

Project Arm: Enhancing The Reading Comprehension of Grade 3 Pupils in Monkayo Central Elementary School

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Publication Date: 2026/04/18

Abstract: This study aimed to determine the effectiveness of Project ARM (Assistive Reading Materials) in enhancing the reading comprehension of Grade 3 pupils at Monkayo Central Elementary School. A mixed-method research design was utilized, combining quantitative and qualitative approaches. The quantitative data were obtained through pretest and posttest scores, while qualitative data were gathered through interviews. The intervention was implemented over three weeks using strategies such as *The House of Phonemes*, *Bitay-Pho-Next*, and *Sari-Story-Tell*. Results revealed a significant improvement in pupils' performance, with the mean score increasing from 3.12 to 9.12. The paired sample t-test yielded a t-value of 19.75 and a p-value of less than 0.001, indicating a statistically significant difference. Qualitative findings showed improvements in phonemic awareness, reading comprehension, learner engagement, and positive emotional responses. The study concludes that Project ARM is an effective intervention for improving reading comprehension among Grade 3 pupils.

How to Cite: Kimberly O. Villacura; Mariel E. Benolirao; Nova L. Magno; Rechel C. Bacsarsa; Fresy G. Moreno; Junro S. Carual; Edson A. Macapagong (2026) Project Arm: Enhancing The Reading Comprehension of Grade 3 Pupils in Monkayo Central Elementary School. *International Journal of Innovative Science and Research Technology*, 11(4), 943-949. <https://doi.org/10.38124/ijisrt/26apr663>

I. INTRODUCTION

Reading comprehension is a fundamental skill essential for effective learning and communication. However, many learners struggle with reading, which affects their performance in writing, spelling, fluency, and comprehension. These challenges can lead to poor academic performance and reduced self-esteem among pupils.

Improving reading comprehension among Grade 3 pupils is particularly important, as this stage serves as the foundation for future academic success and lifelong learning. Strong reading skills promote better understanding, critical thinking, and communication abilities. Moreover, addressing reading difficulties helps reduce educational disparities and ensures equal learning opportunities for all pupils.

This study is anchored on Edgar Dale's (1946) Theory of Direct Purposeful Experience, which emphasizes learning through active and meaningful engagement. Supporting this, Rand and Morrow (2021) highlight the importance of systematic phonics instruction and phonemic awareness in developing reading skills. These theories suggest that interactive and hands-on learning strategies are effective in enhancing comprehension.

Project ARM (Assistive Reading Materials) is designed to support students in developing their reading comprehension by utilizing a multifaceted approach that combines visual and auditory learning techniques, making reading engaging and interactive. During the first week, teachers will employ an activity called "The House of Phonemes," a method focused on teaching children to read and speak by emphasizing the sounds of letters (phonemes) and helping them recognize them. Overall, Project ARM fosters an engaging and supportive learning environment that helps children build essential reading skills while making the experience enjoyable and dynamic.

Project ARM (Assistive Reading Materials) is a program aimed at helping students who are still developing their reading comprehension through a multiple approach. This strategy incorporates visual and auditory learning elements to engage children in reading.

In week one, the teacher will conduct an activity called "The House of Phonemes." This activity is a teaching method used to help children learn to read and speak by focusing on the sound of letters (phonemes). It also helps them identify the letters. In this activity, each house represents a specific letter sound. The teacher will paste the House of Phonemes on the board (Flashcards from A to Z). This strategy has 3

levels. The process of the activity starts by opening the house to reveal the letter and their sounds for them to identify. The students will be asked to turn away from the board to avoid them from seeing what's the missing letter they have to identify. As the level progresses, more letters will be removed.

In week two the teacher will conduct an activity which is "The Bitay-Pho-Next" is a continuation of the first activity but this one will focus more on the identifying words, unlike the first activity that they will get to know the letter sound, this one they will know how to blend letter sounds to create a word. Bitay-Pho-Next is an interactive educational game with 3 different levels; Easy, Moderate, and Difficult. After that students will identify and read what was written in the flashcards. The first easy round, the six cards, will flip to the next page, and then students will guess the one missing card. In the moderate portion, there will be two missing cards, and in the difficult part, there will be three missing cards.

In week three, the teacher will introduce Sari-Story-Tell is an interactive reading strategy designed to enhance students' reading comprehension through short stories that promote understanding. The process begins with a discussion of the story, followed by guided questions from the teacher. To select students to answer the questions, the teacher may incorporate fun activity like singing the ABC Song. When the song stops, and the student at that moment will responds. Upon being chosen, students will select an item that can be found in the mini-store that corresponds to a question about the story. This repetitive approach helps reinforce recall and comprehension of the story's events. A repetitive approach will be used for each question to help students recall and grasp the story's events. Additionally, a various extrinsic motivation will be used for each question to encourage engagement and understanding. This method also helps students improve their letter and sound recognition. Through Project ARM, this approach fosters an engaging and supportive literacy environment, helping young learners

build a strong reading foundation while making the learning experience both enjoyable and interactive.

➤ *Objective of the Study*

To address these needs, Project ARM (Assistive Reading Materials) was developed. It integrates visual, auditory, and interactive approaches to make reading engaging and meaningful. The intervention includes activities such as *The House of Phonemes*, *Bitay-Pho-Next*, and *Sari-Story-Tell*.

This study aimed to answer the following questions:

- What are the changes in the mean scores of pupils before and after the intervention?
- What is the reading comprehension performance of the pupils?
- What insights can be drawn from the implementation of the intervention?

The study tested the hypotheses:

- H₀: There is no significant difference between pretest and posttest scores.
- H₁: There is a significant difference between pretest and posttest scores.

II. METHOD

➤ *Research Design*

This study utilized a mixed-method approach, combining quantitative and qualitative data to evaluate the effectiveness of Project ARM.

➤ *Participants*

The participants were 26 Grade 3 pupils from Section Teak of Monkayo Central Elementary School. These pupils were identified as being at the frustration level in reading comprehension based on the Phil-IRI Group Screening Test.

Table 1 Participants of the Research

Gender	Number of Participants	Percentage
Male	21	81%
Female	5	19%
Total	26	100%

➤ *Intervention Procedure*

The intervention lasted for three weeks, with sessions conducted three times per week:

- Week 1: *The House of Phonemes* – focused on letter-sound recognition

- Week 2: *Bitay-Pho-Next* – focused on blending sounds to form words
- Week 3: *Sari-Story-Tell* – focused on reading comprehension through storytelling and interactive activities



Fig 1 Flow of the PROJECT ARM

➤ *Data Gathering*

Data were collected through:

- Pretest and Posttest to measure reading comprehension performance
- Interviews with 12 selected participants to gather insights and experiences

➤ *Data Analysis*

- Quantitative data were analyzed using a paired sample t-test

- Qualitative data were analyzed using thematic analysis

III. RESULTS

➤ *Quantitative Results*

The results showed a significant improvement in pupils' reading comprehension:

- Research Question 1. What are the changes of the mean scores of the Reading Comprehension assessment of the pupils before and after the implementation?

Table 2 Reading Comprehension Performance of the Pupil's before and after the Intervention.

Test	Mean	Standard Deviation	T-Test	p-value	Finding
Pretest	3.12	0.91	19.75	< 0.001	Significant
Posttest	9.12	1.21			

Table 2 presents the significant difference between the pretest and posttest score of the learners following the implementation of the intervention. Since the p-value is less than 0.05, the null hypothesis is rejected. This indicates a significant difference between pretest and posttest scores, confirming the effectiveness of the intervention.

➤ *Qualitative Results*

Thematic analysis revealed the following major themes:

- Research Question 2: What is the Reading Comprehension Performance of the pupils?

Table 3 Essential Themes and Core Ideas of what is the Reading Comprehension Performance of Grade 3 Pupils.

Essential Themes	Core Ideas
Recognize Letters and Sounds Accurately	Mastering phoneme-letter links Decoding printed words Letters and sounds became familiar. Word recognition improved. Reading became easier
Understand Texts Through Story Engagement	Comprehending story elements Connecting with drama and dialogue Stories made reading meaningful. Dramas clarified messages. Understanding deepened.
Develop Interest in Reading Activities through interactive Tasks	Stimulating reading motivation Promoting enjoyment in literacy Interactive tools made learning fun. Enjoyment sparked engagement. Fun supported comprehension

➤ *Recognize Letters and Sounds Accurately*

Based on the presentation of data, it shows that there were three major essential themes created which supported the research question number 2. The first theme helped the pupils to recognize letters and sounds accurately, as to the responses of the participants, it showed that the intervention helped them to recognize letters and sounds. This tells that pupils have learned through the use of the intervention.

As Letter stated;

“Nakasabot kay gi explain ninyo ang letters ug sound”. (IDI_1)

(I understood because the letters and sounds were explained.)

With the same opinion, Words cited;

“Oo,kay nakasabot ko sa letter and sounds .” (IDI_2)

(Yes, because I understand the letters and sounds.)

Page Pro expressed the same view and added the following point”.

“Naa,kay mas nakaila mi sa tingong sa litra ug kabalo ka mubasa.” (IDI_3)

(Yes, we are more familiar with the sound of the letters and I know how to read.)

Word Wizzard also added his point of view;

“Nalipay ug nanindotan me kay nakabalo mi sa letter ug sounds og kabalo mi mubasa.” (ID_10)

(We are happy and proud because we learned the letters and their sound, and we can read.)

Accurately identifying letters and sounds aligns with Edgar Dale’s Direct Purposeful Experience, as it fosters active, hands-on engagement crucial for foundational learning. When children physically interact with letters—by manipulating them, vocalizing sounds, or tracing their shapes—they participate in concrete learning experiences that deepen understanding. As outlined in Dale’s Cone of Experience, such direct engagement enhances memory retention and strengthens core literacy skills. This learning-by-doing approach is particularly vital in the early stages of reading instruction, ensuring that learners build a strong, lasting foundation.

Students can recognize letters and sounds accurately when they receive systematic phonics instruction and sufficient practice in phonological awareness, which in turn supports their reading comprehension development (Indrayadi & Irawan, 2021). This text is built around three main themes: enhancing pupils’ understanding of phonics rules, improving letter-sound recognition, and strengthening overall reading comprehension skills.

Understand Texts Through Story Engagement. As observed by the researchers, we found out that pupils can enhance their understanding of texts through active engagement with stories.

As Page Pro answered;

“Nindot ang maapil sa drama kay makasabot mi sa kwento”. (IDI_3).

(It is nice to be part of the drama because we understand the story.)

On the same side, Book Savvy stated;

“Katong kwento naa sa tindahan drama drama nindot kayo sa paminaw ang drama kay nakasabot mi sa story.” (IDI_7).

(That story in the store it was like a drama, we understood the story.)

Infera sided with the same view and said;

“Akong giganahan ma’am kay katong story na si lito kay gipasabot jud Ninyo pag ayo.” (IDI_11).

(What I liked was the story about Lito you explained it well.)

With matching thought, Read Rhino voiced;

“Katong story po na gibuhat nato teacher.” (IDI_5).

(That story that we did, teacher.)

Engaging with stories provides direct, purposeful experience that deepens understanding of text through active participation. This immersive involvement helps learners connect emotionally and cognitively with the material, making the learning process more meaningful and memorable.

As Schmitt (2022) argues, active engagement with stories plays a critical role in enhancing pupils’ comprehension skills by encouraging them to interact with the text on a deeper level. This process allows students to not only decode the content but also to analyze and interpret it through personal connections, which aids in developing a more thorough understanding of the material. This approach also encourages students to make predictions, ask questions, and reflect on the story’s meaning, all of which contribute to a more enriched and comprehensive reading experience.

Develop Interest in Reading Activities through interactive tasks. Based on the data gathered, the researchers found that students were able to improve their reading comprehension and retention through hands-on, interactive exercises, which kept them more focused and motivated.

Read Rhino cited;

“Nalipay mi kay kuan...nakabasa,nalingaw mi naa mi sticker.” (IDI_5)

(We are happy because we read something we had fun we have a sticker.)

Book Savvy pointed out;

“Nalipay ug nanindutan mi kay nakabalo mi sa letters ug sound ug kabalo nami mubasa.” (IDI_7).

(Happy and amazed because we learned the letters and sounds, and now we know how to read.)

Word Wizzard added also his experience during the intervention;

“Naenjoy ko,gwapa ang materials. (IDI_10).”

(I enjoyed it, the materials are beautiful.)

Text Titan also shared his experience during the intervention;

“Naganahan ko sa tanan kay nakasabot ko. (IDI_9).”

(I liked everything because I understood.)

Developing interests in reading activities through interactive tasks aligns with Edgar Dale’s theory by emphasizing varied, engaging experiences that promote active learning and deeper retention. By involving learners actively, these tasks create meaningful connections that motivate sustained reading engagement.

Lu (2025) emphasizes, developing interest in reading activities through interactive tasks, such as Web-based Machine (WBMT)-assisted reading strategies, can significantly enhance learners' engagement. By integrating these strategies into reading tasks, students become more active participants in their learning, fostering a constructive and enjoyable reading experience that increases both comprehension and motivation. By integrating these interactive tasks into the learning process, students are more likely to develop a positive attitude toward reading, leading to improved comprehension and motivation over time.

- *Research Question 3: What are the Insights Regarding the Implementation?*

Table 4 Essential Themes and Core Ideas of what are the Insights Regarding the Implementation

Essential Themes	Core Ideas
Positive Emotional Responses	Happy feelings about learning Excitement during activities Learners felt joyful during sessions. Fun activities kept them engaged. Emotional satisfaction encouraged participation.
Improved Reading Comprehension	Better understanding of stories Use of visuals for clarity Pictures helped explain story parts. Characters made stories memorable. Understanding grew with each session.
Character-Based Moral Learning	Admiration for honest characters Reflections on kindness and helpfulness Story character became a role model.

Positive Emotional Responses. Based on the analyzed data, it shows that there were three major essential themes created which supported the research question number 2. The first theme helped the learners experienced positive emotions such as joy and excitement while engaging in fun and meaningful activities. These enjoyable experiences motivated their active participation and enhanced their overall interest in learning. This tells that pupils have learned through the use of the intervention.

As Vocab stated;

“Nalipay ko teacher kay nendot ang mga gebuhat nato”.(IDI_4)

(I am happy, teacher, because what we did was great.)

With the same opinion, Insightful Reader cited;

“Nalipay mi sa akong classmate kay ngindot man mo mutudlo, nakatabang mo samong magbasa nakabasa mi (IDI_6)

(My classmates and I are happy because you teach well, you help us read we were able to read.)

Infera also added his point of view on the effectiveness of the intervention, he claimed;

“Naganahan ko kay nindot kaayo ang mga activities” (IDI_11)

(I liked it because the activities were really nice.)

A positive emotional response plays a crucial role in Edgar Dale’s Direct Purposeful Experience, as it enhances engagement, memory retention, and motivation in learning. Dale’s model emphasizes hands-on, immersive experiences, which naturally evoke emotions that deepen understanding

and reinforce learning. This emotional engagement strengthens cognitive processing, making concepts more memorable and meaningful.

Responding to others with positive emotions, such as empathy or encouragement, can strengthen social bonds at work and lead to improved collaboration and performance outcomes (Bradley et al., 2024). When learners feel emotionally supported, they are more likely to engage deeply with texts, infer meaning from context, and persist through reading challenges—factors essential for developing higher-level comprehension skills.

Improved Reading Comprehension. From the information we gathered. The participants expressed that reading became more enjoyable and easier to understand when visual aids, such as pictures, were included. They shared that the illustrations helped clarify story elements and made the characters more memorable.

As Page Pro stated;

“Makatabang ang mga picture kay arun mailhan namu kinsa ang naa sa kwento ug unsa sila,masabtan namu ang story. (IDI_3).

(The pictures helped us understand who the characters were and what was happening in the story.)

On the same side, LiteratiLux stated;

“Ginindotan maam kay nakabalo mi mubasa ug nakasabot mi. (IDI_10)

(It was nice, maam, because we learned how to respond and we understood.)

Book Savvy added that;

“Nalipay mi kay nakabasa name ug gitudloan tas nag action action.”(IDI_7)

(We were happy because we got to read, we were taught, and there was some acting, too.)

Enhanced reading comprehension is closely connected to Edgar Dale’s Direct Purposeful Experience, as it promotes interactive, hands-on learning that strengthens understanding and memory retention. Dale’s framework highlights that learners absorb information more effectively when they participate in real-world, immersive activities rather than relying solely on passive learning techniques.

According to Mendoza and Ortega-Dela Cruz (2025), integrating silent and oral reading approaches significantly boosts reading comprehension in Generation Alpha learners. These findings suggest that multi-faceted reading approach, which incorporates diverse methods, effectively supports various learning styles and enhances young learners’ overall literacy development.

Character-Based Moral Learning. Based on the responses, it is evident that the children not only admire honest and kind characters but also view them as role models who inspire empathy and moral growth.

Read Smart state that;

“Katung matapat na si Lito, kay buotan kaayu siya kay giuli niyang pitaka”.(IDI_12)

(That “ Ang Matapat na si Lito.” because he is honest and is very kind because he returned the wallet.)

Word pointed out;

“Si kalapati at si maya, kay getabanagan ni kalapati si maya kay nahulog sa pugad.Dapat ato jud tabangan ang nangenahanglan.”(IDI_2)

(The dove and the sparrow, because the dove helped the sparrow when it fell from its nest. I really should help those in need.)

Text Titan added that;

“Lito akong ganahan kay bootan si Lit okay gebalik ang kwarta sa tag iya.”(IDI_9)

(I like Lito because he is kind, he returned the money to its rightful owner.)

Character-based moral learning and Edgar Dale's Cone of Experience connect through the idea that effective learning, including moral development, is enhanced by direct, purposeful experiences. Dale's Cone emphasizes learning through firsthand, sensory experiences, moving from the most concrete to more abstract forms of representation. Moral learning, which often involves understanding and applying ethical principles, can be particularly strengthened through real-world interactions and experiences.

Septiwiharti, Hemafitria, et al. (2024) states that, the integration of character-based moral learning into thematic education, emphasizing the values of honesty and responsibility. By incorporating these values into the curriculum, the research aims to enhance students' moral awareness and foster positive behaviors in elementary school settings. The focus on character development not only nurtures academic growth but also cultivates responsible and ethical citizens.

IV. DISCUSSION

The findings of the study demonstrate that Project ARM significantly improved pupils’ reading comprehension. The increase in mean scores and the statistically significant results confirm the effectiveness of the intervention.

The improvement in phonemic awareness supports the importance of systematic phonics instruction, as emphasized by Rand and Morrow (2021). Additionally, the use of

interactive and engaging strategies aligns with Edgar Dale's Theory of Direct Purposeful Experience, which highlights the value of active participation in learning.

The integration of storytelling, visual aids, and interactive activities contributed to deeper comprehension and increased learner motivation. Pupils were able to connect with the stories, understand key elements, and apply their learning effectively.

Furthermore, the positive emotional responses of pupils indicate that enjoyment and engagement play a crucial role in learning. When learners are motivated and supported, they are more likely to participate actively and achieve better outcomes.

The inclusion of moral-based stories also contributed to character development, helping pupils reflect on values such as honesty and kindness. This suggests that reading interventions can simultaneously support academic and personal growth.

Overall, Project ARM proved to be an effective, engaging, and innovative strategy for improving reading comprehension. It enhanced not only academic performance but also learners' confidence, motivation, and participation in the learning process

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