 and English fluency achievement in Grade 2.²⁹ The results in Table 10 indicate that higher gains in MT fluency between Grade 1 and Grade 2 are associated with higher achievement in English fluency in Grade 2.³⁰ The results provide preliminary support for the theory that fluency preparation in a student’s MT is associated with higher English fluency achievement.

Table 10. MT Fluency Predicting English Fluency

	Unstandardized Coefficient		Standardized Coefficient	<i>t</i>	<i>p</i>
	B	Std. Error	Beta		
Constant	18.02	3.84		4.69	<0.001
Gain in Sinugbuanong Binisaya fluency	1.39	0.20	0.59	7.15	<0.001
Note: Dependent variable is Filipino fluency in Grade 2 r squared =0.35					
	Unstandardized Coefficient		Standardized Coefficient	<i>t</i>	<i>p</i>
	B	Std. Error	Beta		
Constant	19.50	4.75		4.11	<0.001
Gain in Ilokano fluency	1.52	0.19	0.62	8.17	<0.001
Note: Dependent variable is Filipino fluency in Gr. 2 r squared =0.38					

²⁹ The model did not control for grade 1 English fluency achievement. English was not tested for Grade 1 students.

³⁰ The model predicting Filipino fluency achievement in grade 2 from gains in Sinugbuanong Binisaya and Ilokano fluency between grades 1 and 2 (after controlling for Filipino fluency in grade 1) accounted for 35% and 38%, respectively, of the variance in the outcome.

4. IMPACT OF CONTEXTUAL FACTORS ON ACHIEVEMENT

Various factors from the student context interview, collected in 2017 were examined for association with key outcomes: meeting the Filipino and English fluency/comprehension standards. Bivariate statistical analysis found several large and statistically significant correlations between learners meeting Filipino, English, and MT fluency/comprehension standards, and several learner context interview questions. Correlational analysis results are shown in the tables below.³¹

LEARNER CONTEXT INTERVIEW QUESTIONS AND FILIPINO READING ABILITY

Analysis showed that the strongest relationship between learner characteristics and meeting the Filipino fluency/comprehension standard was found with the number of household possessions of learners in the Cebu region. The number of household possessions is a proxy for socioeconomic status, and findings showed that there was a moderate significant relationship between learners with more household possessions and higher rates of meeting the Filipino fluency/comprehension standard in Grades 2 and 3 in the Cebu region. There was also a relationship found for students in Grades 2 and 3 in the Cebu region between teachers using multiple languages for classroom instruction and the rates of meeting the Filipino fluency/comprehension standards. Findings showed that teachers using more languages in their classroom instruction has a small positive relationship with students' rates of meeting Filipino fluency/comprehension standards.

The number of languages spoken at home as well as speaking Filipino at home were found to also have significant positive associations with student's Filipino reading ability. As Table 11 shows, Grade 3 students from the Ilocos region reported that they speak Filipino at home and speaking more languages at home, generally, were associated with better rates of meeting the Filipino fluency/comprehension standards. These relationships both have a small positive association.

Interestingly, there were no correlations found to be consistent across regions.

³¹ In social science research correlations below 0.2 are not considered to be of high importance. Correlations between 0.2 and 0.4 are considered small, correlations between 0.4 and 0.6 are considered moderate, and correlations above 0.6 are considered large.

Table 11. Correlations Between Student Context Interview Results and Meeting Filipino Fluency/Comprehension Standards

Student Context Interview Questions	Cebu			Ilocos			Laguna		
	Grade 1	Grade 2	Grade 3	Grade 1	Grade 2	Grade 3	Grade 1	Grade 2	Grade 3
Number of languages Spoken at Home						0.371*** (p=.001)			
Filipino/Tagalog Spoken at Home						0.332*** (p=.001)			
Mother Knows How to Read And Write									
Father Knows How to Read And Write									
Total Household Possessions		0.426* (p=.011)	0.428** (p=.010)						
Number of Languages Used in Classroom Instruction		0.275* (p=.037)	0.296* (p=.022)						
Classroom Instruction in Filipino/Tagalog									
Teacher Reads Aloud in Filipino									
Teacher Asks Student to Read Aloud in Filipino									
Student Attended Kinder									

*Correlations are significant at the >0.05 level (2-tailed)

**Correlations are significant at the >0.01 level (2-tailed)

***Correlations are significant at the >0.001 level (2-tailed)

Blanks denote no statistically significant associations between variables.

LEARNER CONTEXT INTERVIEW QUESTIONS AND ENGLISH READING ABILITY

Analysis of correlations between learner context interview questions and rates of students meeting the English fluency/comprehension revealed fewer associations. The strongest relationship was found for Grade 3 students in the Ilocos region, where reporting that English was spoken at home had a small positive and significant association with meeting the English fluency/comprehension standard.

For Grade 3 students in the Cebu region, receiving instruction in English also had a small positive and significant relationship with meeting the English fluency/comprehension standard.

Interestingly, there was no significant relationship found with total household possessions and also no correlations found to be consistent across regions.

Table 12. Correlations Between Student Context Interview Results and Meeting English Reading Proficiency Standards

Student Context Interview Questions	Cebu		Ilocos		Laguna	
	Grade 2	Grade 3	Grade 2	Grade 3	Grade 2	Grade 3
Number of languages Spoken at Home				0.05* (p=.016)		
English Spoken at Home				0.357*** (p=0.000)		
Mother Knows How to Read And Write						
Father Knows How to Read And Write						
Total Household Possessions						
Number of Languages Used in Classroom Instruction						
Classroom Instruction in English		0.273 (p=0.009)				
Teacher Reads Aloud in English			-.220* (p=.026)			
Teacher Asks Student to Read Aloud in English						
Student Attended Kinder						

*Correlations are significant at the >0.05 level (2-tailed)

**Correlations are significant at the >0.01 level (2-tailed)

***Correlations are significant at the >0.001 level (2-tailed).

Blanks denote no statistically significant associations between variables.

LEARNER CONTEXT INTERVIEW QUESTIONS AND MT READING ABILITY

Analysis of correlations between learner context interview questions and rates of students meeting their respective MT reading proficiency benchmarks revealed a small number of associations. The strongest relationship was found between Grade 2 students in the Cebu region and the total number of household possessions. There is a small to medium positive association reflecting that a greater number of household possessions correlates with increased MT proficiency. Another small positive association is found between Grade 2 students from the Ilocos region speaking multiple languages at home, with a greater number of languages spoken at home positively correlated with MT reading proficiency.

Several interesting correlations were found between English language exposure and proficiency in a student's MT. For Grade 1 students in the Cebu region, speaking English had a small positive and significant relationship with meeting their MT fluency/comprehension standard. For Grade 1 students in the Ilocos region, teachers reading aloud in English also had a small positive relationship with students meeting the Ilokano reading proficiency standard.

Table 13. Correlations Between Student Context Interview Results and Meeting MT Reading Proficiency Standards

Student Context Interview Questions	Cebu			Ilocos			Laguna		
	Grade 1	Grade 2	Grade 3	Grade 1	Grade 2	Grade 3	Grade 1	Grade 2	Grade 3
Number of languages Spoken at Home					0.369 p=0.001				
MT Spoken at Home									
Filipino/Tagalog Spoken at Home					-0.196 p=0.044				
English spoken at home	0.224 P=0.035								
Mother Knows How to Read And Write									
Father Knows How to Read And Write									
Total Household Possessions		0.398 p=0.03							
Number of Languages Used in Classroom Instruction									
Classroom Instruction in MT						0.192 p=0.048			
Classroom Instruction in Filipino/Tagalog									
Classroom Instruction in English									
Teacher Reads Aloud in Filipino									
Teacher reads aloud in English				0.351 p=0.005					
Teacher Asks Student to Read Aloud in Filipino									
Student Attended Kinder									

*Correlations are significant at the >0.05 level (2-tailed)

**Correlations are significant at the >0.01 level (2-tailed)

***Correlations are significant at the >0.001 level (2-tailed).

Blanks denote no statistically significant associations between variables.

5. CONCLUSIONS

WHAT IS THE RELATIONSHIP AMONG LITERACY ACQUISITION BETWEEN THE DIFFERENT LANGUAGES IN THIS STUDY?

The results from this study provide preliminary support for the theories that fluency preparation in a student's MT is associated with higher Filipino and English fluency achievement. After controlling for Filipino fluency in Grade 1, higher gains in MT fluency between Grade 1 and Grade 2 are associated with higher achievement in Filipino fluency in Grade 2. Models were also developed to explore the relationship between student gains in MT fluency between Grades 1 and 2 and English fluency achievement in Grade 2. Results indicate that higher gains in MT fluency between Grade 1 and Grade 2 are associated with higher achievement in English fluency in Grade 2.

Given that existing research has shown that L2/L3 learning can be influenced by students' L2/L3 oral ability, additional research on learners' L2/L3 oral language development in the early grades is needed to better understand the literacy acquisition between L1, L2 and L3.

WHAT IS THE READING LEARNING TRAJECTORY FROM GRADE 1 TO 3 IN MT, FILIPINO AND ENGLISH, UNDER THE MTB-MLE POLICY?

MT (L1)

Students from all regions showed considerable improvement in their MT reading achievement from Grade 1 and Grade 3. Analysis showed that there is significant improvement from Grades 1 and 2, and then another, smaller, but substantial improvement from Grade 2 to Grade 3.

Filipino (L2)

Results show improvement in learners' L2 reading proficiency from Grade 1 to Grade 3, however, students do not acquire reading proficiency in their L2 (Filipino) at the same rate as their MT (L1). Findings from the Ilocos region showed Ilocos students' improvement in their L2 follows a different trend than that of their MT. Students showed greater improvement in MT reading ability between Grades 1 and 2, while greater improvement for L2 occurred between Grades 2 and 3. In other words, this suggests that initially learners show improvement in reading proficiency at a faster rate in MT compared to their L2, however, from Grade 2 to Grade 3, improvements in the percent of proficient readers occurs at a similar rate in both MT and L2. Further research is needed to better understand the L1 and L2 learning trajectories in the early grades.

However, while the percent of L2 students who are proficient readers in Filipino improves between Grades 1 and 3, they do not “catch up” to Tagalog MT students, who have an advantage in Filipino given the similarities in the languages, by Grade 3. In contrast, Tagalog MT students consistently have greater Filipino reading ability from Grades 1 to 3. In fact, results suggest that instead of “catching up” to Tagalog MT learners by the end of Grade 3 in Filipino reading proficiency, L2 Filipino learners are falling further behind. This indicates that more must be done to help prepare L2 students to improve their L2 reading proficiency.

English (L3)

The results from the English EGRA administered to students in Grades 2 and 3 demonstrate that students from all three regions increase their English reading ability between Grades 2 and 3. In Grade 3, a larger percentage of students from the Laguna were able to read with fluency and comprehension in English compared to those from Ilocos and Cebu. The difference in reading abilities between the regions could potentially be due to the fact that the similarity between Tagalog and Filipino allowed Laguna students to acquire their L2 (Filipino) more easily, and focus more on English (L3) acquisition than students from other regions. Greater exposure to English in Laguna may also be a factor. Additional research is needed to better understand these trends.

Is the shift in Grade 4 to Filipino (L2) and English (L3) as the languages of instruction (LOI) too soon?

Overall, findings suggests that learners cannot be introduced to three languages and be proficient in all of them by the end of Grade 3. The majority of L2 learners were unable to read with proficiency in Filipino by the end of Grade 3. These results suggest that L2 students are likely not prepared for instruction in Filipino in Grade 4. Moreover, even lower percentages of learners meeting English reading proficiency standards also suggest that students from all regions may not be prepared for instruction in English in Grade 4. Findings suggest that students from all regions would likely benefit from continuing instruction in their MTs rather than a transition to Filipino or English instruction in Grade 4.

While the study confirmed that strong L1 fluency gains are predictive of higher L2 and L3 fluency achievement, there are other aspects to L2 and L3 proficiency that need to be strengthened before students can successfully learn in these languages. Vocabulary and comprehension skills, in particular, would need to be better supported. Strategies for bridging learners’ L1 vocabulary and comprehension skills to the additional languages, as well as other second language learning strategies, may need to be more deliberately incorporated into Filipino and English language instruction so that the students’ stronger proficiency in their L1 can be better used as a springboard for gaining L2 and L3 proficiency.

Given that the majority of L2 and L3 learners are unable to read proficiently in their L2 (Filipino) and L3 (English) by the end of Grade 3, they are likely not prepared for the switch in the

language of instruction by Grade 4. While this research was not designed to explore the reading learning trajectories in Grade 4, additional research on L1, L2 and L3 reading proficiency in Grade 4 may be a useful next step. Further, classroom observation findings from the study showed that teachers code switch, or alternate between languages, during lessons. More research is needed on the actual language of instruction used by teachers in Grade 4, particularly whether instruction in fact switches entirely to Filipino and English or whether teachers use code switching and other techniques given the low reading proficiency levels of L2/L3 learners in Filipino and English.

This study provided an excellent foundation and important learning to enhance future study in this important area of MTB-MLE.

ANNEXES

ANNEX 1. METHODOLOGY

DESIGN

This research is intended to explore the implementation of the new Mother Tongue Based—Multi-Lingual Education (MTB-MLE) policy in three regions of the Philippines. The study aims to explore the learning trajectories under the MTB-MLE policy in literacy development in MT (L1), Filipino (L2) and English (L3) from Grade 1 to Grade 3, as well as to determine whether the assumption that improved literacy instruction and outcomes in MT (L1) in Grade 1 will lead to similar improvements in students' L2 and L3 literacy skills. This study examines the reading outcomes, over time, of learners in MT, Filipino and English, specifically exploring whether children become proficient in their MT language while laying the foundation for learning in additional languages (Filipino and English).

The study established the following research questions to examine the trajectory of reading skill acquisition for learners under the MTB-MLE policy.

1. What is the reading learning trajectory from Grade 1 to 3 in MT, Filipino and English, under the MTB-MLE policy?
 - a. Do learners in Cebu and Ilocos “catch up” to Tagalog MT speakers from Laguna in Filipino (L2) by Grade 3?
 - b. Is the change to Filipino (L2) and English (L3) as the language of instruction (LOI) in Grade 4, under the MTB-MLE policy, too soon?
2. What is the relationship among literacy acquisition between the different languages in this study?
 - a. What is the predictive power does L1 literacy have for L2 and L3 in the MTs specific to this study?
3. Are there other characteristics besides grade level that affect literacy in MT, Filipino and English?

METHODOLOGY

In order to answer these questions on students' reading skill acquisition under the MTB-MLE policy, the study followed a longitudinal design. Over the course of three years (Grades 1, 2, and 3), data was collected from the same group of students from three regions: Cebu (where Sinugbuanong Binisaya is the MT), Ilocos Norte/ Sur (where Ilokano is the MT), and Laguna (where Tagalog³² is the MT). Each year, Basa conducted early grade reading assessments

³² Tagalog is one of over 170 languages in the Philippines, and is the predominant mother tongue in key regions of Luzon Island. In 1935, the Philippines worked on establishing a Constitution and sought to institute a national language policy. Tagalog was declared by then President Manuel Quezon as the basis for the national language,

(EGRA) to measure students’ oral reading fluency in their MT³³, Filipino, and English.³⁴ Additionally, teachers were interviewed in order to obtain demographic and contextual data, as well as observed in order to gather data on classroom practices.

The study aimed to implement assessments at the end of each school year, which runs from June to the end of March. However, due to logistical and staff constraints, the timing of the data collection varied, particularly during SY 2015/16 during Grade 2 data collection.

Data was collected at the following three points in time:

- *Grade 1*: February-March 2015;
- *Grade 2*: November 2015 – February 2016;
- *Grade 3*: January - February 2017.

In the first round, data was collected from Grade 1 students over a two-month period (February-March 2015). In the second round, Grade 2 data collection was divided with data collected in Cebu and Laguna in November-December 2015, and then in Ilocos in February 2016. In the third round, data was collected from Grade 3 students in January/February 2017.

Table 14. EGRA Assessment Schedule

	EGRA Assessment	Feb/ March 2015	Nov/ Dec 2015	February 2016	February 2017
Grade 1	MT, Filipino	Cebu, Ilocos, Laguna			
Grade 2	MT, Filipino, & English		Cebu, Laguna	Ilocos	
Grade 3	MT, Filipino, & English				Cebu, Ilocos, Laguna

to be called “Pilipino” in the 1950s, and then later, “Filipino” under the 1973 Constitution. With the adoption of the 1987 Philippine Constitution, Filipino as the national language was framed as an evolving language, which “shall be further developed and enriched on the basis of existing Philippine and other languages.” This more clearly differentiated Tagalog from Filipino, as the latter incorporates words from various other Philippine and foreign languages that have found their way into the lexicon of the national language. Some writers point to the 28-letter Filipino alphabet as proof that Filipino is distinct from Tagalog, with the inclusion of letters such as F, J, V, and Z, which are not typically used in Tagalog but are used in other Philippine languages such as Ibanag. For more information on the distinction between Filipino and Tagalog please refer to

<http://newsinfo.inquirer.net/715880/filipino-is-no-longer-tagalog>, <https://newsbits.mb.com.ph/2017/08/20/the-nationalization-and-modernization-of-filipino/>, https://en.wikipedia.org/wiki/Ibanag_language#Consonants.

³³ Tagalog is the dominant MT in the Laguna region. The Tagalog language is the MT that formed the primary basis for the national language Filipino. As there is no Tagalog language version of the EGRA assessment, Tagalog MT students received the Filipino version of the EGRA assessment. Consequently, in this study, Filipino was treated as the MT for Tagalog MT students in the analysis.

³⁴ English was only assessed in Grades 2 and Grades 3.

STUDY SAMPLE

Sampling was conducted at three levels: 1) school, 2) classroom, and 3) student. The school and classroom samples were drawn through separate selection processes with regional educational officials. The students were randomly drawn from the selected classrooms.

SCHOOL SAMPLE

In Year 1 (2015), a sample of fifteen schools were selected through a consultation process with regional education officials to participate in the study. Six schools were selected from each of the Cebu and Ilocos regions, and three schools were selected in the Laguna region. Schools were selected to intentionally include an equal number of Basa and non-Basa schools. As the Laguna region does not have Basa schools, three non-Basa schools were selected for the study.

As this is a longitudinal study, the same selected schools were visited and included in all three years of data collection.

The school selection process began with nominations by Basa field office staff in the Cebu and Ilocos regions. These nominations prioritized the following characteristics:

- Comparable populations of Grades 1-3 students;
- More than three sections per grade level;
- No multi-grade sections.

To give all schools per region an equal chance of being selected, researchers compared Grade 1-3 population sizes of all schools across all divisions in each region. The research team selected schools with high enrollment in Grades 1-3 and at least three sections per grade level. Schools with multiple sections per grade allows the study to avoid selecting students from the top or “star” sections. In selecting the Basa and non-Basa schools in Cebu and Ilocos, the research team identified regional “dyads” of schools that could be “matched” on pupil population size in Grades 1-3. The final selection of schools was made in consultation with district superintendents and other education leaders.

Table 15. Year 1 (2015) School Sample

Region	Total Number of Schools Visited
Region 1: Ilocos Sur	4
Region 1: Ilocos Norte	2
Region 4: Laguna	3
Region 7: Cebu	6
TOTAL	15

From the selected schools, the school principal suggested two classrooms that did not include “star” classrooms³⁵ for data collection. From each selected classroom, a random sample of students was selected to participate in the study.

STUDENT SAMPLE

In 2015, data collectors randomly selected 10 students from each selected Grade 1 classroom’s student roster for assessment for a total of 20 Grade 1 students per school. Overall, a total of 300 students were included in the initial cohort in 2015. The subsequent year, the same students were tracked longitudinally and tested again in 2016 when they were enrolled in Grade 2, as well as in the following year, 2017, when they were enrolled in Grade 3. The study includes results only for learners who tracked and tested in all three grades (Grade 1-3) and who were not found to be repeating a grade. In total, due to attrition and students’ repeating grades, this study’s analysis is based on 245 longitudinal non-repeater students who were tracked and tested from Grade 1 to Grade 3. Table 16 provides a breakdown of the total students assessed in each region.

Table 16. Student Sample

Region	Grade 1 (2015)	Grade 2 (2016)	Grade 3 (2017)
Region 1 - Ilocos Norte, Sur	119	111	106
Region 4 - Laguna	60	52	51
Region 7 - Cebu	121	100	88
TOTAL	300	263	245

Students were tracked through communication with schools. Prior to data collection in Grades 2 (2016) and 3 (2017), data collectors visited each of the 15 schools to confirm that the longitudinal students were still enrolled and to determine their classroom for the respective year. Over the course of the study, three students repeated a grade and these students were excluded from analysis.

The most common causes of student attrition were student absence, student drop out, or a student moving to another school outside of the data collection region. If a student was absent, data collectors tried to revisit the school after data collection was completed for that grade in order to assess the student. However, at times, staff and logistical constraints

³⁵ “Star” or top classrooms are separate classrooms for high-performing students and were ineligible to avoid over-sampling high performing students.

prevented this from occurring. In the case of student transfer, attempts were made to track students to other schools if they were within the same region.

TEACHER SAMPLE

To obtain information on teacher literacy practices and the environment for the implementation of MTB-MLE, each year, a sample of teachers of learners included in the study were interviewed. In 2015, 28 Grade 1 teachers were interviewed. Subsequently in 2016, 26 Grade 2 teachers were interviewed and in 2017, 30 Grade 3 teachers were interviewed. In total, 84 teachers were interviewed.

Table 17. Teacher Interview Sample

	GRADE 1	GRADE 2	GRADE 3
CEBU	13	4	11
ILOCOS	9	11	11
LAGUNA	6	11	8
TOTAL	28	26	30

The majority of Grade 1 and Grade 2 teachers interviewed were male, while the majority of Grade 3 teachers were female. The majority of teachers fell under the Teacher designation (92.7%) and 7.3% were designated as Master Teachers. The majority of teachers (about 73%) also held a master's degree or higher. Teachers from the Laguna region had the highest educational attainment with only 12% reporting a BA/BS, 84% of teachers attaining a master's degree, and 4% attaining a PhD.

Additionally, to provide context of the instructional environment in schools, in 2017, a sample of Grade 3 teachers in each school were observed during data collection. A total of 30 Grade 3 teachers were observed during MT, Filipino and English reading lessons. However, because of a new policy in some schools where teachers share language instruction with other teachers instead of teaching all three languages themselves, the number of teachers observed varied by language. The Standards-Based Classroom Observation Protocol-Literacy (SCOPE-L) was used for classroom observation of Grade 3 teachers. SCOPE-L is designed to capture teacher instructional practice in domains that research identifies as crucial to supporting student literacy acquisition in multiple languages, and observes for whether or not teachers are implementing the MTB-MLE policy and curriculum in their classrooms.

RESEARCH TOOLS

In order to gather data needed to answer the specified research questions, several tools were used in this study. Two standardized measurement tools were used for the study: the *Early Grades Reading Assessment (EGRA)* and the *Standards-Based Classroom Observation Protocol for Literacy (SCOPE-Literacy)*. Additionally, demographic and contextual information was collected from both teachers and students using tailored interview protocols.

EARLY GRADE READING ASSESSMENT (EGRA)

In order to assess student reading proficiency, this study utilized an adapted Early Grade Reading Assessment (EGRA). EGRA is a standardized reading tool that assesses early reading skills, from basic skills such as phonemic awareness and letter sounds, to more sophisticated reading measures such as fluency and comprehension.

This study used a shortened version of the EGRA tool. Students were assessed in all languages in which they have received literacy instruction during the school year. Consequently, administering a shortened version of each language assessment was more parsimonious and less overwhelming for the students. The EGRA subtests included: Letter Sounds (Filipino only), Oral Passage Reading and Comprehension (MT, Filipino and English), and Dictation (MT, Filipino and English).

The study utilized EGRA subtests and reading passages developed in English, Filipino and several MTs by RTI between 2011 and 2015. These instruments were adapted and used with students in this study. EGRA tests were developed in Sinugbuanong Binisaya, Ilokano, Filipino and English. Care is taken to be sure that all of the reading passages included in the final EGRA tool are appropriate for Grade 1-3 students. Two versions of the EGRA were developed for this study for each language.

Prior to data collection in 2015, Version A of the EGRA tool was developed and pilot tested among a convenience sample of Grade 1 and 2 students in Ilocos and Grade 1 and 3 students in Cebu. Version B was developed in 2015 and piloted among a convenience sample of students in Cebu and Ilocos.

For Sinugbuanong Binisaya, Ilokano and Filipino, version A was administered in 2015 and 2017 and version B was administered in 2016. In English, Version A was administered in 2016 and Version B was administered in 2017.

For the purposes of this study, analysis focuses only on the Passage Reading and Comprehension subtest. The Passage Reading subtest assesses three early reading skills: oral reading fluency and accuracy, and reading comprehension. Given the importance of reading comprehension as the ultimate goal of reading and its relationship to oral reading accuracy

and fluency, the Passage Reading subtest was a natural selection and focus for inclusion in the study.

STUDENT CONTEXT INTERVIEW

In order to collect basic demographic data as well as information about a student’s educational background and opportunities for reading, a student context interview was administered in Grade 3. The interview protocol included questions on the following topics: language(s) spoken at home and at school; household items and parental occupation; availability of books in the student’s home and their subject areas and languages; availability of reading support at home from a parent or other adult or family member; opportunities for reading and oral listening in school; and educational background (specifically, whether or not the student responding had attended kindergarten).

STANDARDS-BASED CLASSROOM OBSERVATION PROTOCOL FOR LITERACY (SCOPE-LITERACY)

To address the research questions regarding teacher instruction, we utilized the *SCOPE-Literacy* tool. *SCOPE-Literacy* is designed to capture teacher practice in domains that research identifies as crucial to supporting student literacy acquisition in multiple languages, and scores on the instrument serve as an effective measure of whether or not teachers are implementing the MTB-MLE policy in their classrooms. *SCOPE-L* assesses classroom reading and writing instruction along thirteen dimensions of practice and is organized into two major subsections: 1) Classroom Structures and 2) Language and Literacy Instruction. The thirteen dimensions of literacy practice and indicators reflecting the dimensions are displayed below.

Figure 24. SCOPE-Literacy Dimensions and Indicators

Section I. Classroom Structure	Section II. Language and Literacy Instruction
<p>1. Supportive Learning Environment</p> <ul style="list-style-type: none"> • Understanding of rules and routines. • Environment supports student language and literacy learning • Teacher management of conflicts and non-compliance 	<p>7. Opportunities for Oral Language Development</p> <ul style="list-style-type: none"> • Learner talk • Teacher language • Direct instruction • Discussion
<p>2. Effective Grouping Strategies</p> <ul style="list-style-type: none"> • Grouping strategies • Learner participation • Learner cooperation and collaboration 	<p>8. Opportunities for Meaningful Reading</p> <ul style="list-style-type: none"> • Text choice • Opportunity to read individually • Print resources
<p>3. Participation of All Learners</p> <ul style="list-style-type: none"> • Learners’ prior knowledge and interests • Strategies that support learner inclusion • Practice that provide learners with access to learning 	<p>9. Opportunities for Learning to Decode and Spell Words</p> <ul style="list-style-type: none"> • Direct instruction • Adaptations for individuals • Strategies for decoding

<p>4. Opportunities for Reflection</p> <ul style="list-style-type: none"> • Opportunities to self-assess reading and writing • Tools to support learner reflection and self-assessment • Ongoing assessment 	<p>10. Develops Reading Fluency</p> <ul style="list-style-type: none"> • Modeling fluency • Varied instructional strategies • Activities to build automaticity
<p>5. Classroom Materials</p> <ul style="list-style-type: none"> • Print-rich environment • Classroom materials to support literacy learning • Use of books in instruction 	<p>11. Opportunities for Developing Vocabulary</p> <ul style="list-style-type: none"> • Teacher modeling • Vocabulary selection • Varied approaches to vocabulary instruction • Strategies for learning word meanings independently
<p>6. Manages Reading and Writing Instruction</p> <ul style="list-style-type: none"> • Lesson planning • Patterns of instruction • Directions to support learner 	<p>12. Opportunities for Developing Reading Comprehension</p> <ul style="list-style-type: none"> • Learner thinking • Instructional strategies • Questioning • Direct Instruction
	<p>13. Writing Instruction</p> <ul style="list-style-type: none"> • Opportunities for self-expression • Writing process • Direct Instruction

Teacher Interviews

In addition to being observed during classroom language instruction, teachers were also asked a series of questions using a semi-structured interview protocol. Teachers were asked to provide details about their teaching experience and background, education level, and language proficiency, as well as the language proficiency of the students in their classrooms. They were also asked open-ended questions about their current teaching practices, including lesson planning and preparation, how they bridge languages in their reading instruction, and what challenges they have faced in implementing the MTB-MLE policy and resulting curriculum. Grade 3 teachers were also asked to opine on whether MTB-MLE makes it easier for students to learn to read in Filipino and English.

DATA COLLECTION

Assessors were identified and trained to administer the four tools used in this study. Assessors were required to be native speakers of the regional MT where they would be assigned for data collection. Assessors also had backgrounds in education and experience working with school-aged children. Assessors were trained each year prior to data collection. During the training, they were exposed to the theory behind the items included in each tool, and were given opportunities to practice and refine their observation, interviewing, and assessment skills prior

to actual data collection. The trainings also helped to reinforce inter-rater reliability and ensure scoring consistency from year to year.

Standards-Based Classroom Observation Protocol For Literacy (SCOPE-Literacy)

Teachers from the selected classrooms were observed during each of their language periods—up to three language periods, depending on grade level. Observers use the *SCOPE-Literacy* tool to score teachers on the tool’s focal classroom management and instructional measures. To conduct the observation, observers sit in an unobtrusive location in the classroom so as not to distract students, and take handwritten notes on the teacher’s activities and performance for each of the 13 items.

Teacher Interview

Following observation of the language period(s), observers conducted teacher interviews using a semi-structured interview form. Participation in the interview was voluntary, and teachers were given the option to decline. Observers took handwritten notes during their discussions, which lasted from 15-30 minutes on average.

Early Grade Reading Assessment (EGRA)

As noted above, students were assessed in up to three languages, depending on their region and grade level. In Grade 1, students are assessed in their regional MT, and Grades 2 and 3 students are assessed in MT, Filipino and English. However, there are two notable exceptions. First, we assess Grade 1 students in Filipino, although they receive only oral language instruction – and not formal literacy instruction – during the school year. This is done in order to generate a baseline understanding of Filipino reading skills before literacy instruction is formally introduced. The second exception pertains to students in Laguna, where Tagalog is the regional MT. A Tagalog version of the EGRA tool has not yet been validated by the developers. Given the similarities between Tagalog and Filipino, in this study, Filipino is treated as the MT for Laguna.

Table 18. Languages Assessed per Grade Level

	SINUGBUANONG BINISAYA	ILOKANO	TAGALOG	FILIPINO	ENGLISH
Grade 1	X	X	n.a.	X	
Grade 2	X	X	n.a.	X	X
Grade 3	X	X	n.a.	X	X

EGRA is administered to students on a one-to-one basis by a trained assessor. Assessors work with students in a quiet location suggested by the school's administration, such as a library or unused classroom. Assessments last from 20 to 60 minutes, depending on the child's grade. *EGRA* subtests are assessed in the following order by language: (1) MT, (2) Filipino, (3) English. Assessors are native speakers of the regional MT where they are assigned to conduct assessments, and *EGRA* is administered in the language of the subtest (that is, the assessor speaks the MT during the MT subtests, Filipino in the Filipino subtests, and English in the English subtests). Students are allowed to respond to reading comprehension questions from any language subtest using their MT, if desired. Assessors translate responses and determine whether they are correct. However, students are required to use the appropriate subtest language to provide responses in the Letter Sounds, Passage Reading and Dictation subtests.

Passage Reading Subtest. During the timed assessment, students are given 60 seconds to read as much of a reading passage as possible. When time runs out, the passage is removed and the student is asked up to 5 comprehension questions, depending on how far s/he read through the passage. This subtest allows for the calculation of two reading measures: fluency, or words correctly read per minute, and reading comprehension.

Student Context Interview

The student context interview is administered to students prior to the *EGRA* assessment, in order to both facilitate information gathering and serve as an icebreaker. Students are asked questions in their MT or language of preference (as indicated by the child) and are encouraged to respond in whichever language they chose. Following administration of the student context interview, assessors initiate the *EGRA* MT subtests.

DATA ANALYSIS

All collected data were cleaned by EDC M&E staff and analyzed using standard statistical techniques such as univariate and bivariate statistics as needed for different analytical purposes. The results were disaggregated by region and grade-level, as appropriate. Central tendency analysis (e.g. mean) were conducted for continuous variables. Comparison of means statistical tests (independent samples *t*-test) were conducted to estimate differences between students of different MTs. Additionally, effect size (Cohen's *h*) calculations were calculated to assess the magnitude of difference between groups (regions and grade-level). Bivariate statistical analyses (e.g. correlations) were conducted to examine the relationship between different variables.

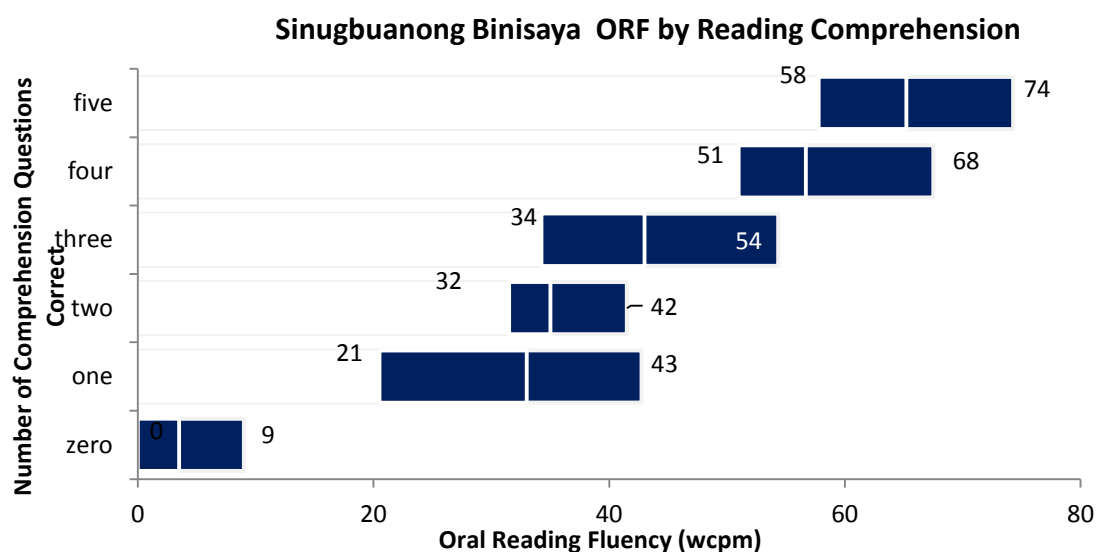
Establishing Reading Proficiency Standards

To assess reading trajectories of learners from Grade 1 to Grade 3, reading proficiency standards were developed for each language – Sinugbuanong Binisaya, Ilokano, Filipino and English. Reading proficiency standards used in this study were developed according to existing proficiency standards, extensive research in literacy and data-supported relationship between oral reading fluency and comprehension.

Under the Basa project, Basa worked closely with DepEd to create oral reading fluency benchmarks for Filipino and English using data from Basa’s EGRA assessment conducted in Cebu, Ilocos, Bohol and La Union. For Filipino and English, the existing oral reading fluency benchmarks were established at a minimum of 40 words correct per minute in Filipino and 60 words correct per minute in English. Given that existing oral fluency benchmarks in Filipino and English were established, the study utilized these benchmarks for reading proficiency standards in this study.

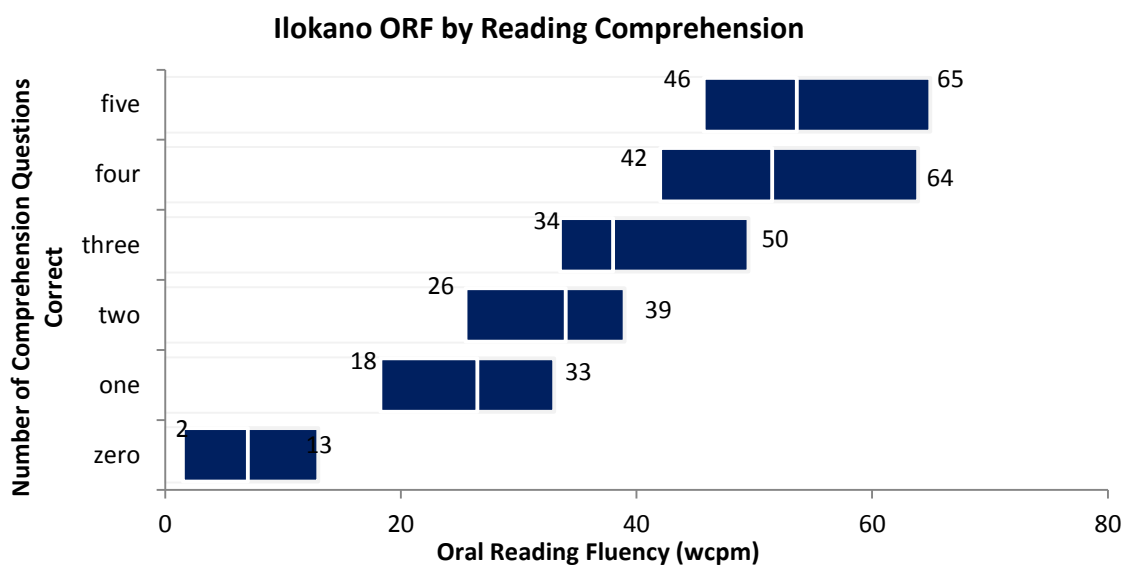
For Sinugbuanong Binisaya and Ilokano, reading proficiency standards were established using Grade 1 – Grade 3 EGRA collected in 2017 as part of the Basa Research cross-sectional data collection in sample schools in Cebu, Ilocos and Laguna. The figure below shows Sinugbuanong Binisaya oral reading fluency by reading comprehension. The graph shows, for each number of correctly answered comprehension question, the ORF results of students between the 25th and 75th percentiles around the median score. As seen in the figure below, 75% of learners who were able to answer four comprehension questions correctly read around 51 or more words correct per minute, as such a Sinugbuanong Binisaya reading proficiency standard of 50 words correct per minute and 80% reading comprehension was established for this study’s analysis.

Figure 25. Sinugbuanong Binisaya Reading Proficiency Standards – ORF by Reading Comprehension (n=380)



For Ilokano, analysis of oral reading fluency results by reading comprehension showed that 75% of Grade 1 -3 learners who were able to answer four out of five comprehension questions correctly were able to read 42 words correct per minute or more and 50% of learners read 51 words correct per minute or more. However, as seen in the figure below, a substantial number of learners who were able to answer only three comprehension questions correctly were able to read 40 words correct per minute or more. To improve the accuracy of the reading proficiency standard, a standard of 50 words correct per minute and 80% reading comprehension was established.

Figure 26. Ilokano Reading Proficiency Standards – ORF by Reading Comprehension (n=397)



LIMITATIONS

This study had some limitations in its design and implementation. The study design did not include the random assignment of schools or classrooms. Consequently, the generalizability of the differences or similarities found between the learning trajectories or other conclusions reached in this study are limited since other factors may have contributed to these findings. Conservatively, study findings can be generalized to the classrooms from which a random sample of students was drawn.

Limitations also stem from the availability of validated assessment tools. A validated Tagalog version of the EGRA tool was unavailable, and consequently, students from the Laguna region (Tagalog MT students) received the Filipino version of the assessment rather than a Tagalog version. Similarly, students from the Cebu region received the Sinugbuanong Binisaya version of the EGRA tool even though students also identified Sinugbuanong Binisaya as their MT.

Another limitation originates from the study's sampling strategy. The study design aimed to include an equal number of Basa and non-Basa schools, while also disaggregating by the Cebu, Ilocos, and Laguna regions. However, there are no Basa schools in the Laguna region and, as a result, the number of schools selected from the Laguna region is half (3) of the number of schools selected from the Cebu and Ilocos regions (6). This has translated into a student sample in Laguna that, from the beginning, was half the size of the student samples of other regions. Additionally, longitudinal designs are particularly vulnerable to sample size attrition. In this study, the conceptualized sample size of 300 students decreased to 245 students. Student sample attrition is largely attributable to student dropout, moves, or grade repetition. Although attempts were made to track students that had moved to a different school or repeated a grade, and assess them at a later date, staff and logistical constraints made this process inconsistent.

Staff and constraints also limit the findings of this study relating to the timing of Grade 2 data collection. Data collection in Grade 2 was designed to occur in the same months (Jan-Feb) as Grade 1, however, at this time the Basa staff (with whom this study shared data collection staff) was in the midst of data collection for the Basa impact evaluation. Consequently, data was collected between 2 and 4 months later from students in the Ilocos region than from those in Cebu and Laguna. As explained in the findings, this is the likely cause of the Ilocos students' greater reading ability in Grade 2 compared to students from other regions; Ilocos students had had an additional 2-4 months of schooling at the time of data collection. The MT reading ability of students in Grade 3 is roughly similar across all regions. This may imply that students from Cebu and Laguna would have had similar learning trajectories to students from the Ilocos region if data collection had occurred at the same time for all regions.

ANNEX 2. SUMMARY EGRA RESULTS

CEBU DETAILED RESULTS

Percentage of Learners Meeting Reading Proficiency Standards (n=88)					
EGRA Test	Grade 1	Grade 2	Grade 3	Effect Size (Grade 1/2)	Effect Size (Grade 2/3)
Sinugbuanong Binisaya (MT)	3.4	12.5	53.4	0.35	0.92
Filipino	0.0	6.8	15.9	0.53	0.29
English	-	0.0	17.0	-	0.85

Percentage of Learners Meeting Reading Proficiency Standards (n=88), by Sex						
Sex	EGRA Test	Grade 1	Grade 2	Grade 3	Effect Size (Grade 1/2)	Effect Size (Grade 2/3)
Boys (n=42)	Sinugbuanong Binisaya (MT)	0.0	2.4	47.6	0.31	1.21
	Filipino	0.0	2.4	11.9	0.31	0.39
	English	-	0.0	14.3	-	0.78
Girls (n=46)	Sinugbuanong Binisaya (MT)	6.5	21.7	58.7	0.45	0.78
	Filipino	0.0	10.9	19.6	0.67	0.24
	English	-	0.0	19.6	-	0.92

Descriptive Statistics for EGRA Subtests (n=88)			
Subtest	Grade 1	Grade 2	Grade 3
SINUGBUANONG BINISAYA (MT)			
Oral Passage Reading (wcpm)	19.1	34.4	56.1
Reading Comprehension- timed (pct)	29.1	40.0	66.8
Reading Comprehension-untimed (pct)	56.8	55.1	75.3
Dictation (pct)	30.5	46.7	69.3

FILIPINO			
Oral Passage Reading (wcpm)	19.7	33.9	58.5
Reading Comprehension- timed (pct)	16.4	21.6	44.6
Reading Comprehension-untimed (pct)	33.3	46.5	62.1
Dictation (pct)	29.2	50.7	66.4
Letter Sounds (lcpm)	8.0	12.1	14.1
ENGLISH			
Oral Passage Reading (wcpm)	-	40.6	62.8
Reading Comprehension- timed (pct)	-	8.0	31.6
Reading Comprehension-untimed (pct)	-	21.7	42.7
Dictation (pct)	-	27.8	44.9

Percentage of Learners with Zero Scores on EGRA Subtests (n=88)			
Subtest	Grade 1	Grade 2	Grade 3
SINUGBUANONG BINISAYA (MT)			
Oral Passage Reading	33.0	4.5	2.3
Reading Comprehension- timed	46.6	31.8	6.8
Reading Comprehension-untimed	4.5	18.8	3.4
Dictation	35.2	2.3	0.0
FILIPINO			
Oral Passage Reading	29.5	2.3	0.0
Reading Comprehension- timed	51.1	47.7	5.7
Reading Comprehension-untimed	18.5	20.6	3.4
Dictation	36.4	1.1	0.0
Letter Sounds	6.8	0.0	1.1
ENGLISH			
Oral Passage Reading	-	2.3	1.1
Reading Comprehension- timed	-	71.6	34.1
Reading Comprehension-untimed	-	32.8	15.7
Dictation	-	3.4	1.1

Descriptive Statistics for EGRA Subtests (n=88), by Sex				
Sex	Subtest	Grade 1	Grade 2	Grade 3
SINUGBUANONG BINISAYA (MT)				
Boys (n=42)	Oral Passage Reading (wcpm)	14.0	27.1	49.9
	Reading Comprehension- timed (pct)	20.0	31.4	63.8
	Reading Comprehension-untimed (pct)	57.7	56.1	70.0
	Dictation (pct)	22.0	39.4	65.7
Girls (n=46)	Oral Passage Reading (wcpm)	23.8	41.0	61.6
	Reading Comprehension- timed (pct)	37.4	47.8	70.0
	Reading Comprehension-untimed (pct)	56.3	54.2	80.0
	Dictation (pct)	38.2	53.3	72.5
FILIPINO				
Boys (n=42)	Oral Passage Reading (wcpm)	14.6	27.8	52.0
	Reading Comprehension- timed (pct)	12.4	14.8	40.6
	Reading Comprehension-untimed (pct)	35.0	36.1	57.1
	Dictation (pct)	22.9	44.1	65.2
	Letter Sounds (lcpm)	7.1	11.5	12.4
Girls (n=46)	Oral Passage Reading (wcpm)	24.2	39.5	61.6
	Reading Comprehension- timed (pct)	20.0	27.8	48.3
	Reading Comprehension-untimed (pct)	32.4	55.1	66.5
	Dictation (pct)	34.9	56.7	72.5
	Letter Sounds (lcpm)	8.8	12.6	15.6
ENGLISH				
Boys (n=42)	Oral Passage Reading (wcpm)	-	30.3	54.1
	Reading Comprehension- timed (pct)	-	4.8	24.3
	Reading Comprehension-untimed (pct)	-	15.6	35.6
	Dictation (pct)	-	22.5	41.2
Girls (n=46)	Oral Passage Reading (wcpm)	-	50.1	70.7
	Reading Comprehension- timed (pct)	-	10.9	38.3
	Reading Comprehension-untimed (pct)	-	25.7	49.5
	Dictation (pct)	-	32.7	48.2

Percentage of Learners with Zero Scores on EGRA Subtests (n=88), by Sex				
Sex	Subtest	Grade 1	Grade 2	Grade 3
SINUGBUANONG BINISAYA (MT)				
Boys (n=42)	Oral Passage Reading	45.2	4.8	2.4
	Reading Comprehension- timed	59.5	38.1	7.1
	Reading Comprehension-untimed	0.0	12.9	3.6
	Dictation	47.6	4.8	4.8
Girls (n=46)	Oral Passage Reading	21.7	4.3	2.2
	Reading Comprehension- timed	34.8	26.1	6.5
	Reading Comprehension-untimed	7.4	23.7	3.2
	Dictation	23.9	2.2	2.2
FILIPINO				
Boys (n=42)	Oral Passage Reading	40.5	2.4	2.4
	Reading Comprehension- timed	59.5	57.1	7.1
	Reading Comprehension-untimed	25.0	25.8	7.3
	Dictation	47.6	2.4	0.0
	Letter Sounds	9.5	0.0	0.0
Girls (n=46)	Oral Passage Reading	19.6	2.2	0.0
	Reading Comprehension- timed	43.5	39.1	4.3
	Reading Comprehension-untimed	14.7	13.0	2.2
	Dictation	26.1	2.2	0.0
	Letter Sounds	4.3	0.0	2.2
ENGLISH				
Boys (n=42)	Oral Passage Reading (wcpm)	-	2.4	0.0
	Reading Comprehension- timed (pct)	-	83.3	42.9
	Reading Comprehension-untimed (pct)	-	43.5	19.5
	Dictation (pct)	-	4.8	0.0
Girls (n=46)	Oral Passage Reading (wcpm)	-	2.2	2.2
	Reading Comprehension- timed (pct)	-	60.9	26.1
	Reading Comprehension-untimed (pct)	-	25.7	11.9
	Dictation (pct)	-	2.2	2.2

ILOCOS DETAILED RESULTS

Percentage of Learners Meeting Reading Proficiency Standards (n=106)					
EGRA Test	Grade 1	Grade 2	Grade 3	Effect Size (Grade 1/2)	Effect Size (Grade 2/3)
Ilokano (MT)	1.9	25.5	40.6	0.78	0.32
Filipino	0.9	8.5	22.6	0.40	0.40
English	-	3.8	18.9	-	0.51

Percentage of Learners Meeting Reading Proficiency Standards (n=106), by Sex						
Sex	EGRA Test	Grade 1	Grade 2	Grade 3	Effect Size (Grade 1/2)	Effect Size (Grade 2/3)
Boys (n=51)	Ilokano (MT)	0.0	9.8	35.3	0.64	0.64
	Filipino	0.0	3.9	15.7	0.40	0.42
	English	-	3.9	15.7	-	0.42
Girls (n=55)	Ilokano (MT)	3.6	40.0	45.5	1.0	0.10
	Filipino	1.8	12.7	29.1	0.46	0.41
	English	-	3.6	21.8	-	0.59

Descriptive Statistics for EGRA Subtests (n=106)			
Subtest	Grade 1	Grade 2	Grade 3
ILOKANO (MT)			
Oral Passage Reading (wcpm)	20.7	42.8	50.4
Reading Comprehension- timed (pct)	31.5	57.7	70.4
Reading Comprehension-untimed (pct)	60.0	69.3	79.4
Dictation (pct)	46.9	49.1	78.1
FILIPINO			
Oral Passage Reading (wcpm)	25.9	43.5	62.5
Reading Comprehension- timed (pct)	23.0	31.1	52.8
Reading Comprehension-untimed (pct)	42.8	48.6	64.6

Dictation (pct)	43.0	65.0	72.8
Letter Sound (lcpm)	11.1	14.6	15.3
ENGLISH			
Oral Passage Reading (wcpm)	-	53.3	64.8
Reading Comprehension- timed (pct)	-	12.6	34.7
Reading Comprehension-untimed (pct)	-	25.2	48.2
Dictation (pct)	-	37.2	51.1

Percentage of Learners with Zero Scores on EGRA Subtests (n=106)			
Subtest	Grade 1	Grade 2	Grade 3
ILOKANO (MT)			
Oral Passage Reading	6.6	4.7	1.9
Reading Comprehension- timed	43.4	15.1	7.5
Reading Comprehension-untimed	10.7	4.7	5.9
Dictation	9.4	0.9	0.0
FILIPINO			
Oral Passage Reading	13.2	5.7	1.9
Reading Comprehension- timed	34.0	28.3	4.7
Reading Comprehension-untimed	7.6	9.5	2.1
Dictation	10.4	1.9	0.0
Letter Sounds	5.7	2.8	0.9
ENGLISH			
Oral Passage Reading	-	6.6	3.8
Reading Comprehension- timed	-	63.2	33.0
Reading Comprehension-untimed	-	44.8	15.1
Dictation	-	0.9	0.9

Descriptive Statistics for EGRA Subtests (n=106), by Sex				
Sex	Subtest	Grade 1	Grade 2	Grade 3
ILOKANO (MT)				
Boys (n=51)	Oral Passage Reading (wcpm)	18.9	36.1	42.2
	Reading Comprehension- timed (pct)	29.0	46.3	61.2
	Reading Comprehension-untimed (pct)	58.2	66.2	73.0
	Dictation (pct)	41.3	42.7	72.2
Girls (n=55)	Oral Passage Reading (wcpm)	22.4	49.0	58.2
	Reading Comprehension- timed (pct)	33.8	68.4	78.9
	Reading Comprehension-untimed (pct)	61.5	72.7	87.1
	Dictation (pct)	52.2	55.1	83.6
FILIPINO				
Boys (n=51)	Oral Passage Reading (wcpm)	23.4	36.3	52.4
	Reading Comprehension- timed (pct)	16.9	25.9	47.1
	Reading Comprehension-untimed (pct)	40.6	47.7	57.4
	Dictation (pct)	37.1	58.0	67.0
	Letter Sounds (lcpm)	10.0	12.5	13.3
Girls (n=55)	Oral Passage Reading (wcpm)	28.2	50.2	71.9
	Reading Comprehension- timed (pct)	28.7	36.0	58.2
	Reading Comprehension-untimed (pct)	44.4	49.4	71.4
	Dictation (pct)	48.5	71.5	78.1
	Letter Sounds (lcpm)	12.1	16.6	17.0
ENGLISH				
Boys (n=51)	Oral Passage Reading (wcpm)	-	43.8	53.4
	Reading Comprehension- timed (pct)	-	12.2	28.6
	Reading Comprehension-untimed (pct)	-	23.3	43.9
	Dictation (pct)	-	32.4	45.4
Girls (n=55)	Oral Passage Reading (wcpm)	-	62.1	75.3
	Reading Comprehension- timed (pct)	-	13.1	40.4
	Reading Comprehension-untimed (pct)	-	26.7	52.6
	Dictation (pct)	-	41.6	56.3

Percentage of Learners with Zero Scores on EGRA Subtests (n=88), by Sex				
Sex	Subtest	Grade 1	Grade 2	Grade 3
ILOKANO (MT)				
Boys (n=51)	Oral Passage Reading	9.8	7.8	2.0
	Reading Comprehension- timed	47.1	23.5	13.7
	Reading Comprehension-untimed	2.9	4.4	10.8
	Dictation	13.7	2.0	0.0
Girls (n=55)	Oral Passage Reading	3.6	1.8	1.9
	Reading Comprehension- timed	40.0	7.3	1.8
	Reading Comprehension-untimed	17.1	4.9	0.0
	Dictation	5.5	0.0	0.0
FILIPINO				
Boys (n=51)	Oral Passage Reading	15.7	9.8	2.0
	Reading Comprehension- timed	43.1	43.1	7.8
	Reading Comprehension-untimed	5.9	15.9	4.3
	Dictation	15.7	3.9	0.0
	Letter Sounds	5.9	2.0	2.0
Girls (n=55)	Oral Passage Reading	10.9	1.8	1.8
	Reading Comprehension- timed	25.5	14.5	1.8
	Reading Comprehension-untimed	8.9	3.9	0.0
	Dictation	5.5	0.0	0.0
	Letter Sounds	5.5	3.6	0.0
ENGLISH				
Boys (n=51)	Oral Passage Reading	-	11.8	5.9
	Reading Comprehension- timed	-	62.7	39.2
	Reading Comprehension-untimed	-	42.9	19.1
	Dictation	-	2.0	2.0
Girls (n=55)	Oral Passage Reading	-	1.8	1.8
	Reading Comprehension- timed	-	63.6	27.3
	Reading Comprehension-untimed	-	46.3	10.9
	Dictation	-	0.0	0.0

LAGUNA DETAILED RESULTS

Percentage of Learners Meeting Reading Proficiency Standards (n=51)					
EGRA Test	Grade 1	Grade 2	Grade 3	Effect Size (Grade 1/2)	Effect Size (Grade 2/3)
Filipino	9.8	17.6	43.1	0.23	0.57
English		0.0	41.2	-	1.39

Percentage of Learners Meeting Reading Proficiency Standards (n=51), by Sex						
Sex	EGRA Test	Grade 1	Grade 2	Grade 3	Effect Size (Grade 1/2)	Effect Size (Grade 2/3)
Boys (n=25)	Filipino	12.0	16.0	40.0	0.12	0.55
	English	-	0.0	48.0	-	1.37
Girls (n=26)	Filipino	7.7	19.2	46.2	0.34	0.59
	English	-	0.0	34.6	-	1.26

Descriptive Statistics for EGRA Subtests (n=51)			
Subtest	Grade 1	Grade 2	Grade 3
FILIPINO			
Oral Passage Reading (wcpm)	38.3	56.2	82.8
Reading Comprehension- timed (pct)	37.6	41.2	64.7
Reading Comprehension-untimed (pct)	57.0	61.2	76.1
Dictation (pct)	69.0	81.2	90.1
Letter Sounds (lcpm)	14.3	14.6	11.7
ENGLISH			
Oral Passage Reading (wcpm)	-	61.9	80.7
Reading Comprehension- timed (pct)	-	16.9	49.0
Reading Comprehension-untimed (pct)	-	41.8	56.4
Dictation (pct)	-	54.4	67.7

Percentage of Learners with Zero Scores for EGRA Subtests (n=51)			
Subtest	Grade 1	Grade 2	Grade 3
FILIPINO			
Oral Passage Reading	8.0	2.0	0.0
Reading Comprehension- timed	16.0	15.7	0.0
Reading Comprehension-untimed	0.0	6.0	4.9
Dictation	5.9	0.0	0.0
Letter Sounds	5.9	7.8	0.0
ENGLISH			
Oral Passage Reading	-	5.9	0.0
Reading Comprehension- timed	-	51.0	23.5
Reading Comprehension-untimed	-	20.5	13.3
Dictation	-	2.0	0.0

Descriptive Statistics for EGRA Subtests (n=51), by Sex				
Sex	Subtest	Grade 1	Grade 2	Grade 3
FILIPINO				
Boys (n=25)	Oral Passage Reading (wcpm)	38.0	50.9	78.4
	Reading Comprehension- timed (pct)	35.2	36.8	60.0
	Reading Comprehension-untimed (pct)	58.3	59.2	69.5
	Dictation (pct)	69.5	79.2	89.0
	Letter Sounds (lcpm)	15.9	14.2	11.9
Girls (n=26)	Oral Passage Reading (wcpm)	38.7	61.2	87.1
	Reading Comprehension- timed (pct)	40.0	45.4	69.2
	Reading Comprehension-untimed (pct)	55.8	63.1	83.0
	Dictation (pct)	68.5	83.1	91.1
	Letter Sounds (lcpm)	12.7	14.9	11.5
ENGLISH				
Boys (n=25)	Oral Passage Reading (wcpm)	-	62.7	74.2
	Reading Comprehension- timed (pct)	-	16.8	52.8
	Reading Comprehension-untimed (pct)	-	45.2	63.8
	Dictation (pct)	-	51.3	66.4
	Oral Passage Reading (wcpm)	-	61.2	87.0

Girls (n=26)	Reading Comprehension- timed (pct)	-	16.9	45.4
	Reading Comprehension-untimed (pct)	-	38.1	50.0
	Dictation (pct)	-	57.3	69.0

Percentage of Learners with Zero Scores for EGRA Subtests (n=51), by Sex				
Sex	Subtest	Grade 1	Grade 2	Grade 3
FILIPINO				
Boys (n=25)	Oral Passage Reading	8.0	4.0	4.0
	Reading Comprehension- timed	20.0	12.0	0.0
	Reading Comprehension-untimed	0.0	8.3	4.8
	Dictation	4.0	0.0	0.0
	Letter Sounds	8.0	8.0	0.0
Girls (n=26)	Oral Passage Reading	8.0	0.0	0.0
	Reading Comprehension- timed	12.0	19.2	0.0
	Reading Comprehension-untimed	0.0	3.8	5.0
	Dictation	7.7	0.0	0.0
	Letter Sounds	3.8	7.7	0.0
ENGLISH				
Boys (n=25)	Oral Passage Reading	-	0.0	0.0
	Reading Comprehension- timed	-	48.0	20.0
	Reading Comprehension-untimed	-	13.0	9.5
	Dictation	-	4.0	0.0
Girls (n=26)	Oral Passage Reading	-	11.5	0.0
	Reading Comprehension- timed	-	53.8	26.9
	Reading Comprehension-untimed	-	28.6	16.7
	Dictation	-	0.0	0.0