

Developing Alphabet Knowledge Among Ayta Kindergarten Learners Using Alpha-Tap It Cards

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ABSTRACT

The study utilized a quasi-experimental design to evaluate the effectiveness of the Alpha-Tap It Cards in improving alphabet knowledge among Ayta kindergarten learners at Bueno Integrated School in Tarlac Province, Philippines. Twenty-five Ayta learners aged 5–6 years participated in the intervention, which involved pretests and posttests on letter recognition, sound identification, and writing skills, analyzed as Consistent, Developing, and Beginning levels. The Alpha-Tap It Cards, adapted from the Alfabasa program, integrated visual, auditory, and kinesthetic elements to enhance learning in a culturally relevant manner.

Based on the gathered data, it was concluded that the alphabet knowledge of the learners before the use of Alpha-Tap It Cards was at the beginning level in letter naming, developing in letter sound, and beginning in letter writing. After the use of Alpha-Tap It Cards, the learners progressed to developing level in letter naming, letter sound, and letter writing. The results revealed a significant difference in the learners' alphabet knowledge before and after the implementation of Alpha-Tap It Cards. Consequently, an action plan was proposed to further enhance literacy development among Ayta kindergarten learners. ^{1V}

To address learners at the Beginning level, Alpha-Tap It Cards should focus on one letter at a time using multisensory activities, including visual cues, auditory repetition, and tactile tracing. A structured progression for achieving the Consistent level should integrate these activities with gradual advancement to simple word formation. Regular use of the cards in interactive games and classroom activities is recommended to foster confidence, engagement, and fluency.

Keywords: letter writing, letter naming, letter sounds, interactive games

1. INTRODUCTION

Literacy is the cornerstone of education, serving as a gateway to future learning and personal development. For young children, particularly those in marginalized and Indigenous communities, mastering early literacy skills such as alphabet knowledge is crucial in determining their future academic success. Alphabet knowledge, which includes recognizing, naming, and understanding sounds of letters, is fundamental to development of reading fluency and comprehension.

Indigenous children frequently grow up speaking their native languages, which are often not the language of instruction in schools. For example, Aboriginal and Torres Strait Islander children in Australia typically enter school with knowledge of multiple languages but limited proficiency in English. This language barrier can make it difficult for them to engage with the standard curriculum (Williams, 2019). Similarly,

scarcity of reading materials that reflect Indigenous cultures and experiences worsens this challenge. While organizations like the Indigenous Literacy Foundation (ILF) strive to supply culturally appropriate books, many communities still lack access to resources that connect with their identities (Williams, 2019). These linguistic barriers and the lack of culturally relevant materials pose significant challenges for Indigenous learners when building alphabet knowledge, as pupils struggle to engage with learning system that do not align with their native languages and cultures.

In line with international efforts, there have been calls for improved educational access for Indigenous people. United Nations stresses the importance of culturally appropriate education, yet acknowledges the persistent gaps in both access and quality (United Nations, n.d.). For instance, in 2015, only 78.7% of Aboriginal learners in Australia reached the literacy benchmark for Year Three, compared to 95.6% of non-Aboriginal learners. In the Northern Territory, this rate was even lower at 42.5% for Aboriginal learners (Creative Spirits, n.d.). The performance gap is further demonstrated by findings that Indigenous learners in Australia perform approximately two-and-a-half years behind their non-Indigenous peers in reading literacy, with 39% classified as low performers compared to 14% of non-Indigenous students (Dreise & Thomson, 2014).

This gap in literacy performance highlights the urgency for building foundational alphabet knowledge among Indigenous learners, as early literacy interventions can help close the educational gap and improve outcomes for Indigenous learners.

Similarly, in countries like Bolivia and Ecuador, Indigenous pupils often experience significantly lower literacy rates than the national average. For example, Bolivia's national literacy rate is around 92%, but rural Indigenous communities see rates as low as 70%. This disparity is largely attributed to the fact that educational resources are predominantly available in Spanish rather than Indigenous languages (Closing the Gap, 2020). Additionally, the lack of books in homes and limited access to culturally relevant educational materials further deepen these disparities. Remote communities often face logistical challenges, delaying the arrival of necessary resources (Information Access Group, n.d.).

Experience of lower literacy rates due to language barriers and lack of resources parallels the challenges faced by Indigenous learners in building alphabet knowledge. Providing accessible, culturally relevant materials in native languages is crucial to improving literacy in these communities.

These difficulties are mirrored in the experiences of Indigenous learners in other regions. For instance, Indigenous children frequently attend underfunded schools, which have limited access to educational resources. This lack of support negatively affects their literacy development and overall academic performance. In many cases, Indigenous learners find that the education system fails to respect or incorporate their cultural backgrounds, leading to feelings of alienation and lower motivation to engage in literacy education (Guiberson & Vining, 2023).

Underfunded schools and lack of culturally inclusive curricula contribute to low literacy performance in Indigenous People communities. Building alphabet knowledge must be paired with efforts to create culturally responsive teaching practices to maintain engagement and foster literacy development.

Indigenous groups in the Philippines like: Aytas, Mangyans, Tiboli for example, face significant challenges in literacy education due to cultural, economic, and systemic factors. One of the primary obstacles is economic hardship, which forces many families to prioritize survival over education. As a result, high dropout rates are common, with many Indigenous children leaving school due to financial constraints (Luna, 2023). Moreover, many Indigenous communities lack proper educational facilities and

trained teachers who understand their unique cultural context. This often leads to a “one size fits all” approach to education, which does not meet the needs of Indigenous learners (Abad, 2020).

Economic hardships and lack of culturally sensitive educational infrastructure hinder efforts to build alphabet knowledge in Indigenous People communities. Addressing these issues requires educators who are equipped with an understanding of Indigenous People culture and targeted interventions that cater to their unique needs.

Furthermore, traditional beliefs and practices sometimes conflict with formal education approaches. For instance, cultural norms often prioritize educating male children over females, as males are viewed as the primary breadwinners. This gender bias results in lower enrollment and retention rates for female students, further perpetuating gender inequality in literacy (Luna, 2023). Additionally, a general skepticism toward the value of formal education persists in many Indigenous communities. Families often view literacy as less critical compared to survival and livelihood activities, leading to a lack of motivation to engage in literacy programs (Luna, 2023).

Cultural dynamics, including gender bias and skepticism toward formal education, present additional challenges for building alphabet knowledge in Indigenous People communities. Overcoming these barriers will require culturally respectful strategies that address both gender inequality and attitudes toward education.

Moreover, historical marginalization and discrimination have contributed to a general distrust of formal educational institutions among Indigenous learners. This distrust hinders collaboration with educational programs designed to improve literacy (Rutu Foundation, n.d.). Many of these programs also fail to incorporate Indigenous culture, language, or context into their curricula, making it difficult for students to relate to the material being taught (Abad, 2020).

The historical distrust of formal education systems further complicates efforts to build alphabet knowledge in Indigenous People communities. Successful programs must integrate Indigenous People culture and language to create curricula that are relatable and relevant to the learners.

Addressing these challenges requires culturally sensitive approaches that respect Indigenous traditions while promoting the value of education for future generations. By incorporating Indigenous cultures into curricula and providing adequate resources, it is possible to bridge the educational gap and improve literacy rates in these communities.

Culturally sensitive and well-resourced interventions are essential for building alphabet knowledge in Indigenous People communities. These efforts must prioritize the inclusion of Indigenous culture and language to ensure meaningful and sustained educational outcomes.

The current study, “Developing Alphabet Knowledge among Ayta Kindergarten Learners of Bueno Integrated School using Alpha-Tap It Cards,” seeks to address these challenges by introducing an innovative instructional tool specifically designed for Ayta kindergarten learners. Conducted at Bueno Integrated School, which serves a population of Indigenous learners, this research aims to develop alphabet knowledge in a culturally responsive and engaging manner using the Alpha-Tap It Cards. These cards are a key adaptation of the Alfabasa program, a Filipino reading system that has demonstrated success in improving literacy among Indigenous Filipino learners.

Alfabasa, created by educator Trisha Gonzales-Cruz, is a comprehensive reading program that utilizes a play-based, multisensory approach to teaching children how to read Filipino. The program integrates music, movement, games, and visual aids into its teaching methods, making literacy learning both interactive and enjoyable for young children. Alfabasa’s structured Eight-step reading program begins

with the basics of listening and letter-sound recognition and gradually progresses to more complex reading tasks. This incremental approach ensures that learners build a strong foundation in alphabet knowledge before moving on to reading words, sentences, and stories. Crucially, Alpabasa emphasizes inclusivity, providing resources that cater to children from diverse socio-economic backgrounds, including those in Indigenous and rural communities. It is this focus on accessibility and engagement that makes Alpabasa an ideal model for adaptation in the current study (Rotary, n.d.).

Alpha-Tap It Cards used in this research are direct adaptation of the Alpabasa method, tailored to the specific needs of Ayta learners. Each card features an uppercase and lowercase letter, the corresponding sound in Filipino, and an image that begins with that letter, all presented in a simple, visually appealing format. For example, the card for the letter "Aa" features the uppercase and lowercase letter "Aa," the sound /a/, and a picture of an "aso" (dog). This design not only helps learners recognize the letters and sounds but also ties the letter-sound relationship to a familiar object, grounding the learning process in concrete, relatable imagery. The Alpha-Tap It Cards are designed to be used interactively, encouraging learners to tap, say, and associate the letter sounds with the images in a playful and engaging way. This approach supports the development of phonemic awareness and enhances the learner's ability to connect letters with their corresponding sounds—skills that are critical for the early stages of reading.

In the context of Aytas, an Indigenous group with their own distinct language and cultural heritage, literacy instruction must be both sensitive and adaptive to their unique needs. Many Ayta children grow up speaking their native dialect at home which are Ayta Mag-Antsi and Kapampangan and have little exposure to formal education in Filipino or English (Luna, 2023). This linguistic divide can make traditional literacy instruction challenging, as it often assumes familiarity with the national language. The Alpha-Tap It Cards aim to bridge this gap by using a multisensory, culturally responsive approach that connects with Ayta learners. By incorporating familiar images and interactive elements, the cards create a learning environment that is both accessible and engaging, making it easier for Ayta children to develop alphabet knowledge in Filipino, despite it not being their first language.

Moreover, this study highlights the importance of culturally relevant pedagogy in the development of literacy among Indigenous learners. Research shows that when teaching methods and materials reflect the culture, language, and experiences of the learners, pupils more likely engage with the content and retain what they have learned (Hasain, 2024). The Alpha-Tap It Cards, with their emphasis on play, visual learning, and context-specific images, are designed to do just that. By grounding the learning process in familiar objects and sounds, the cards help Ayta learners relate to the Filipino alphabet in a meaningful way, making the acquisition of alphabet knowledge more intuitive and less abstract.

This research is also significant in the broader context of educational equity. Indigenous group like the Aytas often face systemic barriers to quality education, including geographical isolation, limited resources, and cultural disconnects within mainstream educational systems.

(Luna, 2024) These challenges contribute to the lower literacy rates seen among Indigenous communities compared to their non-Indigenous counterparts. By introducing a culturally sensitive, play-based approach to literacy instruction, this study seeks to address these disparities and offer a practical solution for improving literacy outcomes among Ayta learners.

The study's setting, Bueno Integrated School, is also significant. As a school that serves Ayta learners who are typically has a strong Kapampangan dialect, it provides a valuable context for testing the effectiveness of the Alpha-Tap It Cards in a real-world, Indigenous educational environment. The research will assess how well the Alpha-Tap It Cards support the development of alphabet knowledge among kindergarten

learners and evaluate whether this interactive, multisensory approach can be an effective alternative to traditional literacy instruction in this setting.

By focusing on alphabet knowledge, a foundational aspect of early literacy, this study aims to equip Ayta learners with the skills they need to succeed in reading and writing as they progress through their education. Furthermore, the use of Alpha-Tap It Cards has the potential to foster a positive attitude toward learning among Ayta learners, who may otherwise struggle with traditional, text-heavy approaches to literacy instruction. The playful and interactive nature of the cards makes learning an enjoyable experience, helping to cultivate a love of reading and learning in a way that is aligned with the developmental needs of young children.

This research on Developing Alphabet Knowledge among Ayta Kindergarten Learners of Bueno Integrated School using Alpha-Tap It Cards is a significant contribution to the field of literacy education, particularly for Indigenous learners. By adapting the Alpabasa framework into a culturally responsive tool, this study seeks to offer a viable solution for improving alphabet knowledge among Ayta kindergarten learners. The findings from this research will not only benefit the Ayta community but also provide insights into how culturally sensitive, play-based literacy tools can be used to improve educational outcomes for Indigenous and marginalized children across the Philippines.

Statement of the Problem

This study aimed to develop alphabet knowledge of Ayta kindergarten learners using the Alpha-Tap It Cards at Bueno Integrated School, Capas West District, Schools Division of Tarlac Province. Specifically, it aimed to answer the following questions:

- 1. What is the alphabet knowledge performance of Ayta Kindergartners of Bueno Integrated School before the use of Alpha-Tap It Cards, in terms of:**
 - 1.1. Letter name;
 - 1.2. Letter sound; and
 - 1.3. Letter writing?
- 2. What is the alphabet knowledge performance of Ayta Kindergartners of Bueno Integrated School after the use of Alpha-Tap It Cards, in terms of:**
 - 2.1. Letter name;
 - 2.2. Letter sound; and
 - 2.3. Letter writing?
- 3. Is there a significant difference before and after the use of Alpha-Tap It Cards in the Alphabet Knowledge performance of Ayta Kindergartners of Bueno Integrated School?**
- 4. What action plan can be proposed to improve alphabet knowledge among Ayta kindergarten learners?**

Null Hypothesis

There is no significant difference in the alphabet knowledge performance of Ayta kindergartners before and after the use of Alpha-Tap It Cards.

Conceptual Framework

The conceptual framework of this study was based on a pre-intervention-post model to systematically measure and analyze the impact of the Alpha-Tap It Cards on the alphabet knowledge performance of

Ayta kindergartners. This structure aligned with the research questions, which examined the learners' baseline performance prior to the intervention, their progress after the intervention, and the significant differences between these two stages. The pre-intervention phase established the learners' initial abilities in letter names, sounds, and writing, serving as a baseline for comparison. The intervention phase involved the implementation of the Alpha-Tap It Cards as a culturally relevant and collaborative instructional tool. The post-intervention phase evaluated the learners' performance following the intervention, providing empirical evidence of the intervention's effectiveness. This framework supported the statistical testing of the null hypothesis and facilitated the development of an evidence-based action plan to enhance alphabet knowledge.

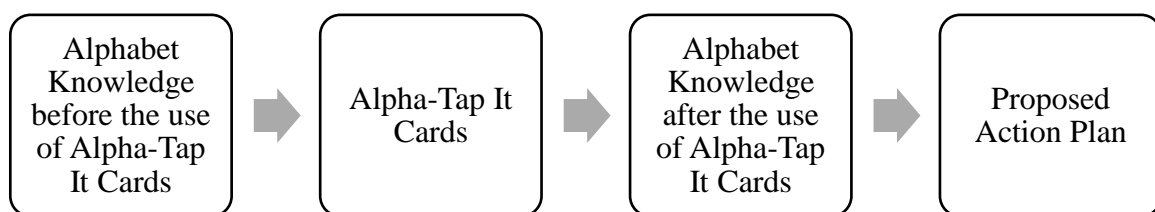


Figure 1. Paradigm of the Study

The study was conducted in a structured step-by-step process to assess the effectiveness of Alpha-Tap It Cards on the alphabet knowledge of Ayta kindergarten learners at Bueno Integrated School. Initially, the research evaluated the baseline performance of Ayta kindergartners in three critical areas of alphabet knowledge before the introduction of the Alpha-Tap It Cards. First, the letter name recognition was assessed to determine how well learners could identify and name the letters of the alphabet. Following this, learners' ability to associate letter sounds with the corresponding letters was evaluated, providing insight into their phonemic awareness. Additionally, the researcher assessed the learners' letter writing skills, which involved their ability to accurately write each letter of the alphabet. After establishing the baseline performance across these areas, the implementation of the Alpha-Tap It Cards took place, involving interactive and engaging activities designed to enhance learners' alphabet knowledge. Subsequently, a post-intervention assessment was conducted to measure the same three areas: letter name recognition, letter sound identification, and letter writing skills. The study analyzed the results to determine if there was a significant difference in alphabet knowledge performance before and after the use of Alpha-Tap It Cards, allowing for a comprehensive evaluation of the effectiveness of this instructional tool in promoting literacy among Ayta kindergarten learners at Bueno Integrated School. An Action Plan was proposed.

2. METHODS

The methods section outlines the systematic approach used to evaluate the impact of the Alpha-Tap It Cards on alphabet knowledge among Ayta kindergarten learners at Bueno Integrated School. This section details the research design, participants, instruments, data collection procedures, and data analysis techniques used to measure improvements in letter recognition, sound identification, and writing skills.

Research Design

This study employed a quasi-experimental design that incorporated a pretest and posttest approach to assess the effectiveness of the Alpha-Tap It Cards in enhancing alphabet knowledge among Ayta kindergarten learners at Bueno Integrated School. A quasi-experimental design was particularly suitable for this research as it allowed for a clear comparison of participants' performance before and after the intervention, providing insight into changes resulting from the implementation of the educational tool. By focusing on specific outcomes such as the recognition of letter names, identification of letter sounds, and the ability to write letters, this design rigorously evaluated the impact of the Alpha-Tap It Cards on learners' learning. The pretest established a baseline measurement of the learners' existing knowledge, while the posttest revealed improvements or progress resulting from the intervention. This approach not only quantified the educational outcomes but also contributed to a deeper understanding of the learning processes in early childhood education.

Research Locale

The research was conducted at Bueno Integrated School, located in the Capas West District of Tarlac Province, Philippines. This institution serves a predominantly Indigenous pupil population, specifically the Ayta community, whose members primarily speak the Ayta Mag-Antsi and Kapampangan dialect. The school was an ideal setting for this study due to its unique demographic and cultural context. Conducting the research in this locale allowed for the exploration of culturally relevant educational practices and tools that effectively address the specific learning needs of Indigenous learners. The study assessed how the Alpha-Tap It Cards, designed with cultural sensitivity in mind, enhanced literacy development among young learners. By focusing on this specific community, the research contributed to the broader discourse on culturally responsive teaching methodologies and the importance of adapting educational materials to suit the linguistic and cultural backgrounds of learners.

Research Respondents

The respondents for this study consisted of 25 Ayta kindergarten learners from Bueno Integrated School. These learners were typically aged five to six years old and were in the early stages of their formal education. The sample was intentionally diverse, including both male and female learners, to ensure that the study accurately reflected the demographic composition of the kindergarten population. This diversity was critical in understanding how different learners interacted with the Alpha-Tap It Cards and in assessing whether the intervention was equally effective across various subgroups within the class. Engaging with Ayta learners provided valuable insights into their unique learning styles and cultural contexts, which could inform future educational practices aimed at Indigenous populations.

Research Instrument

The primary research instrument employed in this study was the Alpha-Tap It Cards, a researcher-made adaptation of the Alfabasa program developed by Trisha Gonzales-Cruz. These interactive and multisensory educational cards were specifically designed to teach essential literacy skills, including letter names, letter sounds, and letter writing abilities, in a way that was engaging and accessible for young learners. Each card featured a distinct uppercase and lowercase letter accompanied by the corresponding sound in Filipino, along with an engaging image representing a word that began with that letter. For instance, the card for the letter "Aa" displayed the uppercase and lowercase letter "Aa," the sound /a/ as in the Filipino word "Aso" (dog), and an illustration of a dog. This design not only aided in visual letter recognition but also reinforced phonetic associations, facilitating a meaningful connection between visual and auditory learning modalities.

This multisensory approach proved particularly beneficial for kindergarten learners, who often exhibit a range of learning preferences and styles. By integrating visual, auditory, and kinesthetic elements, the Alpha-Tap It Cards promoted active engagement with the material, which is crucial for effective learning in early childhood education. The combination of letter representation, sound association, and visual imagery enabled learners to interact dynamically with the content, fostering a deeper understanding of the alphabet and its components.

To comprehensively measure the effectiveness of the intervention, both pretests and posttests were administered to the learners, focusing on three core areas essential for developing alphabet knowledge:

- **Recognizing and Naming Letters:** Learners' ability to identify and name each letter presented in both uppercase and lowercase forms was evaluated.
- **Identifying Corresponding Sounds:** Learners were assessed on their ability to correctly associate each letter with its phonetic sound. For example, when shown the letter "Aa," learners were expected to respond with the sound /a/ for "Aso," demonstrating their understanding of the phonetic connection, which is essential for early reading skills.
- **Writing Letters Accurately:** This component evaluated learners' proficiency in writing letters correctly, a vital skill for overall literacy development.

These assessments provided a comprehensive overview of the learners' progress in alphabet knowledge and served as critical data points for evaluating the Alpha-Tap It Cards' effectiveness. By comparing pretest and posttest results, the study was able to determine whether the Alpha-Tap It Cards facilitated improvements in letter recognition, sound identification, and letter writing abilities. This evaluation not only highlighted the strengths of the intervention but also offered insights into areas for potential improvement, guiding future iterations of the educational tool.

Data Gathering Procedure

The data gathering procedure for this study commenced with the submission of a formal permission letter to the Schools Division Superintendent of Tarlac Province and the school head of Bueno Integrated School. This letter outlined the study's objectives, methodology, and significance in improving alphabet knowledge among Ayta kindergarten learners. After obtaining the necessary approvals, the researcher coordinated with the school staff to finalize logistics and scheduling, ensuring minimal disruption to the learners' regular activities.

In the first week, a pretest was administered to 25 Ayta kindergarten learners to establish a baseline measurement of their alphabet knowledge, focusing on letter name recognition, letter sound identification, and letter writing skills. Following the pretest, the intervention using the Alpha-Tap It Cards was introduced and integrated into the daily literacy lessons. Over the next five weeks, learners participated in play-based, multisensory activities designed to enhance letter recognition, phonetic associations, and writing skills. These activities ensured that learning was engaging, interactive, and culturally relevant, fostering a positive attitude toward literacy.

Teachers were trained to effectively use the Alpha-Tap It Cards to facilitate learning and create a supportive environment that encouraged learner participation. At the end of the six-week period, a posttest was conducted to evaluate the learners' progress in the same areas assessed during the pre-test. The data from both assessments were meticulously gathered and analyzed to determine the intervention's effectiveness. This structured approach ensured meaningful insights into the learners' progress and provided a thorough evaluation of the Alpha-Tap It Cards' impact on their alphabet knowledge.

Program of Activities

Week 1	Objectives
Day 1	Conduct pretest.
Day 2 (Letter Ll)	identify the letter name; produce the sound of the letter; and write the letter.
Day 3 (Letter Ll)	identify the objects that begin with letter Ll; produce the beginning sound of objects that begin with letter Ll; and write the beginning letter of the given words.
Day 4 (Letter Yy)	identify the letter name; produce the sound of the letter; and write the letter.
Day 5 (Letter Yy)	identify the objects that begin with letter Yy; produce the beginning sound of objects that begin with letter Yy; and write the beginning letter of the given words.
WEEK 2	Objectives
Day 1 (Letter Nn)	identify the letter name; produce the sound of the letter; and write the letter.
Day 2 (Letter Nn)	identify the objects that begin with letter Nn; produce the beginning sound of objects that begin with letter Nn; and write the beginning letter of the given words.
Day 3 (Letter Gg)	identify the letter name; produce the sound of the letter; and write the letter.
Day 4 (Letter Gg)	identify the objects that begin with letter Gg; produce the beginning sound of objects that begin with letter Gg; and write the beginning letter of the given words.
Day 5 (Letter Nn and Gg)	review letter names Nn and Gg; tell the beginning sound of given objects; write the correct beginning letter of given objects.
WEEK 3	Objectives
Day 1 (Letter NGng)	identify the letter name; produce the sound of the letter; and write the letter.

Day 2 (Letter NGng)	identify the objects that begin with letter NGng; produce the beginning sound of objects that begin with letter NGng; and write the beginning letter of the given words.
Day 3 (Letter Pp)	identify the letter name; produce the sound of the letter; and write the letter.
Day 4 (Letter Pp)	identify the objects that begin with letter Pp; produce the beginning sound of objects that begin with letter Pp; and write the beginning letter of the given words.
Day 5 (Letter NGng and Pp)	review letter names NGng and Pp; tell the beginning sound of given objects; write the correct beginning letter of given objects.
WEEK 4	Objectives
Day 1 (Letter Rr)	identify the letter name; produce the sound of the letter; and write the letter.
Day 2 (Letter Rr)	identify the objects that begin with letter Rr; produce the beginning sound of objects that begin with letter Rr; and write the beginning letter of the given words.
Day 3 (Letter Dd)	identify the letter name; produce the sound of the letter; and write the letter.
Day 4 (Letter Dd)	identify the objects that begin with letter Dd; produce the beginning sound of objects that begin with letter Dd; and write the beginning letter of the given words.
Day 5 (Letter Rr and Dd)	review letter names Rr and Dd; tell the beginning sound of given objects; write the correct beginning letter of given objects.
WEEK 5	Objectives
Day 1 (Letter Hh)	identify the letter name; produce the sound of the letter; and write the letter.

Day 2 (Letter Hh)	identify the objects that begin with letter Hh; produce the beginning sound of objects that begin with letter Hh; and write the beginning letter of the given words.
Day 3 (Letter Ww)	identify the letter name; produce the sound of the letter; and write the letter.
Day 4 (Letter Ww)	identify the objects that begin with letter Ww; produce the beginning sound of objects that begin with letter Ww; and write the beginning letter of the given words.
Day 5 (Letter Hh and Ww)	review letter names Hh and Ww; tell the beginning sound of given objects; write the correct beginning letter of given objects.
WEEK 6	Objectives
Day 1 to 4 (Ll, Yy, Nn, Gg, NGng, Pp, Rr, Dd, Hh, Ww)	review letter names Ll, Yy, Nn, Gg, NGng, Pp, Rr, Dd, Hh, Ww; produce the beginning sound of given objects; and write the correct beginning letter of given objects.
Day 5	Conduct posttest.

Data Analysis

The performance of learners in both the pretest and posttest was categorized into three levels based on their scores and corresponding percentage ranges. Learners who achieved 8 to 10 correct answers, equating to 80–100%, fell under the Consistent category. These learners consistently demonstrated the expected competencies, participated actively in activities, worked independently, and often exhibited advanced skills in some areas. Those who scored 6 to 7 correct answers, or 60–79%, were classified as Developing. These learners sometimes displayed the expected competencies, participated with minimal supervision, and showed steady progress in completing tasks. Lastly, learners who scored 0 to 5 correct answers, equivalent to 0–59%, were placed in the Beginning category. These learners rarely demonstrated the expected competencies, required close supervision, and exhibited limited participation or independence in tasks. This classification provided a structured framework for analyzing performance in both tests. The collected data will be analyzed using paired sample t-tests to determine whether there is a significant difference in alphabet knowledge performance before and after the implementation of the Alpha-Tap It Cards intervention.

The formula for the paired sample t-test is as follows:

$$t = (\bar{d}) / (s_d / \sqrt{n})$$

Where:

- \bar{d} = the mean of the differences between the paired observations (posttest score - pretest score)
- s_d = the standard deviation of the differences
- n = the number of paired observations (sample size)

The resulting t-value will then be compared to a critical value from the t-distribution table based on the degrees of freedom $(n-1)(n-1)$ to determine statistical significance. This analytical framework not only provides a robust evaluation of the effectiveness of the Alpha-Tap It Cards but also contributes to the growing body of literature on effective teaching strategies for young Ayta learners.

The performance of the kindergarten was characterized as follows:

Adjectival Rating	Index Limits	Description
Consistent	80-100	• Always demonstrates the expected competency.
		• Always participates in the different activities, works independently.
		• Always performs tasks, advanced in some aspects.
Developing	60-79	• Sometimes demonstrates the competency.
		• Sometimes participates, minimal supervision.
		• Progresses continuously in doing assigned tasks
Beginning	0-59	• Rarely demonstrates the expected competency.
		• Rarely participates in class activities and/or initiates independent works.
		• Shows interest in doing tasks but needs close supervision.

3. RESULTS AND DISCUSSION

This section presents the findings from the pretest and posttest assessments conducted to evaluate the effectiveness of the Alpha-Tap It Cards intervention on the literacy skills of Ayta kindergarten learners.

3.1. Alphabet Knowledge Performance Before the Use of Alpha-Tap It Cards

This section analyzes participants' performance in alphabet knowledge, focusing on their ability to recognize letter names, produce letter sounds, and write letters before the use of Alpha-Tap It cards. The evaluation highlights their strengths and identifies areas needing improvement, establishing a reference for assessing the impact of the intervention.

3.1.1. Knowledge Before the Use of Alpha-Tap It Cards on Letter Naming

This section presents the pretest results on participants' ability to identify letter names, providing insights into their initial proficiency levels and areas requiring improvement before the intervention.

Table 1. Knowledge Before the Use of Alpha-Tap It Cards on Letter Naming

Indicator	Frequency	Percentage
Beginning	25	100.00
Total	25	100

The results in Table 1 indicate that all 25 learners (100%) fell under the Beginning category in their pretest performance on letter naming. This means they scored between 0 and 5 correct answers, corresponding to a percentage range of 0–59%. These results suggest that the learners struggled significantly with letter

naming prior to the intervention, demonstrating limited or no ability to recognize and correctly identify letters of the alphabet.

Indigenous learners, such as those from Ayta communities, often encounter barriers in English vocabulary and phonology, which impede their ability to identify and name letters. Studies indicate that the overlap and differences between their native language (L1) and English (L2) contribute to difficulties in phonemic awareness and alphabet knowledge (Leano, Rabi, & Piragasam, 2018). Despite policies promoting mother-tongue-based multilingual education, the insufficient implementation of these policies, coupled with the absence of culturally sensitive teaching methods, exacerbates these literacy challenges (Minority Rights Group, n.d.).

This baseline data underscores the urgency of addressing these barriers and provides a foundation for assessing the impact of interventions like Alpha-Tap It Cards. Research consistently emphasizes that early literacy skills, such as letter naming proficiency, are critical predictors of future reading success. For instance, Adams (1990) emphasized the role of foundational literacy skills in subsequent reading development, while the National Early Literacy Panel (2008) highlighted the predictive value of letter knowledge for literacy outcomes. Recent studies, such as Miller and Almonte (2020), demonstrate that incorporating culturally relevant teaching strategies can significantly improve literacy outcomes for Indigenous learners, as these approaches align instruction with learners' cultural contexts. Additionally, research by WestEd (2021) supports culturally responsive teaching methods, citing their effectiveness in fostering early literacy engagement and proficiency.

The findings in Table 1 underscore a critical and alarming reality: the complete absence of learners in higher proficiency categories signals systemic gaps in the educational experiences of Ayta kindergarten learners. The universal placement in the Beginning category reflects not only limited exposure to the alphabet but also the broader inequities in access to culturally and linguistically appropriate resources. This points to a failure to adequately implement mother-tongue-based multilingual education policies and a lack of investment in culturally responsive pedagogy. Without intervention, these gaps perpetuate cycles of disadvantage, limiting learners' potential to develop foundational literacy skills critical for future academic success. Programs such as the Alpha-Tap It Cards represent an opportunity to address these gaps, but their success depends on their ability to integrate cultural context and linguistic relevance into instruction. Moreover, addressing these systemic issues requires not just innovative tools but a reimagining of educational priorities to center Indigenous learners' unique needs, ensuring they are not merely included but empowered to thrive within the educational system.

3.1.2. Knowledge Before the Use of Alpha-Tap It Cards on Letter Sound

This section presents the pretest findings on participants' ability to recognize and produce letter sounds, offering insights into their initial phonemic awareness. The analysis categorizes their proficiency levels into Frustration, Instructional, and Independent, providing a foundation for understanding their early literacy development.

Indicator	Frequency	Percentage
Developing	19	76.00
Beginning	6	24.00
Total	25	100

Table 2. Knowledge Before the Use of Alpha-Tap It Cards on Letter Sound

The scores in Table 2 indicate that 76% of the learners fell under the Developing category, scoring 6 to 7 correct answers (60–79%), which reflects partial proficiency in recognizing and producing letter sounds but with the need for guided instruction. This suggests that these learners had some foundational understanding of letter-sound associations but were inconsistent in their application, requiring further practice and support. On the other hand, 24% of the learners scored between 0 and 5 correct answers (0–59%) and were categorized as Beginning, indicating minimal ability to connect letters with their corresponding sounds and highlighting a need for intensive intervention.

Many Ayta individuals primarily communicate in their native languages, which often differ significantly from Filipino and English in phonology and structure. This linguistic gap presents a substantial barrier to learning and pronouncing letters in these languages. For example, the Abellen Ayta speak a Sambalic language that lacks direct equivalents for certain Filipino or English sounds, further complicating letter naming and literacy development (Ethnic Groups of the Philippines, n.d.).

These findings are consistent with studies highlighting the challenges Indigenous learners face in developing phonemic awareness. For instance, research by Reyes and Correa (2021) on Philippine Indigenous learners in English phonology revealed significant struggles with alphabet knowledge and phonological awareness, which directly affect reading abilities. Similarly, Del Rosario and Santos (2022) emphasized the value of mother-tongue-based phonological awareness interventions for Filipino kindergarten learners, underscoring the importance of developing foundational literacy skills in learners’ native languages to facilitate further literacy acquisition.

The results underscore the urgency of addressing foundational gaps in letter-sound knowledge among Ayta learners. The predominance of learners in the Developing category suggests some familiarity with letter sounds, but the significant proportion in the Beginning category highlights the critical need for intensive support in connecting letters to their corresponding sounds. This lack of proficiency in letter-sound associations is particularly concerning, as it forms the cornerstone of early reading development. The linguistic and cultural disconnect between the learners’ home language and the language of instruction further compounds these challenges, making it difficult for learners to acquire the phonemic awareness necessary for decoding words. These findings reinforce the necessity of culturally responsive and linguistically appropriate instructional strategies specifically designed to enhance letter-sound proficiency. Without such targeted interventions, the inability to establish this foundational literacy skill risks perpetuating cycles of educational disadvantage, ultimately limiting Ayta learners’ ability to achieve academic success.

3.1.3. Knowledge Before the Use of Alpha-Tap It Cards on Letter Writing

This section presents the pretest results on letter writing proficiency among Ayta kindergarten learners before the implementation of the Alpha-Tap It Cards.

Table 3. Knowledge Before the Use of Alpha-Tap It Cards on Letter Writing

Indicator	Frequency	Percentage
Developing	7	28.00
Beginning	18	72.00
Total	25	100

Table 3 presents the pretest results on letter writing proficiency among Ayta kindergarten learners, revealing significant challenges in this skill area. The majority of learners (72%) were categorized as Beginning, scoring 0 to 5 correct answers (0–59%), which indicates minimal ability to form letters correctly and a reliance on substantial support to attempt writing tasks. Meanwhile, 28% of the learners

fell under the Developing category, scoring 6 to 7 correct answers (60–79%), suggesting some ability to write letters but with frequent errors and a need for guided instruction to improve accuracy.

These findings align with existing research that underscores the challenges Indigenous learners face in acquiring literacy skills, particularly in writing, due to limited exposure to formal instruction (Gregorio et al., 2019). Early literacy development in rural and Indigenous contexts often necessitates tailored interventions to address foundational skills like letter formation and writing (Alampay & Bernabe, 2021). Moreover, studies on fine motor development emphasize the critical link between motor control and letter writing proficiency (Domingo et al., 2020). In communities with restricted access to formal education, learners frequently lack opportunities to develop the motor skills essential for writing, resulting in lower levels of proficiency. Structured activities such as letter tracing, writing exercises, and visual aids can effectively address these deficiencies.

The intervention in this study seeks to bridge these gaps by incorporating hands-on writing activities designed to improve fine motor control and letter formation accuracy. Research supports this approach, showing that explicit writing instruction, when combined with cultural and linguistic relevance, significantly enhances literacy outcomes for learners from Indigenous backgrounds (Tan et al., 2022). This data reinforces the importance of targeted, skill-building strategies to improve letter writing proficiency among Ayta learners, ultimately paving the way for better literacy outcomes.

The results on letter writing proficiency highlight a significant gap in foundational skills among Ayta kindergarten learners, with 72% categorized as Beginning and unable to independently write letters accurately. This overwhelming majority reflects the limited exposure to structured writing instruction and the lack of opportunities to practice letter formation. The 28% of learners in the Developing category show some progress but still require consistent guidance to achieve accuracy and fluency. The absence of learners in the Consistent category underscores the critical need for interventions that explicitly target fine motor skills and letter writing practices. Without addressing these gaps, learners may struggle to progress in overall literacy, as writing proficiency is a key component of early reading and academic success. This data reinforces the urgency of implementing structured, culturally responsive strategies, such as the Alpha-Tap It Cards, to provide learners with the necessary tools to improve their letter writing skills and build a solid foundation for future literacy development.

3.2. Alphabet Knowledge After the Use of Alpha-Tap It Cards

This section presents the posttest results on participants' ability to identify letter names, providing insights into their initial proficiency levels and areas requiring improvement before the intervention.

3.2.1. Knowledge After the Use of Alpha-Tap It Cards on Letter Naming

This section presents the results of learners' letter naming proficiency after the implementation of Alpha-Tap It Cards.

Table 4. Knowledge After the Use of Alpha-Tap It Cards on Letter Naming

Indicator	Frequency	Percentage
Developing	7	28.00
Beginning	18	72.00
Total	25	100

Table 4 presents the posttest findings on letter naming proficiency after the use of the Alpha-Tap It Cards. The data shows that while there was some progress, 72% of the learners still remained in the Beginning category, scoring between 0 to 5 correct answers (0–59%), which reflects continued

difficulty in accurately naming letters and a need for substantial instructional support. However, 28% of the learners improved to the Developing category, scoring 6 to 7 correct answers (60–79%), indicating partial proficiency in letter naming with progress evident but still requiring guidance to enhance accuracy and consistency.

After five weeks of using the Alpha-Tap It Cards, the students underwent a post-intervention test to evaluate their letter-naming proficiency. During the assessment, the researcher utilized the Alpha-Tap It Cards to present the letters included in the second quarter curriculum. Each card featured a specific letter, and the students were asked to name the letter when it was pointed out. This procedure ensured consistency with the intervention method, as the Alpha-Tap It Cards had been the primary instructional tool during the intervention period. The test aimed to measure the learners' ability to correctly identify and name the letters after repeated exposure and practice, providing data to assess the effectiveness of the intervention in improving their letter-naming skills.

To enhance letter naming skills, several strategies were implemented with a focus on consistency and cultural relevance. A 3×3 chart featuring examples in Ayta Mag-Antsi was added to the Alpha-Tap It Cards. Each learner received a copy of this chart pasted into their notebooks, enabling them to practice letter names at home. Parents reported that the charts were instrumental in creating a structured way for their children to continue learning, especially during class cancellations. One parent shared how they used the chart as part of their daily routine, pointing to letters and asking their child to name them, which built the child's confidence and improved their recognition of familiar letters.

In the classroom, a visual display of the alphabet was created, prominently featuring examples that matched the Alpha-Tap It Cards. For instance, the letter "L" was consistently paired with "lamok," and this uniformity was maintained across all teaching materials. Learners often referred to the display during activities, helping them solidify the association between letters and their names. One learner excitedly pointed out during a class activity, "That's 'L' for 'lamok!'" This moment demonstrated how the repeated exposure to the same example across multiple resources reinforced learning.

The classroom environment was further enriched by integrating these materials into routine activities. Learners frequently referred to the classroom display when completing activities, with some even helping their peers identify letters. This peer interaction added a collaborative element to the learning process, making it more engaging and memorable. For example, during one session, a student confidently explained to their classmate how the letter "G" was for "gatas," proudly recalling what they had seen on the display and in their notebook.

Parents played a vital role in supporting letter naming proficiency at home. One mother shared how she used the notebook materials every evening, asking her child to recite the letters and pointing to the corresponding pictures. She noticed her child began identifying letters in other contexts, such as on store signs or labels, which showed how the learning extended beyond the classroom. Another parent mentioned that their child eagerly pointed out letters to siblings at home, teaching them what they had learned in school.

While these strategies contributed to the progress of many learners, the 13% who remained at the Frustration Level highlighted the ongoing need for targeted support. Some learners struggled to retain the names of letters consistently, often mixing them up or relying heavily on prompts. Teachers observed that these learners benefited from repetitive, one-on-one reinforcement, suggesting a need for additional focus on these students during future interventions.

Overall, the combined efforts of integrating culturally relevant materials, aligning classroom resources with take-home materials, and engaging parents in the learning process had a significant impact on letter naming proficiency. The stories of learners excitedly identifying letters and parents actively supporting their children's education underscore the importance of a collaborative approach in improving literacy outcomes. However, the continued challenges faced by some learners point to the necessity of sustained and individualized support to ensure all students achieve mastery in letter naming.

The findings align with studies that emphasize the importance of culturally responsive teaching methods in enhancing early literacy skills among Indigenous learners. Research by Gay (2018) highlights that culturally relevant materials not only engage learners but also create meaningful connections between their home language and the language of instruction. Similarly, Cummins (2000) advocates for the use of mother-tongue-based resources, suggesting that learners achieve better outcomes when their cultural and linguistic contexts are integrated into instruction.

The progress made in letter naming proficiency reflects the importance of integrating culturally relevant materials, aligning classroom and home resources, and engaging parents in the learning process. However, the persistent challenges faced by a significant portion of learners indicate that further efforts are necessary. Sustained, individualized support is critical to ensuring all learners achieve mastery in letter naming, laying a strong foundation for future literacy success. The incorporation of culturally aligned strategies, supported by evidence-based practices, will be instrumental in bridging literacy gaps and promoting equitable education for Indigenous learners.

3.2.2. Knowledge After the Use of Alpha-Tap It Cards on Letter Sound

This section presents the results of learners' letter sound proficiency after the implementation of the Alpha-Tap It Cards.

Table 5. Knowledge After the Use of Alpha-Tap It Cards on Letter Sound

Indicator	Frequency	Percentage
Consistent	5	20.00
Developing	7	28.00
Consistent	13	52.00
Total	25	100

After five weeks of implementing the Alpha-Tap It Cards intervention, the students participated in a posttest to assess their proficiency in recognizing and producing letter sounds. The assessment was conducted using the Alpha-Tap It Cards to ensure consistency with the instructional method employed during the intervention. Each card displayed a specific letter, and the students were tasked with identifying and articulating the corresponding sound for each letter as the researcher guided the process. The letters assessed were aligned with the second-quarter curriculum to maintain relevance and focus on the targeted competencies.

The posttest served as an opportunity to measure the impact of the intervention on the learners' ability to connect letters with their sounds, a critical foundation for literacy. Throughout the five-week intervention, learners engaged in regular, structured activities using the Alpha-Tap It Cards, which incorporated culturally relevant elements and encouraged active participation and repetition. The intervention aimed to build their confidence and mastery in letter sounds progressively.

The results, as shown in Table 5, revealed varying levels of improvement among the learners. Notably, 20% of the students advanced to the Consistent category, scoring 8 to 10 correct answers (80–100%),

which demonstrated mastery of letter sounds and significant skill development. Additionally, 28% of learners reached the Developing category, scoring 6 to 7 correct answers (60–79%), showing partial proficiency with continued need for guidance and support. However, 52% of the learners remained in the Beginning category, scoring between 0 and 5 correct answers (0–59%), reflecting minimal progress and a need for more intensive, targeted instruction.

To specifically enhance letter sound recognition, the researcher incorporated culturally relevant materials and engaging strategies to connect letters with familiar and meaningful examples. For instance, a tarpapel (poster) displaying letters alongside culturally resonant images was prominently featured in the classroom. Learners practiced associating these letters with sounds during daily routines. One learner confidently pointed to the poster and exclaimed, “L ay Lamisa!” This demonstrated their growing ability to connect letters to their corresponding sounds with confidence and accuracy.

Daily group activities involved the teacher modeling correct pronunciation and encouraging repetition to reinforce letter-sound associations. One parent reported that their child began identifying the letter "Y" at home by recalling "yangka," a word featured in classroom activities, showcasing the transfer of learning from school to home.

To address disruptions in regular schooling, the researcher leveraged Learning Support Aides (LSAs)—volunteers, often community members, who provided additional guidance to learners. This strategy, initially employed during the pandemic, proved effective in supplementing instruction and ensuring continuity in learning. Parents were also engaged in the process through informal training sessions, where they learned the correct pronunciation of letter sounds. This enabled them to actively support their children’s literacy development at home. For example, one mother shared how she created a game to reinforce letter sounds, which not only strengthened her child's skills but also empowered her as a participant in the learning process.

The results align with research emphasizing the importance of culturally relevant and community-driven strategies in enhancing literacy outcomes. Cummins (2000) highlights that incorporating learners’ cultural and linguistic contexts into instruction promotes better literacy acquisition. Similarly, Gay (2018) underscores the role of culturally responsive teaching in creating meaningful learning experiences that resonate with students’ identities.

Studies on parental involvement, such as those by Sénéchal and LeFevre (2002), emphasize the significant impact of home-based literacy activities on early reading and phonemic awareness. By training parents to understand and reinforce letter sounds, this intervention mirrors findings that parental engagement fosters stronger literacy outcomes.

Fine motor skills and phonemic awareness are critical components of early literacy, as noted by Snow et al. (1998) and Del Rosario and Santos (2022). These studies emphasize the need for repetitive, guided practice in phonics and sound-letter association to build foundational literacy skills.

While the intervention using Alpha-Tap It Cards yielded measurable improvements in letter sound proficiency, the persistence of learners in the Beginning category underscores the need for sustained and targeted support. The integration of culturally relevant teaching materials, community involvement through LSAs, and parental engagement has proven to be effective strategies. However, addressing the needs of struggling learners requires additional focus on individualized, repetitive practice and tailored interventions. By leveraging these strategies, educators can create an inclusive learning environment that fosters literacy development and ensures all learners achieve mastery in letter sound recognition.

3.2.3. Knowledge After the Use of Alpha-Tap It Cards on Letter Writing

This section presents the results of learners' letter writing proficiency after the implementation of the Alpha-Tap It Cards.

Indicator	Frequency	Percentage
Consistent	5	20.00
Developing	8	32.00
Beginning	12	48.00
Total	25	100

Table 6. Knowledge After the Use of Alpha-Tap It Cards on Letter Writing

After five weeks of implementing the Alpha-Tap It Cards as an intervention, the learners underwent a posttest to assess their letter-writing proficiency. This assessment required the students to independently write specific letters that had been covered during the intervention period. The evaluation was designed to measure their ability to form letters accurately and assess the impact of the intervention on their writing skills, with results categorized into Beginning, Developing, and Consistent levels to reflect their proficiency.

The results, presented in Table 6, revealed varied outcomes among the learners. Notably, 20% of the students achieved the Consistent level, scoring 8 to 10 correct answers (80–100%). These learners demonstrated the ability to form letters accurately and independently, reflecting significant skill acquisition and mastery of the intervention content. This category represents the most successful outcome of the intervention, as these learners exhibited confidence and accuracy in letter writing. Additionally, 32% of the learners progressed to the Developing level, scoring 6 to 7 correct answers (60–79%). These learners displayed partial proficiency, forming letters with some degree of accuracy but still requiring occasional guidance and reinforcement to ensure consistency. Their improvement suggests steady progress resulting from repeated exposure and practice during the intervention.

However, 48% of the learners remained in the Beginning category, scoring 0 to 5 correct answers (0–59%). This group continued to struggle with the fundamental aspects of letter formation, demonstrating persistent challenges in accuracy, orientation, and consistency. Their performance indicates a need for more intensive support and targeted instructional strategies to address their specific difficulties.

The results highlight the mixed effectiveness of the Alpha-Tap It Cards intervention. While it succeeded in helping a significant portion of learners improve their letter-writing skills, nearly half of the students still required substantial guidance and additional practice. This underscores the importance of extending the duration of the intervention, providing differentiated support, and incorporating complementary teaching strategies to address the unique needs of learners who remain at the Beginning level. Overall, the findings emphasize the potential of culturally responsive tools like the Alpha-Tap It Cards to enhance foundational skills, while also calling for ongoing adjustments to maximize their impact on all learners.

To support letter writing, the researcher created an Instructional Material (IM) aligned with the Alpha-Tap It Cards, which included letter tracing exercises. This was designed to help learners improve their fine motor skills and reinforce the letter formation process. For example, the letter "G" was paired with "gatas" in the IM, and learners traced the letter while saying the corresponding sound. One learner, who initially struggled with the letter "G," showed significant progress after using the tracing sheets consistently.

During a class session, this learner proudly showed how they could write the letter "G" independently, explaining that it was "for gatas"—a connection they had made through the practice sheets.

These IMs were also sent home with learners, allowing parents to help their children with letter writing practice. One parent shared how they noticed their child became more confident in writing the letters after several days of tracing the letters with the provided sheets. They used the notebook as a tool for follow-up practice, reinforcing the classroom activities and fostering a supportive learning environment at home. The repeated tracing and exposure to the correct letter formation helped the learners solidify their skills, moving them closer to the Instructional and Independent Levels.

While many learners demonstrated progress, the 48% in the Beginning category highlights the ongoing challenges faced by some students. These learners often struggled with fine motor control, requiring more intensive, one-on-one guidance. Targeted strategies, such as breaking down tasks into manageable steps and providing consistent reinforcement of letter-sound associations, proved effective in helping them gradually improve. For example, learners who initially had difficulty holding writing tools correctly benefited from exercises focused on grip and hand strength, integrated into the tracing activities.

These findings align with research emphasizing the role of fine motor skills in early writing development. Domingo et al. (2020) highlighted the importance of repetitive tracing exercises in improving both motor control and letter formation, especially for learners in underserved communities. Similarly, Snow et al. (1998) noted that proficiency in letter writing is a critical predictor of future literacy success, underlining the necessity of foundational writing interventions.

The study also reflects findings by Bernardo and Garcia (2021), who explored culturally relevant instructional strategies and their impact on Indigenous learners' literacy outcomes. Their research emphasized the importance of using familiar examples, such as culturally resonant words, to enhance letter-sound and letter-writing associations. Furthermore, Sénéchal and LeFevre (2002) emphasized the pivotal role of parental involvement in supporting literacy development at home, reinforcing the effectiveness of the take-home IMs used in this study.

The combined efforts of integrating culturally relevant IMs, fostering parental involvement, and providing targeted classroom support significantly contributed to the improvement of letter writing skills among Ayta learners. However, learners still at the Beginning level underscores the need for sustained and individualized attention to address persistent challenges in letter formation and motor skill development. By continuing to build on these strategies and tailoring support to the needs of struggling learners, educators can ensure that all learners progress toward proficiency in letter writing, laying a strong foundation for their future literacy success.

Summary Table Before and After the Use of Alpha Tap It Cards

Proficiency Level	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
	Letter Naming	Letter Naming	Letter Sound	Letter Sound	Letter Writing	Letter Writing
Consistent (80–100%)	0	0	0	20	0	20
Developing (60–79%)	0	28	24	28	28	32

Beginning (0–59%)	100	72	76	52	72	48
Total	100	100	100	100	100	100

The pretest and posttest results reveal important findings regarding the impact of the Alpha-Tap It Cards on the alphabet knowledge of Ayta kindergarten learners. For letter naming, all learners (100%) were categorized under the Beginning level in the pretest, demonstrating minimal ability to identify letters. After the intervention, 28% of the learners progressed to the Developing level, reflecting partial proficiency, while 72% remained at the Beginning level. No learners achieved the Consistent level, highlighting that while some improvement was evident, many learners continued to struggle with letter naming.

In terms of letter sound proficiency, the pretest results showed that 24% of the learners were at the Developing level, indicating partial proficiency, while 76% were at the Beginning level. After the intervention, 20% of the learners reached the Consistent level, showcasing mastery of letter sounds, and 28% remained at the Developing level. However, 52% fell back to the Beginning level, suggesting that although some learners achieved significant progress, others struggled to maintain or improve their performance.

For letter writing, the pretest revealed that 72% of the learners were at the Beginning level, with only 28% categorized as Developing and none achieving Consistent proficiency. After five weeks of intervention, 20% of the learners progressed to the Consistent level, demonstrating mastery of letter writing skills, and 32% moved to the Developing category. However, 48% remained at the Beginning level, reflecting ongoing challenges in accurately forming letters.

Overall, the Alpha-Tap It Cards facilitated notable improvements for some learners, particularly in letter writing and letter sounds, as seen in the increase in Consistent and Developing levels. However, the majority of learners in letter naming and a significant portion in the other areas still struggled, indicating the need for extended intervention and additional instructional support to ensure more substantial progress across all learners.

3.3. Test of Significant Difference Before and After Using Alpha-Tap It Cards

This section presents the results of the statistical test conducted to determine the significant difference in letter naming, letter sound, and letter writing proficiency before and after the use of Alpha-Tap It Cards. The pretest and posttest results were analyzed to assess the effectiveness of the intervention in improving learners' literacy skills.

Table 7. Test of Significant Difference Before and After Using Alpha-Tap It Cards

Indicator	T-Statistics	P-Value	Interpretation
Letter Name	-3.22	0.0023	Significant
Letter Sound	-2.69	0.0098	Significant
Letter Writing	-2.78	0.0078	Significant

The results from the statistical analysis show that the Alpha-Tap It Cards intervention had a significant effect on letter naming, letter sound recognition, and letter writing. For Letter Name, the t-statistic was -3.22 and the p-value was 0.0023. Since the t-statistic is less than the p-value, the null hypothesis is rejected,

indicating that there is significant evidence that the intervention positively impacted letter naming proficiency.

Similarly, for Letter Sound, the t-statistic of -2.69 and the p-value of 0.0098 also result in rejecting the null hypothesis, providing strong evidence that the intervention had a significant effect on letter sound recognition.

Finally, for Letter Writing, with a t-statistic of -2.78 and a p-value of 0.0078, the null hypothesis is also rejected, suggesting that the intervention led to significant improvements in letter writing skills.

The findings align with studies emphasizing the importance of interactive, multisensory approaches to literacy instruction. For instance, Montessori (2019) highlighted the benefits of hands-on, tactile learning materials in building early literacy skills, particularly among younger learners. The Alpha-Tap It Cards, which combine visual, auditory, and kinesthetic elements, reflect these principles, allowing learners to engage with letters in a dynamic and memorable way.

In the context of Indigenous education, King and Schielmann (2004) emphasized the need for culturally responsive teaching strategies to improve literacy outcomes. Their research shows that incorporating learners' cultural and linguistic backgrounds into instructional materials significantly enhances engagement and comprehension. The Alpha-Tap It Cards intervention aligns with this approach by integrating culturally familiar examples into its content, making literacy skills more accessible and relevant to Ayta learners.

This shows that the Alpha-Tap It Cards intervention had a statistically significant positive effect on letter naming, letter sound recognition, and letter writing. For all three areas, the t-statistics were smaller than the corresponding p-values, leading to the rejection of the null hypothesis. This provides strong evidence that the intervention was effective in improving learners' proficiency in recognizing and writing letters, as well as in associating letters with their corresponding sounds. Therefore, the results demonstrate the success of the intervention in enhancing foundational literacy skills.

3.4. Proposed Action plan

This action plan outlines a comprehensive approach to enhancing alphabet knowledge among Ayta kindergarten learners through the innovative use of Alpha-Tap It cards. This plan details a series of engaging activities and assessments designed to foster phonetic awareness, letter recognition, and ultimately, a strong foundation in literacy. The plan emphasizes a hands-on, play-based learning environment that caters to diverse learning styles and promotes active participation, ensuring that all learners can successfully navigate the crucial early stages of alphabet acquisition.

Areas of Concern	Activities	Strategies	Mode of Verification (MOV)
Letter Name Recognition	Play games for letter name recognition.	Letter Name Relay. Ask the learners in front to come up and show the letters to them. They need first to identify the correct letter name before they can relay the letter name to their group	Increase in the number of letter name recognition of learners.

		mates. The last member need to shout the letter name in order to win.	
	Art Activities	Provide different Art Activities for each letter. These will help learners remember the letter structure as well as boost their creative skills.	Observation of children’s ability to recognize letter names.
Letter Sound Identification	Play sound identification games.	Cookie Monsters Game. Group the learners into three groups. The teacher will say the letter and learners need to choose the correct letter. The first learner who put the letter in cookie monster’s mouth need to say the sound in order to win the game.	Engagement and participation of learners in the game.
		Slurp-aghetti Challenge. Two groups of learners will do the challenge. Two learners will compete. The learner who first finish the task need to say the letter sound correctly. This will also develop their fine motor skills.	
	Include Alpha-Tap It Cards in daily routines.	Before the discussion proper, review all the letters that were already discussed. And before the dismissal time, put the card on the wall and call the learners one by one	Observation of children’s ability to recognize letter names.

		before they can go home.	
Letter Writing Skills	Use structured and repetitive writing tasks.	For every discussion of letters, the teacher will use first the tracing and writing activity to reinforce the letter formation process. After that, writing on the blackboard and in the notebook will follow.	Improvement in fine motor skills.
	Provide follow up letter writing activity at home to reinforce learning.	With the help of Learning Support Aides (LSAs) learners will do their follow up activity at home.	Check the follow up activity before class starts.

CONCLUSIONS AND RECOMMENDATIONS

This section provides a comprehensive summary of conclusion and recommendation based on the findings in each research question.

Conclusions

Based on the gathered data, the following conclusions were derived:

1. Alphabet knowledge of the learners before the use of Alpha-Tap It Cards is beginning in letter naming, developing in letter sound, and beginning in letter writing.
2. Alphabet knowledge of the learners after the use of Alpha-Tap It Cards is developing in letter naming, developing in letter sound, and developing in letter writing.
3. There is a significant difference in the alphabet knowledge of learners before and after the use of Alpha-Tap It cards.
4. An action plan is proposed.

Recommendations

Based from the conclusions, the following recommendations are offered:

1. For beginning level, utilize Alpha-Tap It Cards as an intensive foundational tool by focusing on one letter at a time through repeated, multisensory activities. Emphasize visual recognition using clear and culturally relevant images, auditory repetition of letter names and sounds, and tactile tracing exercises to build familiarity and confidence.
2. To help learners achieve the consistent level, using Alpha-Tap It Cards, implement a structured progression that starts with mastering individual letters through consistent practice and repetition. Incorporate multisensory activities, such as pairing visual cues on the cards with verbal repetition of letter names and sounds, and integrating tactile writing exercises to reinforce learning. Gradually advance to combining letters into simple words to build fluency.
3. Regularly use the cards in interactive games with action songs and provide art activities to promote confidence and automaticity.

4. Implement the proposed action plan.

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