

Phonological awareness intervention in mother tongue among Filipino kindergarten learners

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ABSTRACT

Developing strong reading skills in children is crucial to overcoming language and academic barriers and ensuring future success in education. The extent of phonological awareness (PA) substantially affects children's reading ability (Hoff, 2014). Thus, the goal of the study was to document the success rate of ten Filipino kindergarten pupils enrolled in one public school in Calaca who underwent twenty sessions of 30-minute integrated PA intervention. The study employed mixed methods research utilizing intervention design. The quantitative results were taken from a single-group pretest-posttest, and the qualitative results were taken from a thematic analysis of interviews of educational assistants and kindergarten teachers at three-time points. Muñoz et al.'s (2018) pedagogical framework and Cummins' (1979) Linguistic Interdependence Theory provided foundational support in analyzing how PA intervention in the mother tongue assists children in gradually promoting their reading outcomes in the mother tongue and English. Results show significant differences in PA and letter knowledge in Batangas Tagalog and English before and after the intervention. Batangas Tagalog scores show a very high significant positive correlation. Additionally, observations reveal positive changes among the pupils after undergoing the intervention. The study demonstrates that PA intervention in the mother tongue potentially provides a promising and sustainable way to improve the early reading skills of Filipino kindergarten pupils.

Keywords: Batangas Tagalog; bilingual; intervention; mother tongue; phonological awareness

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INTRODUCTION

Reading ability is fundamental in ensuring school success. Unfortunately, many Filipino children are found to be reading below their grade level (Augusto Jr., 2022; Calingasan & Plata, 2022; Graham & Kelly, 2019; Ocampo, 2018). Filipino learners in basic education are also found to perform dismally in global assessments. The Philippines scored lowest in reading, mathematics, and science among participating countries in the 2018 Programme for International Student Assessment by the Organization for Economic Co-operation and Development. In the following year, Grade 4 students were found to score lowest in mathematics

and science among 58 countries in the Trends in International Association for the Evaluation of International Achievement (Ornedo, 2020). Meanwhile, the Regional Report of Southeast Asia Primary Learning Metrics in 2019 implemented in six participating Southeast Asian countries within the months of School Year 2018-2019 revealed only a small percentage of Grade 5 students excelling in reading, writing, and mathematics (UNICEF & SEAMEO, 2020).

The Mother Tongue-Based Multilingual Education of the K-12 program in the Philippines uses the mother tongue as a medium of instruction and as a subject in the first three grades of primary

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school. It provides instruction in the first language (L1) from kindergarten pupils to third-grade students as they learn to read and count in their second language (L2). Exposure to such program allows young learners to use their mother tongue which would eventually hone them to become skillful readers both in Filipino and English by the end of third grade (Ocampo, 2018). Despite the implementation of the K-12 curriculum, more than a third of Filipino children scored low in reading and listening (Hernando-Malipot, 2019). Looking at English and Filipino reading profiles of 8,272 Grade 1 to Grade 7 learners, Tomas et al. (2021) noted that the majority of these learners were at the frustration level. Additionally, Sor and Caraig (2021) disclosed that the majority of students in Grade 11 were at a frustration level in reading and had to be given appropriate intervention to improve their reading performance.

Many studies specifically point to the essential role of phonological awareness (henceforth PA) in predicting later reading achievement (Fernandez-Otoya et al., 2022; Jing et al., 2019; Kelly et al., 2019; Pfoest et al., 2019; Saiegh-Haddad, 2019). When provided phonological instruction, learners may benefit from increasing PA, reading, and spelling skills (Novianti & Syihabuddin, 2021; Soto et al., 2019). PA skills intervention is viewed as crucial during early grades to foster skills and prevent children from developing reading problems. Similarly, knowledge training in print accuracy combined with PA helps children with disabilities to read accurately (Layes et al., 2022).

Despite the efficacy of PA intervention in improving reading outcomes, there appears to be no program in the Philippines that systematically conducts PA intervention in kindergarten even while PA is part of the kindergarten curriculum. Current interventions mostly focus on technology-mediated reading literacy, but this may not be sustainable in public schools nationwide, especially those in remote areas where access to technologies or internet connectivity is limited. Other interventions are intended for intermediate grades and delivered in English (Jemina et al., 2020; Martin Jr. et al., 2021) while what is needed is a research-based intervention targeting the early grades and in the mother tongue (Monje et al., 2019; Perez & Alieto, 2018). It is worth investigating to look into the efficacy of an originally designed integrated PA intervention featuring complementary approaches - attention to scope and sequence, use of mother tongue, utilization of immediate feedback, and language experience through storytelling to assess whether it would demonstrate improvement in the kindergarteners' reading outcomes in their mother tongue and in L2 English.

Muñoz et al.'s (2018) PA pedagogical framework includes explicit and systematic instruction, clear and consistent articulation in the

activities that teachers use, and quality of instruction and responsiveness of children. Explicit and systematic instruction entails a carefully planned coverage and sequence in developing skills on PA and letter knowledge among learners. Planning the progression of the lesson, demonstrating the skill first and explaining the task in detail, and providing immediate feedback are characteristics of such instruction. Teacher immediate feedback is a valuable and efficient instructional tool to reach the goal of harnessing PA skills necessary to assist children and gradually promote their reading outcomes.

Another essential feature in PA as espoused by Muñoz et al. (2018) is clear and consistent articulation in the activities that teachers employ. Teachers can employ storytelling as it is found to give such an opportunity for young learners to experience language and to see connections between words and their internal structure. Likewise, the quality of instruction and responsiveness of children are also viewed as instrumental in PA instruction (Muñoz et al., 2018).

Meanwhile, Cummins' (1979) Linguistic Interdependence Theory explains that skills learned in L1 are transferable to L2 to account for the cross-lingual transfer of PA. This hypothesis adheres to the notion that the performance of children in one language directly translates to their second language. It elaborates that the learners' use of the first language can positively contribute to the learning of a second language. The theory explains the development of PA among bilingual learners, and it elucidates the value of developing PA in one language to support the learning of a second language. The theory gained recognition in explaining the assumption that L1 language skills transfer to L2.

Learners' prolonged exposure to a first language allows them to possess skills in their mother tongue, which is expected to contribute to their learning of an L2. The learner's mother tongue can positively contribute to learning a second language. Gonzales and Hughes (2018) report that providing language instruction in children's mother tongue may help improve second language reading outcomes. Klinger et al. (2006) indicated that a strong foundational skill in the child's native language is proven to be beneficial in the acquisition of English. An improved PA was apparent in children between the ages of 3 and 4, and it is relatively stable across time from kindergarten. This stability emphasizes the merit of early screening of PA to identify children who may have trouble with reading.

The integrated PA intervention in the current study is mapped onto the pedagogical and theoretical frameworks of Muñoz et al. (2018) and the L1-L2 Interdependence Theory by Cummins (1979). Muñoz et al.'s pedagogical features of PA

intervention were adopted to include complementary approaches in PA intervention such as attention to scope and sequence, immediate feedback, and language experience through storytelling. Cummins' (1979) Linguistic Interdependence Theory, which explains that skills learned in L1 are transferable to L2, provides the theoretical anchor for the use of the mother tongue in PA intervention. These frameworks and theories were considered in the current enhanced PA intervention designed for Filipino kindergarten children who are studying in a public school. Thus, the present study looks into the benefit of an originally designed PA intervention delivering improvement to a group of kindergarteners' reading outcomes in their mother tongue and in L2 English.

METHOD

Research Design

The study employed mixed methods research utilizing intervention design. To provide effective pedagogical support that would address the necessity of establishing PA intervention, there is a need for an initial assessment. A needs analysis yielded the finding that no school among fourteen public elementary schools surveyed in Calaca, Batangas in the Philippines was found to have conducted PA intervention to address kindergarten pupils' early reading difficulties. Hence, the researchers adopted the use of a single-group pre-posttest design. Although the single-group pre-posttest design has its limitations, pre-experimental designs do have a role to play in educational research in that such designs can determine the promise of intervention during its development phase (Marsden & Torgerson, 2012). To address the methodological limitations of involving only one group in a pretest and posttest design, the researchers employed a mixed-methods approach. Employing mixed methods result in greater methodological mixes that strengthen the research design (Creswell & Creswell, 2018).

Research Site/Participants

The study was conducted in Luzon, Philippines, particularly in Calaca, Batangas. Batangas Tagalog is the lingua franca in the province and the nominated language of instruction in Calaca, thus making the school children a suitable sample for the study. A public school in Calaca was chosen because it caters to a great number of young children, and it has a high percentage of reported kindergarten pupils who struggle with early reading skills. Participants in the intervention were ten kindergarten pupils recruited through purposive sampling and were assessed to meet the following criteria: (1) an eligible kindergartener; (2) a native speaker of Batangas Tagalog; (3) with normal hearing; (4) qualify as kindergarten pupil with early

reading difficulty; and (5) can complete twenty (20) sessions in the intervention.

Additionally, two educational assistants were recruited to handle the participants in a small group intervention, and two kindergarten teachers handling these pupils were also involved in the study. They were interviewed on the performance of the selected pupils at three points in time - at the beginning, middle, and end of the intervention. The study obtained ethics approval from the university of the second author, informed consent from the participants and permission from the children's parents. In a simple assent procedure, the researchers explained to the pupils that their participation was voluntary and that they could withdraw if they no longer wished to take part in the intervention.

Data Collection Techniques

Data collection entails the use of different evaluative measures - an early reading checklist, pre-post reading assessments, an intervention plan, and an interview guide. All these instruments underwent validation from a panel of experts before their administration and implementation. The Early Reading checklist was used to screen pupils who showed difficulty in early reading skills and needed intervention. Since many standardized assessments of PA are available only in English, it was necessary for the current study to design the assessment needed to gather baseline data in PA and in early reading skills in Batangas Tagalog and in English. The pretests and posttests are experimenter-made tests on reading assessment which consist of eight subtests. In designing the reading assessments, the researchers considered five subsets such as rhyming, segmenting, blending, deletion, and phoneme manipulation. Letter knowledge includes assessment of both letter names and letter sounds for both English and Filipino languages.

Two sets of interview guides were prepared for two educational assistants and two kindergarten teachers. The interview proves to be an important resource in understanding perspectives about phonological awareness and its practice among primary grade teachers (Verissimo et al., 2021). Each interview consists of three phases: beginning, middle, and end of the intervention. The components and salient features of the intervention were considered in preparing the interview guide to assess how the integrated PA may contribute to delivering change in the early reading outcomes of kindergarten children. The crafting of interview guides adopts the three steps from the Interview Protocol Requirement framework by Castillo-Montoya (2016) to refine the interview guides and address the necessity for valid data collection.

Meanwhile, the PA intervention plan used in the study was validated by language experts, and their suggestions on the inclusion of lessons, lexical

items, materials, procedures, and other pertinent matters were carefully followed. The plan provides PA sessions for twenty 30-minute sessions, conducted four times a week, totaling 600 minutes or 10 hours of PA intervention. The intervention was carried out in the mother tongue by trained EAs in a small group of five children implemented after class time. Interviews were done along with measures of early reading skills.

Procedures

The pupils were initially screened using the researcher-made Kindergarten Early Reading Difficulty Checklist to identify pupils who will undergo intervention. After screening, these participants underwent a three-stage process which includes pretest administration, providing intervention, and post-test administration.

In the typical lesson with kindergarten pupils in the public school, teachers are found to focus mostly on social skills development. The domain under language, literacy, and communication does not

cover areas necessary for children to learn how to read, much less on the full range of PA skills. The integrated PA intervention in the current study is designed to fill in what is missing in actual class instruction in kindergarten. The intervention plan comprises 20 sessions of 30-minute lessons on PA and letter knowledge with the inclusion of storytelling designed to gradually hone the early reading skills of pupils, particularly PA skills and letter knowledge through intent listening and guided instruction with immediate feedback. The entire intervention is delivered in the mother tongue, specifically, Batangas Tagalog, the lingua franca, and the designated mother tongue in Batangas, Southern Luzon in the Philippines.

Table 1 illustrates the sequence of a lesson during the intervention. In the sample lesson on Rhyme Exposure and Beginning Letter Names, the pupils are taught rhyming skills and recognizing letter names. The EA provides colorful name tags that highlight the beginning letter of their names.

Table 1
Sample Lesson

Lesson I - Rhyme Exposure and Beginning Letter in Names	
Component	Session 1
Material	Alpabetong Filipino chart Letters with design, size "3x5" Smileys Stickers Pictures of words which start with initial letters of pupils' names <i>Jack en Poy</i> nursery rhyme, (audio, 1:11) Pictures of rhyming and non-rhyming words <i>Ang Lumilipad na Bisikleta</i> , (audio, 6:32) Customized storybook in laminated sheets, 22 pages
Letter Knowledge 8 minutes	Warm-up: The educational assistant engages the pupils to sing Alpabetong Filipino. The EA asks the names of each pupil and says the beginning letters of the pupils' names and repeats them. The EA then presents pictures of Batangas Tagalog words starting with the initial letter of their names. Example: A, J, at S (<i>aso, jet, saging</i>)
Phonological Awareness 12	Rhyme Exposure: The EA and the pupils sing <i>Jack en Poy</i> and pick out all the rhyming word pairs in the song. The EA shows how words rhyme by examining their ending sounds. After the nursery rhyme, a practice exercise on rhyming words follows. (<i>Jack en poy, halehaleho, unggoy</i>)
Storytelling 10 minutes	The EA provides language experience through storytelling. The EA facilitates the story through recorded audio and customized story in laminated sheets. After reading the story, the EA points out words that begin with the letters learned (<i>arogante, salamangkero</i>). The EA also provides sample words taken from the story that rhyme or she may ask pupils to add to the list. (<i>lawa:tuwa; buhay:kulay</i>) Story: <i>Ang Lumilipad na Bisikleta</i> Words beginning with pupils' letter names: <i>arogante, salamangkero</i> Rhyming words: <i>lawa:tuwa; buhay:kulay</i>

This is intentionally done to familiarize pupils with how their names look in print. The EA starts establishing rapport with the pupils as they begin the lesson on rhyming. At the onset, the EA models actions before they sing the *Alpabetong Filipino*. The EA encourages them all to stand up and sing the song altogether.

The lesson proper begins with the beginning letter of the children's names. The EA reads their names one by one including her name. Then the EA presents colorful beginning letters including beginning letters of the pupils' names. Next, the EA presents the text of the recorded nursery rhyme 'Jack en Poy'. They practice recognizing rhymes by listening to the ending sounds of a word. The last activity involves the pupils' intent listening on audio recording while the EA turns each page with illustrated pictures. Listening attentively and doing the PA task after the story is retold allow the pupils to learn from the story as they gain PA skills and letter knowledge. The story serves as a cornerstone in delivering the intended aim of harnessing PA skills among children.

Data Analysis

The study made use of both quantitative and qualitative analyses of research data. The quantitative analysis consisted of examining the results of pretests and posttests administered to participants before and after the intervention. The pretests and posttests include items that measure phonological awareness and letter knowledge and make use of folio to allow mixing and matching and variation in the presentation. Initially, the raw data generated from different measures during pretests and posttests were coded, entered, and checked for errors. The study utilized a paired t-test to determine whether there is an improvement in scores in the reading components of PA and letter knowledge in Batangas Tagalog and English after the intervention. It also used the Spearman Correlation coefficient to find the relationship between Batangas Tagalog and English posttests. After finding the correlation, the appropriate t value was computed to test the significance of the correlation.

The qualitative portion of the study employed thematic analyses to investigate and describe how the perceptions of both educational assistants and kindergarten teachers took shape in understanding whether there may be an improvement that happened before, during, and after the intervention. The twelve sets of audio-recorded interviews were listened to several times and transcribed with the aid of O transcribe, a free web app with interactive timestamps to navigate through the transcript and to facilitate in the transcription. The interview transcripts were handed over to the kindergarten teachers for member checks. Analysis of data adopts the coding strategy outlined in Saldaña (2016). Descriptive coding was employed to

document and categorize responses elicited by the educational assistants and kindergarten teachers. The following themes were ultimately identified: pupils' attention to PA subskills, recognition of letters and sounds, and pupils' response to instruction in their mother tongue.

The statistical analyses of pretests and posttests assess the outcome of the intervention while the qualitative data gathered from interviews makes it possible to elicit information if progress is observed among pupils undergoing the intervention, and at the same time, to provide a view of participants' experiences and responses toward the intervention. Thus, integrating qualitative data with quantitative results provides greater support for ascertaining whether PA intervention could promote growth in early reading skills among Filipino kindergarten pupils.

FINDINGS

The Target Items and Concordance in the Corpus

The study is geared toward the implementation of the PA intervention in the mother tongue to the kindergarten pupils to bring improvement in the early reading outcomes of these pupils. The statistical results indicated that scores in the reading components in terms of PA and letter knowledge among kindergarten pupils suggest improvement in the reading outcomes after the intervention.

Table 2 provides the descriptive statistics for PA and its sub-skills and letter knowledge on pretests and posttests in Batangas Tagalog. Table 2 shows an increase in the overall mean scores in Batangas Tagalog and English across all PA skills and letter knowledge. Batangas Tagalog obtained more considerable gains in the overall mean scores than in English. All PA sub-skills increased in scores after the posttests except in phoneme manipulation, which showed a smaller gain in Batangas Tagalog and reduced scores in English after the intervention.

The statistical results indicated that kindergarten scores in reading components in PA and letter knowledge (LK) suggest improvement after the intervention. In Table 3, paired sample t-test (dependent t-test) was utilized to determine significant difference in the scores for pretest ($M=14.90$, $SD=2.76$) and post-test ($M=21.40$, $SD=1.84$) conditions; $t(9)=-7.34$, $p=0.00$ in PA. Similarly, the test scores for LK reveal a significant difference in the scores for pretest ($M=6.70$, $SD=2.35$) and posttest ($M=48.50$, $SD=22.45$) conditions; $t(9)=-4.66$, $p=0.01$. Thus, there is sufficient evidence indicating a significant increase in posttests for both overall PA and LK.

Table 2
Descriptive Statistics

Batangas Tagalog	Overall	Rhyming	Segmentation	Blending	Deletion	Phoneme Manipulation	Overall	Letter names	Letter sounds
	PA	M(SD)	M(SD)	M(SD)	M(SD)	M(SD)	LK	M(SD)	M(SD)
	M(SD)						M(SD)		
Pre-	14.90 (2.76)	1.6 (1.3)	3.4 (1.3)	2.8 (1.1)	3.5 (1.1)	3.6 (1.3)	6.70 (2.83)	5.4 (2.3)	1.3 (1.3)
Post-	21.40(1.84)	4.4 (0.8)	4.8 (0.42)	4.1 (0.6)	4.3 (1.3)	3.8 (0.8)	8.50 (22.45)	32 (16.2)	16.5 (6.8)
English									
Pre-	13.00 (1.76)	1.7(1.6)	3.9 (1.7)	2.7(0.5)	2.5(1.6)	2.2 (0.6)	3.60 (5.23)	6.9 (4.2)	1.7(1.8)
Post	19.60 (1.95)	5.0 (0.0)	5.0 (0.0)	4.4 (0.8)	4.6 (0.7)	1.9 (1.3)	7.60 (21.46)	31.9 (14.9)	15.7 (7.1)

Table 3
Pretest and Posttest Results in PA and in LK in Batangas Tagalog

Batangas Tagalog	X		t-value	p-value	Interpretation
	Pre	Post			
	Test	Test			
1. PA	14.90	21.40	-7.34	0.00	Significant
2. LK	6.70	48.50	-4.65	0.01	Significant

Table 4
Pretest and Posttest Results in PA and LK in English

English	X		t-value	p-value	Interpretation
	Pre	Post			
	Test	Test			
1. PA	13.00	19.60	-12.18	0.00	Significant
2. LK	8.70	47.60	-7.14	0.00	Significant

In terms of phonological awareness skills, the results in Table 4 show that there is a significant difference in the scores for both the pretest (M=13.00, SD=1.76) and the posttest (M=19.60, SD=1.95) conditions; $t(9)=-12.18$, $p=0.00$. Similarly, the test scores for letter knowledge yield a significant difference in the scores for pretest (M=8.60, SD=5.23) and posttest (M=47.60, SD=21.46) conditions; $t(9)=-7.14$, $p=0.00$.

The results in Table 5 point to a significant difference in the scores for pretest (M=21.60, SD=5.91) and posttest (M=67.20, SD=21.60) conditions; $t(9)=8.31$, $p=0.00$. Similarly, the test scores for Batangas Tagalog show a significant difference in the combined scores in PA and letter knowledge for pretest (M=29.80, SD=5.53) and posttest (M=69.90, SD=23.40) conditions; $t(9)=-5.22$, $p=0.01$.

Table 5
Pretest and Posttest Results of Combined PA and LK in Batangas Tagalog (BT) and in English

Batangas Tagalog	X		t-value	p-value	Interpretation
	Pre	Post			
	test	Test			
1. BT	29.80	69.90	-5.22	0.01	Significant
2. English	21.60	67.20	-8.31	0.00	Significant

Table 6
Posttest Results of Early Reading Outcomes Between BT and English

Test Variables	Rs	p (2-tailed)	Interpretation
Posttests	0.95	0.05	Significant
English	Tagalog		

Table 6 shows a significant relationship between the two sets of scores ($r_s: 0.95; p=0.05$). By normal standards, the association between the two variables suggests a statistically very high significant positive correlation. A correlation of 0.95 represents a strong positive correlation. The sets of pretest scores between these two languages can be understood as a significant correlation between the kindergarten pupils' scores in their mother tongue and their second language. This correlation strengthened after the posttests.

From the quantitative analysis, it can be concluded that an integrated PA intervention is promising in strengthening the PA skills and letter knowledge of kindergarten pupils. Many studies showed that children who received phonemic awareness training showed more significant gains in developing early reading skills (Dussling, 2018; Gonzales & Hughes, 2018; Muñoz et al., 2019; Wawire & Kim, 2018).

The study's findings support the argument raised by Kelly et al. (2019) that phonological awareness is effective in producing significant effects on reading achievement among children. This resonates with the claim of Hoff (2014) on the importance of phonological awareness to establish a strong foundation in reading among children. The demonstrated improvement among kindergarten pupils in PA and letter knowledge implies an effective PA implementation through the salient features involved in the intervention. These features of the intervention may have provided substantial advantages in promoting the early reading skills of kindergarten students. This is supported by Muñoz, et al. (2018) on the need to consider inclusions and sequences of tasks in implementing phonological awareness intervention among children. Additionally, Paudel (2018) supported the use of language that the children understand as a medium of instruction in classes accounts for the mother tongue's supportive nature in the learning process.

Moreover, Firat (2018) maintained that phonological awareness and letter knowledge activities in the two target languages improve literacy in both languages. He noted that PA activities are universal across languages. Hence, doing it in two languages allows children to be aware of the connection between these two languages. The finding is substantiated by Gonzales and Hughes's (2018) study demonstrating an increase in literacy and PA skills in the mother tongue and English. They argued that the

phonological skill one has in one's mother tongue might have a corresponding effect on the learning of L2. Thus, providing explicit PA intervention in the child's mother tongue may influence the second language's reading outcomes and facilitate the adverse effects ascribed to limited English proficiency. Similarly, Pae (2019) accounts for L1 ability as a significant predictor of L2 ability. All these provide evidential bases that there are interdependent relationships between L1 and L2 operations in early reading skills. From these findings, we may conclude that the obtained scores showing a significant relationship between the two languages, Batangas Tagalog and English, may indicate a link or association between these two languages.

To obtain a fuller understanding and a multidimensional view of how kindergarten pupils respond to an integrated PA intervention, the study employed a thematic analysis (Saldaña, 2016) of the interview data. The interviews were carried out during the beginning, middle, and end parts of the PA intervention. The repeated interviews were done to assess the progress of each participant and observed the extent of improvement. At the outset, the kindergarten pupils hardly knew letter knowledge and PA skills. The pupils did not know how to recognize similar sounds. They could not identify the beginning letter of their names, and they were unfamiliar with the letters of the alphabet. During the middle part of the intervention sessions, the EA and the kindergarten teachers observed some gradual improvement in the pupils in recognizing sounds and in remembering letters in sequence. They still demonstrated some difficulty in combining sounds to read simple words. Toward the end of the intervention, the EA and the kindergarten teachers pointed out a noticeable improvement in recognition of letters and PA skills such as rhyming sets, simple segmentation, and blending of syllables, which later enable them to do simple phoneme manipulation. Toward the end of the PA intervention, pupils undergoing intervention acquired letter knowledge and PA skills which enable them to read simple words. Kindergarten teachers' and educational assistants' observations point to positive findings relating to pupils' attention to the PA subskills, recognition of letters and sounds, and the efficacy of the use of mother tongue in instruction.

Pupils' Attention to the PA Sub-Skills

The acquisition of PA skills is one of the primary purposes of holding an intervention. It is believed that phonological awareness produces substantial effects on children's ability to read; hence, giving an intervention in this area is essential to improve their early reading skills. Intervention can be considered effective only if pupils' responses could bring the intervention's desired improvement. One EA shared:

Mapapansin mo po talaga na from the beginning naman, nakikita mo naman 'yong improvement ng mga bata. Nakita ko din po na halimbawa po ay 'yung di agad nila makita sa una kasi nag-iisip sila, iisip ako ng iba pang word na iba doon sa dalawa then kapag inihiwalay mo yung isang word, hahanapin nila sa dalawang 'yon ang katugma..mas naiintindihan po nila. Alin kaya sa dalawang ito ang katunog ng kulay? Gulay ba o araw? So makikita po nila iyon. (EA2, 68-69)

'You can notice the improvement with these pupils by comparing them from the onset of intervention and from what they have become now. During the beginning of the intervention, it was observed that they could not distinguish rhyming. I would think of additional options, like separating the first word and telling them which of the two remaining options rhymes with the first. This made them understand rhymes better and they were able to get it.'

The EA further reported that in a rhyming lesson, children could distinguish rhyming words even if the words are not repeated to them. The pupils responded well in the intervention, and they did learn rhyming skills. Before the start of the intervention, the pupils had a hard time recognizing rhyming sets, seemingly because they never had any experience in distinguishing rhyming words in class. The pupils responded well with the ending sound of /a/ which can be found at the end of words like *kalabasa* 'squash', *mustasa* 'mustard', etc.

The pupils' reaction toward syllable segmentation was positive because they find it easy compared to other PA skills. Their previous experience with their kindergarten teachers, teaching them counting the syllables of their names, proves beneficial in syllable segmentation. The kindergarten teacher said:

'Di po ba kasi po ang ibang bata sa simula 'di masabi ang pangalan. Nahihiya yan so ang ginagawa po namin para makapagkilala, halimbawa po, uunahin naming ang aming pangalan, tapos bibilangin naming through hands, kaya po alam na nila ang pagbilang. (KT1, 283)

'Some pupils are so shy to introduce themselves during the onset of classes, so we encourage them by telling our names, guiding

them in counting it using our fingers. That way, they become familiar with how syllables in words are counted.'

The intervention has helped kindergarten pupils gain skills in sounding out words. This allows them to do syllable manipulation, gradually recognizing syllables and later combining them to form words.

Halimbawa po, bubuwin nila ang /u/-/be/, kahit hindi ituro sa kanila alam na nila ang ube. Cubes lang po ang kanilang kaharap kahapon. 'Di po ba pinaktris ko nung una sabi ko 'di ko alam kung kaya nila at na-try nila na wala silang nakikita as in sounds lang naririnig nila and then sa isang round na ikot wala silang visuals. (EA1, 150-151)

'The pupils were able to create a word by blending syllables of simple words like the word *ube*, even without showing them how to do it. They knew how to blend /u/ and /be/ to form a word. Using cubes with letters, they were able to combine those cubes to create new words. At first, I was in doubt about whether they would be able to do it, so we tried doing it with cubes. They were able to form words without the use of pictures.'

The kindergarten pupils found difficulty with phoneme deletion initially. Often, they associated syllables with the same letters. One EA shared that:

Si Pupil J5 ay hirap sa phoneme deletion, yun nga po, mas kabisado n'ya yung mismong dalawang syllables kaysa letters only. (EA1, 255)

'Pupil J5 finds difficulty in phoneme deletion. He is observed to be more familiar with syllables than with letters alone.'

Although some displayed difficulty in deletion, some others did well after they were given lessons on phoneme deletion.

Siya (A1) ay good sa syllable, good din s'ya sa segmentation tapos 'yon pong sa

deletion at saka yung sa addition ng letter. (EA1, 237)

'He is good with syllable recognition, segmentation, deletion and addition of phonemes.'

The children were also observed to have progressively gained skills in phoneme manipulation and were found to be successful in manipulating sounds to form simple words:

Pagdating po kay pupil S3 and S2, sila po naman ay nakaka-pantig na. 'Pag sinabi ang salita, uulitin mo sa kanila, halimbawa, 'bata', 'pag pinalitan mo ito ng /ka/ ang /ta/, alam na nila. (EA1, 297)

'Pupil S2 and pupil S3 were able to do syllable manipulation. When you tell them a word, for

instance, 'bata', and you change the syllable /ta/ to /ba/, they are able to figure it out.'

Recognition of Letters and Sounds

Recognition of letters and sounds during the intervention can give insights into whether the intervention might have delivered the intended outcomes. The pupils responded well, and this helped them recognize letter names and sounds as this appears to be a fundamental part of learning to read. As EA shared how pupils learn letter knowledge:

'Halos lahat po nan a- observe ko po ang letter A ay hindi ganoong nahirapan. Siguro po dahil yon ay popular at starting letter ng alphabet (EA, 12-13)

Almost all pupils did not find much difficulty in learning letter A. This may be because letter A is considered a popular beginning letter of the alphabet.

Letter sounds became easy for the pupils when letters were introduced to them gradually. During the pretest assessment of letter knowledge, the pupils were observed to have very limited knowledge on letter sounds. Many were observed to not know their individual sounds. They recognized only a very minimal number of letters, and the majority of them hardly knew the letter sounds. During the intervention, EA observed that:

'Isang paraan na kapag inilatag nyo sa table, hanapin mo nga ang letter na may tunog na ito, makuluha naman po nila. Kaya po yun po ang nakakatuwa sa kanila'. (EA2, 85)

It is a good thing to observe that pupils were able to identify letters correctly. When you ask them to look for a letter with a particular sound among jumbled letters on the table, they were able to give you the correct one.

Even teachers commented on the observed improvement in letter knowledge after the intervention. They said:

'Pag tinanong mo alam nyo ba ang letter na ito, alam nila pero si Pupil J6 noong una hindi n'ya alam. (KT2, 847)

Pupil J6 did not know those letters before. But now, they can recognize the letters when asked to identify them.

The pupils knew nothing before, but eventually, they gained skills in recognizing letters and sounds.

Pupils' response to instruction in their mother tongue

The use of language understood by learners during the intervention proves to be an effective pedagogical resource to achieve the purpose of the intervention. The integrated phonological awareness

intervention was carried out using Batangas Tagalog, the mother tongue of the pupils, the teachers, and the educational assistants. The EAs shared their experience with pupils on the use of Batangas Tagalog during the intervention, saying that the use of a language that children understood was helpful:

Okey po ang Tagalog kasi doon sila nakakapag-participate. Kasi doon nila mas naiintindihan. (EA, 342)

'It is much better to use the mother tongue because pupils can participate with the use of Tagalog, and it is the language that they understand.'

The use of the mother tongue both as a medium of instruction and as a subject is implemented in the K-3 curriculum in the Philippines. While some kindergarten teachers strictly observe the use of Tagalog in their classes, some also resort to translanguaging by using both English and Tagalog, as kindergarten teachers are given some control over how to conduct their classes. One kindergarten teacher reported to be using both Tagalog and English in her classes:

Actually, ako po ay Taglish. Nag-e-English po ako, nag-ta-Tagalog po. Halimbawa sa letters po kami may time na letter A, lahat nagsisimula sa letter A. Gagawin ko sa Tagalog muna and then ang gagawin ko ipapakita ko rin ang A sa English naman. Halimbawa A ampalaya, sa sunod arrow. (KT1, 415)

'Actually, I use Tagalog and English especially when teaching letters. In teaching the letter A, I provide examples of Tagalog words starting with the letter A, followed by English words starting with A. For instance, 'A' for ampalaya, then arrow.'

Another kindergarten teacher reported to use Tagalog to reinforce instructions in English:

Minsan sa instruction, halimbawa match tapos tatagalugin ko yung match kung ano 'yon. Kapag in English ko tinatagalog ko na siya, dalawang instruction po ang gamit ko, Taglish po talaga. (KT1, 416)

'When giving instructions in English, I translate them into Tagalog. When I use English, I translate them to Tagalog, so I am using two mediums of instruction.'

An educational assistant thinks that with young children, it is important to use their L1 because that is what children understand even if input is in English:

'Di ba ganoon naman po tayo, kaya kahit i-English mo s'ya, dahil mga bata parang kailangan din yong i-Tagalog para maunawaan nila. (EA1, 341)

‘There is a need to use the mother tongue so that children may be able to understand. When we use English, there is a need to translate it into Tagalog because that is the language children understand.’

The thematic analyses of the interviews conducted between kindergarten teachers and educational assistants reinforced the findings that PA intervention in mother tongue appears to have brought significant changes among pupils, primarily in PA skills and letter knowledge. The children were observed to have progressively gained skills in PA and letter knowledge, and successful efforts have been made to teach foundational reading skills. The themes generated from the interview data demonstrate how pupils responded to PA intervention. The pupils’ response to intervention shows how they were able to acquire all the PA skills such as rhyming, segmenting, blending, deletion, and phoneme manipulation and its subskills which are deemed essential to establish early reading skills. The observed improvement among kindergarten pupils gives insights that PA intervention appears to have delivered the intended outcomes in learning PA and letter knowledge.

This finding is supported by Soto et al. (2019) claiming that PA instruction establishes a foundation for early reading ability. Therefore, if PA skills were harnessed to these struggling pupils, they would gradually overcome reading difficulties that they may likely face. This perspective is shared by Novianti and Syihabuddin (2021) who explained that pupils with reading difficulties can benefit from PA intervention. Further, the findings of the study show that PA intervention is effective in improving the early reading skills of Filipino kindergarten pupils. PA intervention among children provides a positive impact on literacy outcomes (Porta et al., 2021). It also exhibited significant improvement in PA skills and substantial improvement in reading skills (Bdeir et al., 2020). Moreover, understanding PA and reading is also found to help in effective program design aimed at delaying children’s PA while in preschool (Milankov et al., 2021).

Additionally, the observations during PA intervention demonstrate that kindergarten teachers are receptive to the use of the mother tongue in the kindergarten classroom and the PA sessions. Although some teachers use whatever language is in their students’ repertoire, the use of Batangas Tagalog to reinforce instruction and input in English is a common practice and is found to be an effective pedagogical resource. It adheres to Gonzales and Hughes (2018) and Klinger et al. (2006)’s concept of providing instruction in children’s mother tongue to help improve reading outcomes. What instruction in the mother tongue appears to offer is flexibility in the language class, allowing pupils more opportunity to absorb the lesson in a language that

they know and learned at home and in the community rather than it being delivered entirely in English. Hence, the shift of instruction toward giving importance to the use of the mother tongue has provided noteworthy effects on children and can bring about real literacy gains (Education Development Center, 2018).

Overall, both the quantitative and the qualitative data point to the promise of the intervention in strengthening the PA skills and letter knowledge of Filipino kindergarten pupils. Particularly, the thematic analysis of the interviews conducted between kindergarten teachers and educational assistants showed that the integrated phonological awareness intervention appears to have brought significant positive changes among pupils, primarily in PA skills and letter knowledge. Additionally, a PA intervention designed and delivered in the mother tongue proves to be beneficial. Although they used a translanguaged discourse in English and Tagalog in some aspects of the lessons, the EAs predominantly use the mother language to make the pupils feel at ease during classes so they may express and actively participate in classes. The use of the mother tongue during the intervention appears to be a potent tool to achieve the purpose of the intervention. When EAs were asked about the value of the use of Batangas Tagalog in teaching pupils skills in early reading, the EAs explained the advantage of the mother tongue because pupils participate when the medium used in instruction is Tagalog, allowing the learners to remember and understand the lesson better. When the lesson is delivered using the language pupils understand, pupils participate more.

Other scholars also believe that the positive effects of using the mother tongue and corresponding link to learning other languages as well (Yeung & Ganotice, 2014). Children learn from their immediate family members’ social and cultural values through their mother tongue. Outside their home environment, children may form relationships through their second language. Children’s mother tongue helps them with language skills and intellectual capacities which aid them in second language learning ability, thus giving a premium on the use of the mother tongue that has a positive effect on the learning of a second language. One of the ways of promoting readiness in reading among children is by providing more opportunities for them to use their mother tongue competently. Further, Gonzales and Hughes (2018) posit that providing language instruction in children’s mother tongue may improve second-language reading outcomes. This resonates with Klinger et al.’s (2006) claim that a strong foundational skill in the child’s mother tongue is proven to be beneficial in acquiring a second language. The current intervention plan put these principles in mind when

the learning materials and delivery were localized and contextualized in the pupils' mother tongue.

CONCLUSION

The study demonstrates how the integrated PA intervention in the mother tongue delivers improvement in early reading skills of kindergarten pupils in terms of phonological awareness and letter knowledge. All the features of the integrated PA adopted by Muñoz et al. (2018) appear to contribute to the positive outcomes of Filipino kindergarten pupils' early reading skills. Notably, the use of the mother tongue is a new feature that is found to play a significant role, adding to a teaching framework for children in the Philippines. The current study highlights the localization and contextualization of materials in mother-tongue instruction. It explains how the elements put forward by Muñoz et al. (2018) can be improved and can work in the Philippine public school context. Thus, this research-based integrated PA intervention offers a feasible framework and design to help improve Filipino kindergarteners' reading outcomes in their mother tongue and in their L2 English.

While the present study offers a promising intervention plan for PA for Filipino students, its design can be improved by employing an experimental approach to the investigation of PA skills using complementary approaches designed to be delivered in the mother tongue. In addition, an investigation of the impact of the mother tongue on L2 PA growth can provide greater insight into the value of mother tongue instruction on PA.

Notwithstanding its limitations, the study offers a promising and sustainable contribution to improving language skills among kindergarten pupils. With many children around the world failing to read especially during these pandemic times when schools are significantly constrained, the present study provides an evidenced and informed intervention plan supportive of the development of early reading skills.

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