

## Improving the Ilocano Phonological Awareness of Kindergarten Learners Using Indigenized Reading Materials



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**ABSTRACT:** The study aims to improve the Ilocano phonological awareness of kindergarten learners in Sto. Rosario Elementary School, Sigay, Ilocos Sur, using indigenized reading materials. The result shows a significant positive impact on learners' skills in Ilocano phonological awareness, as demonstrated by the scores from the post-test. A paired samples t-test confirmed that the difference between pre-test and post-test means was statistically significant, demonstrating the effectiveness of the intervention.

The increase in the mean posttest score further supports that learners have improved significantly in all factors of phonological awareness. These outcomes explain why indigenized reading material and environmental print are incorporated into early childhood education. The materials provided a culturally familiar context that added meaning to what had been learned and further directed learners' attention toward phonemic patterns through visual word forms.

**KEYWORDS:** Culturally Relevant Context, Ilocano Phonological Awareness, Indigenized Reading Materials, Phonological Awareness

### I. INTRODUCTION

Literacy is a fundamental ability for a child and is the underpinning support to academic learning. It pertains to reading, writing, and counting and would thus be essential to the child's proper academic performance and life. For Philippine education, literacy skills are to be taught during kindergarten. During this early stage of development, knowledge about sound structure and the symbol-sound relationship must help the child read correctly.

The Department of Education (DepEd Order No. 14, s. 2018) in the Philippines has recognized the importance of literacy improvement and placed it high on the agenda through their flagship program, Every Child a Reader, to ensure every Filipino child can be a proficient reader and writer by end third grade. According to DepEd, kindergarten is the stepping stone from informal to formal literacy, as these are critical years and must encourage positive experiences to prepare children for school.

Specifically, most Ilocano Grade 1 learners need to achieve adequate reading fluency. In 2015, a USAID report disclosed that only 55 percent of these learners read at or above 10 correct words per minute, and hardly a percentage could boast reading fluency rates as high as 60 correct words per minute or more. Grade 1 Ilocano learners had an average oral reading fluency rate of 18 CWPM, slightly above the 2014 average of 14 CWPM. Further, it disclosed that 17% of learners could not read even one word of connected text, and 56% could not answer reading comprehension questions. These findings indicate a low level of reading fluency among regular grade 1 Ilocano learners, and what should be established is the essential skill of reading in kindergarten.

The essence of literacy is best grasped when setting the context of international assessments. In 2018, the Philippines was ranked at the bottom in terms of reading comprehension among 79 countries. In reading comprehension, it ranks last among its Southeast Asian neighbors. The Programme for International Student Assessment, administered by the Organization for Economic Cooperation and Development, tested some 600,000 15-year-old learners from various countries. That poses a concern regarding reading comprehension competencies because the inability to read is a disadvantage in other subjects, be it math, science, or humanities. What the World Bank's report points out in 2022 is the additional impact of the pandemic, as 90% of children aged 10 failed to read because of remote learning challenges.

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Low- and middle-income countries were already experiencing a learning crisis before the effects of the COVID-19 pandemic. The most profound effects of the disruption have been on early childhood learners, whose development has been halted in the most volatile aspects. Thus, the poor performance of the Philippines in international exams makes it urgent to read, comprehend, and engage in other literacy-related matters to enhance academic performance among learners. The improvement of reading skills among children needs to be done early, starting from kindergarten, so that they will continue to be proficient even to higher grade levels.

Language, literacy, and communication are vital developmental domains under the kindergarten curriculum. These include promoting early literacy learning and self-expression through language using the child's mother tongue or first language. This fosters a positive attitude toward reading and writing while encouraging children to view themselves as influential users and learners of language.

In language, literacy, and communication, phonological awareness is critical. It involves various skills, including oral identification of letter sounds, recognition of rhyming words, and words with the same beginning sound. Phonological awareness refers to the ability of the children to hear, identify, and manipulate sounds in spoken words. These include rhymes, syllables, and phonemes. Children performing adequately in phonological skills are generally better provided to read. Therefore, it is essential for all elementary teachers, above all kindergarten teachers, to explicitly instruct phonological awareness to all learners.

Research has indicated that a child's phonological awareness at the entry point of kindergarten is among the best predictors for the learner regarding literacy success or failure during their entire school career. Thus, phonological awareness needs to be assessed in learners so that areas of deficiency can be identified. By assessing phonological awareness, teachers can design focused and systematic instruction to target specific areas of need.

Teaching phonological awareness to all learners is a strategy that can contribute significantly to reading instruction. Phonological awareness skills have been consistently and extensively documented as essential to successful reading and spelling. Systematic phonological awareness instruction can give learners the foundation to become proficient readers and spellers.

Another important aspect of phonological awareness assessment by kindergarten is that it helps the teacher keep track of their learner's progress and adjust instruction appropriately. Through assessments, one can find where the learners require more support or even intervention while phonological skills are developed at optimal levels.

Sto. Rosario Elementary School is a multigrade and Indigenous People Education (IPEd) school in a geographically isolated upland municipality of Sigay, Ilocos Sur. It has faced very significant problems, in addition to those that are continuing, in providing quality education to kindergarten learners. This is because of limited access to resources, few instructional materials, and logistical difficulties in a very isolated area. Multigrade teaching and cultural requirements of IPEd create a new set of challenges within which the needs of this group bring problems in fully understanding their young children's learning requirements.

Based on the researcher's experience and observations in the classroom, almost all three learners still need to achieve familiarity with alphabet letters or the ability to produce their corresponding sounds. The time taken to read three-letter CVC words is also considerable, and they even exhibit inappropriate behavior to hide their reading struggles. Aware of the existing problem, the teacher-researcher seeks to create an indigenized reading material that only focuses on enhancing the phonological awareness of kindergarten learners.

Therefore, this study will augment the kindergarten learners' fundamental reading abilities and further enable them to grow their reading abilities and competencies to satisfy the minimum competencies for kindergarten and higher grade levels. This study has filled the gap by focusing on developing tailored reading materials based on the learners' cultural context and applying practical phonological awareness exercises.

This study, therefore, hopes to address the emerging concern of low performance and reading deficiencies among kindergarten learners in Sto. Rosario Elementary School, through the development and implementation of indigenized reading materials, will concentrate on tailoring them to the specific needs and challenges faced by the learners themselves. This would then ensure that enhancing their phonological awareness provides the learner with the ingredients needed to function successfully in the complex realm of reading and be set toward improved academic success.

In a nutshell, challenges in the instruction of kindergarten learners in Sto. Rosario Elementary School has led to a focused intervention on developing phonological awareness skills. The researcher's experience will illustrate the need for intervention for low learner performance. This study seeks to fortify the basic skills of kindergarten learners by developing indigenized reading materials appropriate for the cultural context of the learners, as well as using practical exercises that develop phonological awareness in preparation for future academic success.

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## II. RESEARCH QUESTIONS

### 3.1 Research Design

This study aimed to improve the Ilocano phonological awareness of kindergarten learners of Sto. Rosario Elementary School, Sigay, Ilocos Sur, School Year 2023-2024 using indigenized reading materials.

Specifically, it sought to answer the following questions:

1. What is the learners' phonological awareness level in their pre-test and post-test?
2. Is there a significant difference between the learners' phonological awareness levels before and after the intervention?
3. What are the perceived benefits of using indigenized reading materials in improving learners' phonological awareness?

### 3.2 Participants

Three kindergarten learners from Sto. Rosario Elementary School in Sigay, Ilocos Sur, comprised the participants of this study. Upon entry, the researcher observed that the class had not yet mastered having familiarity with alphabet letters and could not produce their respective sounds. Reading three-letter CVC words took them a significant amount of time, and some learners even displayed inappropriate behavior to conceal their reading difficulties. The observations indicate a general need for more basic phonological awareness reading skills among the learners.

### 3.3 Intervention

The current study involved indigenizing a reading material that the teacher-researcher designed to target phonological awareness skills for kindergarten learners. "Indigenous instructional material" is an instruction material created by the teachers where consideration has been taken from the culture, Indigenous knowledge system, practices, and Indigenous learning system of the learners and community (Rivera & Sanchez, 2021; Tolentino et al., 2020; Hipolito, 2019).

Localized reading materials are effective in earlier studies. Navales and De Mesa (2019) developed localized reading material for Laguna Grade 8 learners and concluded that it appropriately triggered learners to read by helping them establish connections with the content. Pinoliad (2021) hypothesized that contextualization and localization of reading materials enhanced reading comprehension among learners. Building from these findings, this study centered on developing a decontextualized readers' input by implementing environmental print.

Exposure to environmental print, which includes words and graphic signs in the child's environment, enables children to live with written code in the concrete mode and is the first step toward interpreting abstract symbols. In addition, environmental print fosters early child literacy in the reading code (Morrison & Morrison, 2022). Qing et al. found the role of environmental prints in promoting early reading development. They suggested that using salient pictures within the environment could help children's eyes focus on the words themselves. Adding environmental print, this developed material hoped to give young children rich experiences of the visual forms of words.

According to Roe et al. (2019), most children learn to read environmental print even before attending school. This often occurs as they grow up with the surroundings they see each day. In this paper, the teacher attempted to bridge the home/community environment with the classroom environment by using environmental print in reading materials. This included ads and advertisements for items seen by children.

The reason is that phonemic awareness is a part of phonological awareness; the material's content was initiated by familiarizing the learner with the letter and its sound. Further activities included training in identifying words that rhyme, recognition of alliterations, segmentation of sentences into words, syllable finding in words, and blending and segmenting onset-rimes.

The indigenized reading material was developed through a process that involved the review and analysis of the reading competencies expected of the kindergarten learners, design and development of the material from the insights gathered, expert validation, and revamping of the activities based on the suggestions and comments of the validators. The validators were the school head, master teacher, and language teacher, who gave valuable insights and feedback to enhance the learning process.

### 3.4 Instrumentation and Data Collection

In this study, both quantitative and qualitative research methods were employed. A quasi-experimental one-group pretest-posttest design was utilized, involving a single intact class before and after the intervention. Researchers commonly use this design to assess the impact of a treatment or intervention on a specific sample (Cranmer, 2017).

After obtaining the necessary approval and permit from the school head, a formal letter was addressed to the participants' parents, seeking their permission for their children to be part of the study. It was emphasized that the learners' names would not be mentioned at any point in the research, and they would not be coerced or pressured to answer the test.

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To assess the participants' level of phonological awareness, a series of oral reading tests was administered using indigenized reading materials. These materials were designed to incorporate cultural elements familiar to the learners, creating a more engaging and relevant context for their reading assessments.

The oral reading tests evaluated the learners' ability to recognize and manipulate sounds within words. They were tasked with identifying rhyming words, recognizing alliteration, segmenting sentences into words, identifying syllables in words, and blending and segmenting onset-rimes. These assessments provided valuable insights into the learners' phonological awareness skills, allowing for a more comprehensive understanding of their reading abilities.

By utilizing indigenized reading materials and conducting oral reading tests, the study sought to gain a deeper understanding of the learners' level of phonological awareness. The findings from these assessments would inform the subsequent development of targeted interventions aimed at improving the learners' reading skills, particularly in phonological awareness.

During the Third Quarter of the School Year 2023-2024, indigenized reading material was used to teach kindergarteners reading. The researcher initially developed a 40-item Phonological Awareness Test in Ilocano that served as the primary research instrument for the pretest and posttest.

One day was allocated for the administration of the pretest and posttest. In addition to the quantitative data, field notes were taken to document the teacher's observations during monitoring and follow-up activities. These observations aimed to assess the suitability of the strategy employed in addressing the problem. The qualitative remarks derived from the field notes were considered in evaluating the effectiveness of the indigenized reading material in improving the phonological awareness of kindergarten learners.

### 3.5. Data Analysis

The recorded raw scores obtained before, during, and after the intervention were tabulated, graphed, and analyzed. The quantitative data collected in this study underwent descriptive and inferential statistical analysis. In addressing the first problem, the learners' phonological awareness level was determined using percentage and mean scores. The data categorization below was used to interpret the level of phonological awareness:

#### Level of Phonological Awareness

Score Range	Descriptive Rating
31-40	Very Good
21-30	Good
11-20	Average
0-10	Poor

For the second problem, the mean pretest and posttest scores in the Phonological Awareness Test were analyzed using the t-test for dependent samples to determine the presence of a significant difference. The hypothesis was tested at a significance level of .05. Regarding the third problem, qualitative data was gathered through field notes and subjected to content analysis. The data were assigned codes utilized in the content analysis to identify possible themes relevant to the study.

## IV. RESULTS AND DISCUSSION

### 4.1 Level of Phonological Awareness of the Learners before and After the Intervention

The results of the pretest and posttest scores of the kindergarten learners are presented in Table 1.

**Table 1. Level of Phonological Awareness of the Learners before and After the Intervention**

Score Range	Pretest	%	Posttest	%
31-40 (Very Good)	0	0	3	100
21-30 (Good)	0	0	0	0
11-20 (Average)	0	0	0	0
0-10 (Poor)	3	100	0	0
Total	3	100	0	100
Level	Poor		Very Good	

The table shows that during the pretest, 100% of the learners (3 out of 3) scored within the lowest score range of 0-10, which pointed out that all the learners were at a "Poor" level of phonological awareness. The findings indicate learners needed

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more skills in phonemic discrimination; that is, few skills for perceiving and using sounds in language before intervention. It would be crucial for early literacy learning since the lack of foundational phonological skills may negatively impact their capacity to decode. Decoding is a critical early step in learning to read.

The post-test shows a drastic change; all the learners scored within 31-40, falling in the "Very Good" category. This drastic change, wherein all learners with "Poor" grades turned to "Very Good," raises high expectations that the intervention was compelling enough to enhance phonological awareness skills. Since no one learns at the score level of 0-10, 11-20, or 21-30, it can show that the learning intervention caused a total transformation of learners' capacities for phonological abilities.

In contrast, the mean score of learners on the posttest was 34.67, which indicates a dramatic performance improvement compared to their scores for the pretest. This dramatic increase proves how effective the instructional approach used to enhance phonological awareness has been. Therefore, from these results, the intervention involving local-variation reading material had some impact on learners' phonological awareness.

The intervention improved learners' phonological awareness skills from average to excellent performance. Notably, the positive change in phonological awareness among kindergarten learners after the intervention using indigenized reading materials is similar to what the other researchers have recently reported in studies like those of La Croix et al. (2023), Gillon (2023), Solis (2023), and Gurjar (2023). The above studies underlined the importance of adjusting the reading intervention, culturally embedded materials, and the strategy on phonological awareness in improving early literacy development.

### Significant Difference in the Level of Phonological Awareness before and After the Intervention

Table 2 shows the result of the paired samples t-test of kindergarten learners' mean pretest and posttest scores in the Ilocano Phonological Awareness Test.

**Table 2. Paired Samples T-test of the Mean Pretest and Posttest Scores**

	Mean	Mean Difference	N	df	p (2-tailed)	Remarks
Pretest	8.67	26	3	2	<. 001	Significant
Posttest	34.67					

The mean pretest score was 8.67, which means that, on average, the learners had a low level of phonological awareness before the intervention through the indigenized reading materials. On the other hand, the mean post-test score significantly increased to 34.67, which means that, on average, the learners had a substantial improvement in their skills in phonological awareness as a result of the intervention.

The t-test showed that the p-value in this study was 0.001, which is less than the significance level of 0.05. This indicates that the mean pre-and post-test scores are insignificant when considering the learners. This study concludes that these results prove that the intervention through indigenized reading materials significantly positively affects kindergarten learners' phonological awareness skills. The most notable increase in the mean score during post-testing is observed in aspects such as rhyming discrimination, sentence segmentation, syllable segmentation, and phoneme blending, indicating the presence of a significant improvement among the learners.

The findings hold with research proving that positive outcomes make way through such interventions in phonological awareness in early childhood education. Research studies emphasize the importance of targeted interventions for enhancing the phonological awareness skills of young learners.

According to Jones and Christensen (2023), environmental prints are valuable instructional tools that support early reading development. These prints, like signs, labels, and logos in children's environments, offer them a vibrant perceptual experience about word forms at a very young age. This is further supported by Zoll et al. (2023), who found that early exposure to environmental print enables children to make meaning from abstract symbols and begin learning about written language.

Such strategies as word-salient pictures in the environment tend to foster the development of phonemic awareness by drawing children's attention to the words themselves. This makes environmental prints add meaning and context to kindergarten learners' learning and foster their phonemic awareness development. Similar observations from Netra and Eddy (2023) suggested that the localization and contextualization of reading materials can enhance reading comprehension.

Further, studies have substantiated the role of environmental print in early literacy development. Xiao et al. (2023) posit that early exposure to environmental print in the form of words and symbols in children's surroundings facilitates comprehension of written language, which naturally supports early reading development.

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Xue et al. (2023) emphasized the concept of phonemic awareness as a component of phonological awareness and its significance in reading development. The authors further pointed out that many children learn to read environmental print before they attend formal schooling.

The findings from these studies justify using the indigenized reading materials in the current study and emphasize the phonological awareness-based intervention to improve the reading skills of kindergarten learners. The posttest results, where all the learners scored high, indicate that the intervention implemented through the indigenized reading material enabled the participants to develop their phonological awareness abilities effectively.

It is based on previous studies and affirms the latter's results; therefore, the current research allows for an increase in support for the application of targeted interventions and Indigenous reading materials in developing phonological awareness and reading skills during early childhood education.

### **Perceived Benefits of Using Indigenized Reading Materials in Improving the Ilocano Phonological Awareness of Kindergarten Learners**

From the field notes, analyzing the perceived benefits of using indigenized reading materials in enhancing the Ilocano Phonological Awareness of Kindergarten Learners was very much possible. In Week 1, the introduction of the materials was of high interest and enthusiasm among the learners. They were very active in all the tasks and yearned to open and discuss the materials. Their performance for phonological awareness tasks like rhyming and syllable segmentation improved compared to other lessons. This means the culturally relevant examples and images used in the materials were relevant and particularly evocative for the learners, creating an aura of relevance and connection.

With each successive week, phonological awareness remained a strong ability with the learners. For instance, by Week 2, they became more capable and more robust at accomplishing phoneme blending and tasks related to breaking a word into syllables. They grew more confident about participating in phonological awareness-related activities; such activities showed increased participation when learners gave their answers and ideas more freely. This is because the indigenized reading materials allowed them to create a positive attitude toward learning and a culturally inclusive classroom environment.

By Week 3, learners performed phonological awareness tasks at a new level of mastery. At this stage, many learners also displayed increased accuracy and automaticity in identifying initial sounds and blending to form words. Continued use of indigenized reading materials kept their attention for further engagement and active participation during lessons. Furthermore, incorporating culture-related material positively impacts the learner's disposition toward reading and thus becomes an advantage in the process.

In the fourth week, learners improved their phonological awareness skills very well. Their capabilities were marked in tasks such as rhyming discrimination, blending of syllables, and segmentation of phonemes. The transfer of phonological awareness to actual reading situations was noticeable, with these learners' improved reading fluency and accuracy. Importantly, however, the materials had positive spillovers because of the increased self-esteem of the learners and their lively interest in learning.

Week 5 allowed continued exposure to the same reading materials to deepen the learners' phonological understanding. They were also able to apply their skills to decoding and spelling without necessarily demonstrating the applicability of their learning, which shows that the identical learners' attitudinal positive remarks on reading and language learning tended to seek every event outside the schedule set aside for such activities. Therefore, integrating culturally relevant content into the materials continued to promote cultural pride and identity in the learners, making their learning experiences much more fulfilling.

During the sixth week, learners involved in the indigenized reading materials incessantly enhanced their skills relating to phonological awareness. They could read vowel sounds and manipulate phonemes in words without much struggle. This gave them more confidence in their phonological awareness skills, allowing them to ask for challenging work and foster teamwork with their peers. The use of indigenized materials continued to promote a connection to cultural relevance and meaning, as learners felt proud of their heritage and increased cultural sensitivity. The learners demonstrated an ability to connect more of their own experience with the concepts of phonology being taught by using culturally familiar examples and contexts in the materials. With the heightened positive attitude toward language learning, the learner's interest in learning new vocabulary and conversing using the target language intensified.

By week 7, learners' phonological awareness skills expanded and grew. This entailed more complex tasks- such as the ability to manipulate syllables and replace a phoneme in a word. Learners could also read more accurately and fluently with accurate CVC words and simple sentences. In this regard, these improvements resulted directly from using indigenized reading materials. The attitude of the learners toward reading and learning the foreign language was maintained as they were eager for opportunities to interact with the material and independently approach related sources. Applying indigenized materials for



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phonological awareness activities has enhanced learners' ownership of the intervention and cultural identity, creating a perfect configuration of a sound learning environment.

By the last week of the term, Week 8, phonological awareness was well beyond obvious and established by the advanced level abilities developed in rhyming, segmenting multisyllabic words, and identifying the sound patterns in words. Improved phonemic accuracy and awareness also aided spelling: they could now correctly apply phonological rules for spelling words. Most importantly, their positive attitude toward reading, language, and cultural heritage remained intact. The indigenized materials have inspired and motivated the learners, challenging them to sustain continued interest and enthusiasm.

Field notes indicate the perceived advantage of using indigenous readings during the phonological awareness improvement activity of Ilocano learners. The readings sparked the interest and eagerness of the learners, making them participate in the activities more actively. For instance, examples and images used to represent the culture of the learners made the activities more relevant and relevant. Indigenized material also rises with time, thus influencing the phonological awareness learners generally possess, such as blending, segmenting, and manipulating sounds in words.

Beyond academic performance, there was also a positive impact on learners' self-esteem, motivation, and cultural pride. The indigenized materials were also instrumental in acquiring a positive attitude toward learning and a culturally inclusive classroom environment. Increased exposure to indigenized materials deepened phonological awareness and applications of their decoding, spelling, and authentic reading knowledge. Culturally relevant content further enhanced the cultural identity and pride; for that reason, learners continued to engage with language with affirmative attitudes.

These results underscore the role of indigenized reading materials in providing a supportive environment for Ilocano learners to develop their phonological awareness and set up the classroom as a positive learning space. Project success was realized with the resulting benefits of enhanced academic performance, the development of language skills, and appreciation of their culture. Further research can be conducted to trace the long-term outcomes of using indigenized materials for learners' literacy development and continued engagement with their cultural heritage.

## V. CONCLUSIONS

All learners' phonological awareness improved significantly, going from "Poor" on the pretest to "Very Good" on the posttest. Before the intervention, all scores fell into the lowest category, indicating that most students needed to improve their phonemic discrimination. However, all students achieved high scores on the posttest, demonstrating the remarkable improvement that occurred when indigenous reading materials were employed. This result indicates that the culturally appropriate approach improved their phonological abilities while reinforcing a positive attitude toward learning, demonstrating the efficacy of such treatments during the early stages of literacy development.

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