

LOCATING THE SCIENCE OF READING IN SANTO TOMAS CITY, PHILIPPINES: A CASE STUDY OF LITERACY APPROACHES

[MENELUSURI ILMU MEMBACA DI KOTA SANTO TOMAS, FILIPINA: STUDI KASUS PENDEKATAN-PENDEKATAN LITERASI]

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Abstract

The 2022 PISA assessment delivered a harsh truth about the literacy in the Philippines, raising urgency to recalibrate local reading initiatives. Since then, reading strategies have filled spaces in the reading field, including school-level up to national initiatives. This study seeks to determine whether these activities can be analyzed using the Science of Reading framework. The researchers employed a mixed-method research design, developing and validating a survey questionnaires and interviews among selected reading teachers. The results revealed that all five components of the Science of Reading are highly present in the local contexts. Additionally, five themes from the interviews were developed: *differentiated reading instruction, targeted reading interventions, repetitive practice, needs-based instruction, and foundational skill development*. These findings were analyzed, generating a framework that links the local initiatives to the Science of Reading.

Keywords: Science of reading; Philippines; functional literacy; reading interventions

Abstrak

Penilaian PISA 2022 memberikan kenyataan pahit tentang literasi di Filipina, meningkatkan urgensi untuk mengkalibrasi ulang inisiatif membaca lokal. Sejak saat itu, strategi membaca telah mengisi ruang dalam bidang membaca, termasuk tingkat sekolah hingga inisiatif nasional. Studi ini bertujuan untuk menentukan apakah aktivitas-aktivitas ini dapat dianalisis menggunakan kerangka kerja Ilmu Membaca. Para peneliti menggunakan desain penelitian metode campuran, mengembangkan dan memvalidasi kuesioner survei dan wawancara di antara guru-guru membaca terpilih. Hasilnya menunjukkan bahwa kelima komponen Ilmu Membaca sangat hadir dalam konteks lokal. Selain itu, lima tema dari wawancara dikembangkan: pengajaran membaca yang terdiferensiasi, intervensi membaca yang ditargetkan, latihan berulang, pengajaran berbasis kebutuhan, dan pengembangan keterampilan dasar. Temuan-temuan ini dianalisis, menghasilkan kerangka kerja yang menghubungkan inisiatif lokal dengan Ilmu Membaca.

Kata Kunci: Ilmu membaca; Filipina; literasi fungsional; intervensi membaca

Introduction

Reading is an essential skill that supports cognitive development and socio-economic participation, involving language processes and the decoding of symbols and letters. Gatcho et al. (2024) emphasize the value of ensuring that every child enjoys equitable access to reading development activities. Additionally, technological innovation in today's life demands reading as a core skill for living. Manuel (2024) recognized this potential and recommended literacy programs for adults. Such perspectives highlighted the present drivers of literacy trajectories and created space to emphasize reading progress. It refocused the attention from "reading as an academic skill" to "reading as a life necessity."

Efforts to improve children's reading competencies have attracted extensive scholarly attention, hence, a large pool of knowledge in the field of literacy. The Science of Reading (SoR) emerged from this body of studies, producing principles that help children read better. Goodwin and Jimenez (2020) defined the SoR as an accumulated exploration of how humans read and how they ought to be taught to read. It assumes the collected data on the field of reading, making a strong impact on scholastic settings that it earned a special place even among pre-service teachers (Hindman et al., 2020). One of its arguments is that reading is not automated in the brain (Moats, 2020), demanding that reading ought to be treated scientifically. Considering this, it is not surprising that teacher education institutions included the SoR in developing specialists. Moreover, the argument that early reading and pre-service teachers are linked made a strong case for continuing investigations in the field. This would contribute to the body of research aimed at improving literacy outcome and given SoR's current stance, it would keep piling up materials. It would remain relevant within the broader education umbrella, culminating in further explorations in its name. After all, the SoR does not claim absolute values in its present form.

Admittedly, this developing field has caused quite a stir in the area of literacy, instigating discussions and the so-called "reading wars" (Castles et al., 2018). Goldenberg (2020) builds on these skirmishes and employs SoR lingo to promote its potency among non-native English speakers. Apparently, the SoR principles can help non-English locals improve their literacy levels. Snowling, et al. (2022) showcased the variety of its approaches in helping struggling readers achieve proficiency. From word recognition to fluency, vocabulary development, and comprehension, this approach has captured the interest of specialists. In the Philippines, reading interventions have been constructed in different ways; summer reading camps (Malubay & Manuel, 2022), stakeholders' engagement (Manuel et al., 2025), and technology-enhanced (Fulgueras & Bautista, 2020; Gatcho, 2024). The interest in literacy development seems to keep rising, drawing in more

interested parties. The war, however, has sown much confusion and must be treated with caution in scholarly utilization (Dejulio et al., 2024).

This study investigates Filipino reading interventions and how they could be accommodated into the ongoing discussions in the SoR. Presently, the abundance of materials in the Western setting provides sufficient data to spark interest. Corpus in the Philippines includes a wide array of approaches that highlight reading, claiming an essential space in the field. In Batangas, the advocacy towards this agenda has encouraged teachers, producing numerous approaches and strategies (Quimsing & Ortega-Dela Cruz, 2024). Nevertheless, local studies that emphasize discussions in the Science of Reading remain few. The researchers find this gap interesting.

With the gap in mind, this study was conducted to explore Filipino reading interventions and their potential contributions to the Science of Reading discussions. Specifically, it inquires about:

1. How frequently do reading strategies emphasize:
 - a. phonological awareness,
 - b. phonics,
 - c. word fluency,
 - d. vocabulary, and
 - e. comprehension?
2. How do reading specialists conduct their interventions?
3. Based on the findings, what can Filipino interventions contribute to the discussions in the SoR?

Theoretical Framework

The Science of Reading provided the analytical lens in the discussion portion. Apparently, the field is ripe with materials for scrutinizing literacy activities, especially with its present tenets. The SoR has five elements and these are: *phonological awareness, phonics, word fluency, vocabulary, and comprehension* (Petscher et al., 2020).

Phonological awareness involves auditory factors as integral components of reading development (Milankov et al., 2021). It highlights linguistic aspects as contributory elements towards one's literacy skills. Adding to this complexity is phonics, an element identified as another key

aspect of reading (Sanden et al., 2022). Children are exposed to exercises using the phonics system. Moreover, word fluency is deemed the bridge between decoding and comprehension, measuring a child's ability to immediately recognize words and symbols and their use (Barwasser et al., 2021). Extensive studies have examined the nexus between vocabulary and reading comprehension (Masrai et al., 2019). Different approaches on the use of content-based vocabulary have enriched the discussions in these discourses (Pollard-Durodola et al., 2018). It is not surprising for reading specialists to endorse vocabulary-enriching activities in their activities. Finally, the last element, comprehension, remains foundational in the field of reading. Duke et al. (2021) suggested a set of considerations regarding its development: *(1) that it is not automatic regardless of fluency levels, (2) its development ought to be initiated early, (3) text structures and features boost its improvement, and (4) it is contingent on vocabulary, (5) strategic instructions support it, and (6) text support engagement optimizes its development.*

In this paper, Filipino reading strategies were analyzed under the SoR elements, appropriating the frequency of the activities to the SoR parameters. Additionally, the experiences and considerations of reading specialists would help build a case for the Science of Reading in the country.

Literature Review

Related Frameworks, Models, and Theories

The Science of Reading is a collection of scientific data on how humans read and the pedagogical approaches implicated in it. It includes several theories, models, and frameworks tied to reading development. In this section, these approaches were navigated, though not exhaustively.

Simple View of Reading (SVR)

The SVR emphasizes the need for proficient grasps of both decoding and linguistic prowess to ensure skilled reading (Hoover & Gough, 1990). According to studies, a learner should possess language comprehension, demonstrating understanding of the language of the

presented text, and the ability to produce sounds from symbols. Critics of the SVR, Duke and Cartwright (2021), identified aspects of SVR they deemed lacking, including learners' self-regulation, varied causes of reading difficulties, and overlapping skills. According to them, the SVR ignored developmental concerns that have impeded reading growth. Hoover and Tunmer (2021) have long responded to these charges and expressed that the SVR has been misunderstood by their critics. To this time, the formula language comprehension and decoding remains essential to producing comprehending readers.

The Scarborough's Rope

Scarborough et al. (2009) posited that reading is a complex skill, enunciating the processes involved in both language and reading. It enumerated the elements that each subcomponent needs to process. For language processing, *background knowledge*, *vocabulary expansion*, *language structure*, *reasoning*, and *language literacy*. The decoding process involves *phonological awareness*, *the act of decoding itself*, and *familiarity with words* (Brest, 2025). These elements play a role in distinguishing Filipino activities, allowing the SoR to accommodate the local practices under its rubric.

Ehri's Four Phases

Ehri (2015) argued that children learn how to read in four developmental phases. These four stages embody the progression readers move through, requiring certain skills to advance to the next phase. Labeling it as the science of learning to read, Ehri (2020) specified the skills of decoding, predicting contextual words, and automatic sight reading as necessary reading competencies for skilled literacy. The four phases are: *pre-alphabetic*, *partial alphabetic*, *full alphabetic*, and *consolidated alphabetic*. Recent literature on interventions utilizes Ehri's four phases as a theoretical foundation for analysis, displaying its capacity to discuss interventions accordingly (Lee, 2019; Sargiani et al., 2022). This implicates the strong contribution of this framework to the SoR themes.

In essence, these theories are not treated in isolation. To achieve optimal effect, they must be viewed as complementary to one other. For

instance, the SVR can serve as the overarching model that seeks to understand reading outcomes and explain variations in students' reading skills by framing terms of decoding and linguistic comprehension. Scarborough's Reading Rope, on the other hand, elaborates on the components of reading through a more detailed examination. It shows that all components of reading are interwoven and gradually become automatic and strategic over time as one a learner develops into a skilled reading. While the SVR explains variations in learners' reading performance, the Scarborough's model helps categorize the specific skills being measured among learners. Finally, Ehri's four phases provide a developmental framework specific to word recognition, illustrating learners progress from one stage to the next. This bridges the components of SVR, particularly decoding, with those of Scarborough's model, especially in relation to word recognition.

Global Reading Approaches

Across the globe, educators have responded to this issue through a range of reading interventions, including phonics-based instruction, fluency training, comprehension strategies, and vocabulary development. Among these, systematic phonics instruction has gained considerable attention over the years because it is believed to significantly enhance students' reading abilities. In fact, Ehri (2003; 2020) underscored the importance of systematic phonics instruction for the acquisition of word-reading skills. It was eventually recognized by the National Reading Panel as one of the most effective reading instructions. Additionally, READ 180 in the US is a widely recognized reading program designed to support students in grades 3-12. This program combines technology, instruction, and individualized literacy learning. Ware (2020) revealed that the READ 180 program significantly increased students' reading achievement, especially in the United States. Similarly, Murray et al. (2014) compared Fountas and Pinnell's Leveled Literacy Intervention (LLI) and Scott Foresman's My Sidewalks (MS) reading interventions. They posited that the former focuses on the repetition of frequent words in a text and the latter highlights the use of phonics in instruction.

Other studies explored the use of technology-based reading interventions. Jamshidifarsani et al. (2019) emphasized the need to enhance gamified reading tools to improve user experience. According to them, among the different reading categories, the features of fluency interventions were insufficiently extensive and lacked a holistic approach.

Moreover, Rodli and Prastyo (2017) argued that the use of reciprocal teaching, which involved the use of strategies, enhanced students' understanding of the texts they read, thereby improving their comprehension skills.

Filipino Literacy Approaches

Filipino teachers also took the initiative to help mitigate the reading concerns. One of which was by implementing their own localized programs tailored to their specific context. Case in point, Manuel et al. (2024) implemented the *Bawat Batang Paranaqueño Bumabasa* (BBPB) intervention program, which was found effective in developing reading comprehension skills among elementary pupils through stakeholder engagement. Malubay and Manuel (2022) developed a reading intervention program called *Project SCORE*, which implemented remediation during the summer vacation. Teachers volunteered as examiners in the said program, as they were the recipients of the initiative. Pocaan et al. (2022) developed reading intervention materials for their left-behind learners, which consisted of four parts. In the post-test, students advanced to the instructional and independent level after using the material. Busari and Toluwa (2024) highlighted the utilization of individualized reading programs as a key strategy to improving students' literacy in the elementary grades. Cubillas et al. (2025) examined the impact of the reading program *Beginning Reading Para sa mga Tsikiting* using a descriptive research design. The results showed a reduction in the number of frustrated readers and an increase in independent readers. In the same study, Jalotjot (2023) investigated the *Basa Baya Lahat* program and found similar results. The nomenclature that labels independent, developing, and frustrated came from the Comprehensive Rapid Literacy Assessment (CRLA) and have emphasized comprehension as an identifier (Casingal & Laud, 2026). Moreover, the present dialogues on functional

literacy also motivated policy proposals; for example, Manuel et al. (2025) developed a brief on Multilingual Reading Interventionists. One can deem that reading development is given a premium in the country.

Synthesis

Despite ongoing debates about the view of reading, the Science of Reading provides a cohesive set of evidence-based instructional practices synthesized from decades of reading frameworks, including *phonological awareness, phonics, word fluency, vocabulary, and comprehension*. Across the globe, educators also use the same approaches to address learners' reading difficulties, coupled with strategies such as technology integration, gamification, and reciprocal teaching.

In the Philippine context, many students still struggle to read, as demonstrated in the results of the 2022 PISA assessment. National reading programs and initiatives were implemented to achieve a stronger reading culture. Meanwhile, in local settings, schools and teachers alike intensified their efforts to combat reading dilemmas by proposing contextualized reading programs in their respective areas. Despite these efforts, there is still limited research on how these reading interventions are aligned with the Science of Reading. This suggests the need for more studies that bridge global reading frameworks with localized literacy practices. Examining reading programs in the Filipino context would strengthen their potential links to the SoR and, in turn, enhance literacy activities within its framework.

Methodology

Design

This research utilized a mixed-method approach. McLeod (2024) defines mixed-methods research as a design that integrates qualitative and quantitative data, allowing the study to explore breadth and depth. A quantitative survey gathers data on how the SoR parameters are used in literacy practices, whether in substance or in accidents. Moreover, an interview among reading specialists was conducted to explore their experiences. This is an appropriate design as case studies often involve

the exploration of complex issues. Examining both the "what" and the "why" will help the study achieve a clearer understanding of the phenomenon, as in the case of the appropriation of Filipino reading instructional designs in the Science of Reading.

Setting, participant, sampling

The participants were teachers from the Division of the City of Sto. Tomas, Batangas, and were selected through purposive sampling. The selection criteria included *employment at any school within the Division of the City of Sto. Tomas, a literacy teacher, and has experience in handling intervention programs for struggling readers in their respective schools*. Following Barkhuizen's (2014) recommendations for case studies involving teachers, 43 participants were invited based on the provided criteria, of whom 40 responded to the survey. Regarding the experiences of reading specialists, 5 teachers participated in the activity.

Additionally, purposive convenience sampling was also considered in the content validation of the researcher-made instrument. The criteria for the invitation included the following: *a graduate or postgraduate degree in reading education, publication of a study in the field of reading, and experience validating survey instruments*. 3 reading specialists participated in the instrument's content validation.

Instrument Development and Validation

The instrument was constructed by the researchers and was validated by reading specialists. The instrument, initially constructed in accordance with the Science of Reading, was examined and validated by three reading specialists using a content validation form. To ensure the coherence of the survey instrument, a pilot test was implemented at Fourth Estate Elementary School BF Homes. The researchers requested feedback from the pilot test participants. These evaluations were incorporated into the construction of the instrument survey.

The researchers also prepared a semi-structured interview regarding the implementation of literacy interventions. While a guide ensured the interview's trajectory, the researchers also sought authenticity through follow-up questions based on the initial responses.

Data Collection and Analysis

Quantitative data were collected via Google Forms using the researcher-developed instrument. Descriptive statistics were used to analyze the data on the tenets of the SoR, specifying the means and standard deviations of the item frequencies in the responses. The researchers decided to utilize these tools to highlight the frequency of the activities, as the data from the interviews would augment this. The interviews were conducted online via Google Meet. It was transcribed and translated before being coded independently by the researchers. The responses were filtered for their more salient statements. To ensure the objectivity and quality of the codes, an intercoder was invited to construct a third set. The two researchers decided on the final codes and themes for analysis.

Table 1. Code Abstraction Sample Table

Response	Category	Theme	Description
Usually teacher-made reading materials. Depending on their level of difficulty...	Teacher-developed materials	Differentiated Reading Instructions	This theme refers to differentiated instructions particular to reading development.

Ethical Considerations

The researchers recognized the importance of ethics and accomplished the necessary processes to ensure compliance. Permission was sought from authorized people before conducting the study. Similarly, the respondents were informed of the questionnaire's purpose and given the opportunity to withdraw. Anonymity was also included in the presentation of data to protect participants' privacy, both in the questionnaire and the interview.

Findings and Analysis

The SoR Elements in Filipino Reading Strategies

The following table displays the reading specialists' responses regarding the frequency of their emphasis on the SoR elements.

Table 2. Teachers' Frequency of Emphasizing Phonological Awareness

Phonological Awareness		
Descriptor	Mean	Standard Deviation
I model the process of blending and segmenting sounds.	4.00	0.716
I use rhyming games to instill phonological awareness.	4.07	0.572
I provide sound-matching activities for students.	4.20	0.686
I instruct students to identify individual sounds in spoken words	4.20	0.648
I evaluate students' phonological awareness.	4.25	0.808
Average	4.15	0.686

Phonological Awareness (PA)

In this table, the descriptor with the highest mean is linked with evaluating PA among learners, displaying high practice among the participants. One can infer that specialists create interventions based on these assessments. After all, Brest (2022) noted that PA is a strong component of decoding skills, strengthening one's ability based on auditory and oral linguistics. On the other hand, the descriptor that concerns modeling the process of blending and segmenting sounds had the least mean in the PA parameter. While not necessarily low, it lessens the display of confidence in the actual role of the teacher in processing decoding matters. This is surprising as the Simple View of Reading heavily emphasize decoding as an essential tenet in reading comprehension (Hoover & Gough, 1990). The seeming tension of emphasis and less frequency of modeling puts a question on how specialists target decoding when one of its elements is held in lesser value.

Table 3. Teachers' Frequency of Activities Emphasizing Phonics

Phonics		
I include decoding practice in my reading instruction.	4.22	0.733
Phonics-based games in my reading lesson are present.	4.15	0.833
Teaching letter-sound relationships is my priority.	4.30	0.822
I introduce letter sounds in a systematic way.	4.32	0.828
I review the phonics rule with my students.	4.35	0.769
Average	4.27	0.798

Similar to PA, this parameter also averaged a frequent standing in reading activities. Additionally, the convergence of the responses near the mean is much narrower, indicating high confidence in phonics as an essential parameter for implementing reading interventions and activities. Among the descriptors in Phonics, the activity linked to its rules took the highest mean at 4.35, showing a narrow distribution around it with a standard deviation of 0.769. It can be deduced from this that participants have almost equally practiced the presentation, and an assumed repetition of the rules in their practice. This is not uncommon as students do not necessarily focus, and retain reading principles easily. This is supported by the exercises provided to enhance decoding skills, implicating repetitions in its administration (Sanden et al., 2022). With the SoR advocating for reading as a non-natural process in cognitive levels, this high frequency for phonics-linked drills is an encouraging note (Moats, 2020). On the other hand, the descriptor that garnered the lowest mean was the activity connected to the presence of games in phonics development.

Table 4. Teachers' Frequency of Activities Emphasizing Word Fluency

Word Fluency		
My students practice repeated reading exercises.	4.35	0.485
I utilize available fluency assessment tools to track my students' progress	4.47	0.505
I monitor my students' reading speed and accuracy.	4.42	0.500
I read aloud in class to show the students the proper reading habit.	4.45	0.503
We practice timed reading or partner reading for fluency.	4.22	0.733
Average	4.38	0.545

In this table, word fluency was emphasized in descriptive stances. The participants displayed the frequent use of fluency tools for tracking reading progress, generating the highest mean, 4.47, in this parameter. Assessment tools such as Comprehensive Rapid Literacy Assessment (CRLA) might have played a role in this high frequency. Keeping with the national agenda concerning reading levels, tracking word fluency would help the initiatives. Timed and partnered reading activities garnered the lowest mean in this set, though the SD results suggest variability of responses among the participants. It could be inferred that the specialists do not emphasize time in completing texts. Rather, decoding and comprehension are given higher attention. This is in line with the SoR's treatment of fluency, which serves as a link between the two (Barwasser et al., 2021). Nevertheless, it casts a doubt on the ability of the students to immediately recognize symbols and words, affecting the two processes.

Table 5. Teachers' frequency of activities emphasizing vocabulary

Vocabulary		
I incorporate vocabulary drill activities on my English lessons	4.40	0.744
I teach students context clues techniques and strategies to better understand unknown words.	4.40	0.744
I integrate vocabulary enhancement in my lesson through concept maps.	4.30	0.757
Students are encouraged to use new words in their written and oral activities.	4.32	0.729
Word meanings are taught explicitly in my class.	4.42	0.747
Average	4.37	0.744

In this parameter, teachers demonstrated frequent practices in incorporating vocabulary drills, and using context clues in learning new words, generating means of 4.40. The SoR highly supports these practices as vocabulary is a main tenet among the models in the field. The Scarborough Rope included vocabulary expansion as a necessary aspect of reading development (Brest, 2025). The focus of Filipino specialists in vocabulary is understandable as it is implicated in comprehending texts. Children who have limited words in their vocabulary bank would remain challenged in their quest for comprehension, hence, their reading profiles are kept in the frustrated or beginning levels (Casingal & Laud, 2026). The

use of concept maps garnered the lowest mean, 4.30, but with a similar variability of responses with a standard deviation of 0.757. This shows the focus of the specialists on actual texts more than conceptual maps. It begs the question of how these specialists ended up with this frequency when concept mapping is a useful tool in developing vocabulary. The argument of Rodli and Prastyo (2017) in recognizing various tools towards reading development, implicating the necessity of particular methods such as concept mapping, is negated by the participants.

Table 6. Teachers' Frequency of Activities emphasizing comprehension

Comprehension		
I teach students to pause and monitor their understanding of the text.	4.50	0.816
I make them highlight the difficult idea or concept that they encounter while reading.	4.47	0.816
I include predicting, clarifying, and making inferences in my reading instruction.	4.47	0.816
I help students process the text by providing comprehension checks.	4.60	0.744
I use probing strategies to enhance students' appreciation of the text.	4.57	0.747
Average	4.52	0.788

In this table, the participants displayed the high frequency of using comprehension checks, generating a mean of 4.60. This is in line with the SoR's emphasis on comprehension. While the variability of responses seems a little disperse, it is still narrower than the other descriptors. Using comprehension checks is not uncommon as it is relatively easy to construct questions based on reading materials. Volunteer stakeholders would be able to create items considering the customary use of this even in the previous generation as shown in the action research of Manuel et al. (2024). This implicates the language use of the created materials, implicating the aspects of the Simple View of Reading in its considerations. On the other hand, two descriptors garnered the lowest means in this table, highlighting the difficult idea in the text, and making inferences, both generating 4.47. While the distance to the other descriptors is not huge, there are questions on the considerations of the specialists in developing comprehension. The SoR captures not just observational inquiries but critical reading, pushing the

readers to engage texts beyond the obvious. Ehri (2020) included predicting contextual texts as a significant stage in a reader's journey. Deducing action time that improves readers' critical reading does not help them perform better.

It is observable that across the local interventions, the SoR elements are present, indicating that Filipino reading approaches can contribute to the present discourses in the field. While most of these activities are not necessarily technically framed in the SoR perspective, one can still show a particular drift towards its considerations. The five elements, however unstructured, may be observed heavily with the high mean close to the almost "always" frequency, with distributions that are very close to the mean. This shows that reading specialists have focused on these elementary skills as foundational to improving reading levels.

One noteworthy aspect of this portion is the emphasis on the highest and lowest elements in the reading activities. Reading comprehension yielded the highest mean, and phonological awareness had the lowest. In the SoR, there is a strong link across the five that overemphasizing one could lead to an imbalanced progress, hence an unoptimized reading framework.

Table 7. Abstracted Codes from the Interviews

Response	Category	Theme	Description
Usually teacher-made reading materials. Depending on their level of difficulty. Word recognition Fluency Reading comprehension.	Teacher-developed materials	Differentiated Reading Instructions	This theme refers to differentiated instructions particular to reading development especially in the three key components of SOR.
I designed targeted intervention such as uhm guided reading or a small group ah remediation and most of the time which is a very useful for me is that whenever I have my lesson I always ah put the vocabulary	Guided reading instructions	Targeted Reading Interventions	This theme points to the teacher's strategy in developing vocabulary as this is one hindrance in overall reading achievement.

enrichment activities which can be shown in my demonstration teaching.			
I applied strategies such as paired reading, repeated reading and comprehension questioning to strengthen the fluency and the understanding.	Guided reading instructions	Repetitive Practices	In order to help the learners develop reading habits, repetitive practices are deemed necessary. This improves fluency and comprehension.
First, in reading intervention, because I study well. What are the basic needs of the child?	Learner centered instructions	Needs-based Instructions	Teachers begin with diagnostic tests before implementing any reading remediation. The results point them back to the first steps toward reading: phonics.
"...What I did is it comprises because with uhm young syllabication or phonemic assistance then followed by uhm the story..."	Scaffolded reading instructions	Foundational Skill Development	Teachers gradually increase the level of difficulty of the reading material to support students' needs.

Implementation of Reading Interventions

A particular level of autonomy is granted among reading specialists that allows them to conduct their own strategy. Nevertheless, four similar themes were abstracted from their stories. The following sections highlight these materials.

Differentiated reading instructions

The findings revealed that teachers used differentiated reading instruction to support students' varying abilities. Students were grouped according to their ability to recognize words, construct meaning, and comprehend texts. In this manner, teachers developed self-made tools and sometimes adopted materials from the internet. For instance, Ehri (2020) highlighted the importance of systematic phonics in teaching learners to read, while Ware's (2020) study suggested that integrating technology can be more engaging and comprehensive. In the Philippine

context, several studies complement differentiated reading instruction, as seen in the works of Manuel (2024) and Busari and Tulowa (2024), which emphasize the use of contextualized reading materials appropriate for Filipino learners. The elements of Science of Reading are implicated in these instructions; showing phonics, comprehension, fluency, and vocabulary among the activities.

Targeted reading interventions

The results showed that teachers designed targeted reading remediation based on the results of the standardized reading assessment administered at the beginning of the school year. This reading remediation was incorporated into lesson plans through strategies such as paired reading and small group discussions. These strategies target students' vocabulary and comprehension. Similarly, the study by Rodly and Pastyo (2017) highlighted the use of reciprocal teaching, in which teachers guide students to lead group discussions, thereby facilitating discussions afterward. This approach is also supported by the national program of DepEd, specifically called the "Catch-up Friday" initiative, which follows a similar implementation model. Similar to the first theme, these interventions also provide a channel for the SoR to accommodate Filipino interventions.

Repetitive practices

The findings revealed that repetitive practices are fundamental to reading development. Teachers use this strategy to improve fluency and comprehension. Murray et al. (2014), in Fountas and Pinnell's Leveled Literacy Intervention (LLI), use a similar technique, emphasizing the repetition of words within the text. Nevertheless, the resemblance remains evident. Drills are hallmark in the Science of Reading too. The act of decoding, draws insights from the Simple View of Reading, while the repetition implicates the stages in Ehri's phase.

Needs-based instructions

Most reading teachers agreed that a diagnostic test should be administered before designing any reading intervention materials. This diagnosis helps teachers gauge students' abilities before placing them in

reading groups categorized as frustrated, instructional, and independent. From there, teachers design materials and conduct interventions appropriate to each level of learners (Cubillas et al., 2025; Pocaan et al., 2022). The Science of Reading supports this theme as profiling implicate the elements. For instance, frustrated profiles are determined by decoding difficulties, and independent profiles are considered by high comprehension. Both of these are present in the SVR, Scarborough's Rope and Ehri's phases.

Foundational skill development

The teachers' knowledge of how the reading process works is demonstrated in this theme. They recognize that before students can comprehend a text, they must first be taught skills such as decoding, sounding out words, syllabication, understanding vocabulary, and how words function within a broader text. This reveals that teachers gradually increase the difficulty of the reading material to better support students' needs. This progressing difficulty is a hallmark of the Science of Reading. Nuanced challenges based on elementary reading principles are designed with certain levels of decoding, vocabulary, and comprehension in mind. In fact, the proposal by Manuel et al. (2025) to move multilingual reading interventionists into formal offices assumes these perspectives and demands.

The Science of reading in the Philippines

Both the survey and interviews allowed the researchers to generate conclusive statements regarding local interventions and their potentiality to contribute to the discourses in the field. The following elements are presented in light of the findings:

The five elements of the Science of Reading are present in local approaches.

The SoR elements are given emphasis in the local study settings. This is an encouraging stance if one intends to appropriate the framework in the local setting, or at least to appropriate the existing interventions to the SoR. Constructing local interventions with the SoR in presupposition

would allow the strategies to approach the learners dynamically, strengthening the links between language and reading (Hoover & Gough, 1990; Scarborough et al., 2009). After all, recent proposals on addressing literacy concerns in the country include multilingual reading interventionists (Manuel et al., 2025).

Comprehension is given the highest emphasis among the five elements of the Science of Reading.

While the elements yielded close means in the survey, comprehension remained the most sought-after reading skill in the study setting. Even in the interviews, only fluency and comprehension were mentioned twice by two different participants. This is noteworthy, as comprehension is the identifier for being considered an independent reader vis-à-vis the Comprehensive Rapid Literacy Assessment (CRLA) profiles (Casinal & Laud, 2026). The SoR theorizes that the elements inform one another and should be given appropriate attention to produce readers with optimized skills. Structuring local interventions aligned with the SoR elements and mechanisms would provide contributory insights to the present discourses, and command better production among students' reading development.

In the interviews, four of the five themes can be categorized as learner-centered.

There is nothing wrong with being learner-centered. In fact, learners ought to be given prominence in any learning institution. In terms of reading development, specialists should address the reading demands of their students. The data that address students' needs should be aligned with the SoR elements, at least for the structuring of one's intervention. This will help the teacher target the learners' needs and at the same time develop the other reading elements. This approach will help avoid unbalanced emphasis among the elements and ensure a more optimized reading development.

Future Directions

The study demonstrated that Filipino local reading strategies can contribute to ongoing discussions in the Science of Reading. The strong presence of SoR elements was observed across the parameters. Nevertheless, the activities were not founded on any SoR-themed approach. This opens opportunities for Filipino specialists to implement SoR-based frameworks such as SVR, the Reading Rope, Ehri's Phases, and Structured Literacy. On the other hand, these reading specialists could also capitalize on the themes of reading interventions and construct a more local approach, filling a gap between their methods and the SoR. The imbalance across the five elements also implies an overemphasis on one element at the expense of the others, which ought to be addressed.

Considering that the study was conducted in only one division, further explorations in other settings could also provide insights. One fact this study highlights is the setting itself, intentionally choosing one with no strong ties to the Science of Reading in a formal sense. This draws attention to divisions known to practice techniques under the SoR banner.

The place of the Science of Reading in the Filipino local approaches may also be explored. The cohesion and connections of the five elements as parts of a unified approach could be examined. Similarly, the highest frequency yielded for the comprehension descriptors could be given attention and justified the present practice, or a position could be found that allows equal access across the five elements. The present learner-centered approach, while not necessarily wrong, could also be framed within the SoR tenets.

In addition to these directions, teacher training schools could also capitalize on current pedagogical stances that help these specialists develop techniques. This will either provide affirmations or negations on the linking of the elements to the SoR, whether they were crafted with its insights deliberately emphasized in practice.

Conclusion

Reading specialists in study settings show strong agreement with the Science of Reading elements. This is evident in the survey results, which examined their reading practices, and is further supported by interviews with the selected educators. Hence, SoR is already embedded in their daily instructional practices. Among the indicators, comprehension obtained the highest mean of 4.52, whereas phonological awareness had the lowest mean of 4.145. This difference may be explained by educators' affiliation with the junior high school level, where phonics is typically a lower instructional priority in reading instruction. In addition, strategies identified by participants for implementing reading interventions included differentiated reading instruction, targeted reading interventions, repetitive practice, needs-based instruction, and foundational skill development. Based on these findings, the researchers captured the essence of the local approaches and developed three key insights that may contribute to the SoR discourses: *the five elements of the Science of Reading are present, Comprehension is given the highest emphasis among the five elements, and in the interviews, four of the five themes can be categorized as learner-centered.* In conclusion, while SoR can be observed in the practices and implementation of reading programs in the Philippine classrooms, many teachers still need to become familiar with the theories associated with it to apply SoR appropriately in the Philippine context.

Authors' Disclosure Statements

Generative Artificial Intelligence (GAI) was used to aid the construction of the instrument's descriptors and to analyze materials in the coding process. Google Translate was used to convert Filipino responses into English statements. Grammarly was utilized to ensure the flow and cohesion of the constructed paragraphs. There is no potential conflict with any commercial institution in the conduct of this study.

References

- Barkhuizen, G. (2014). Number of participants. *Language Teaching Research*, 18(1), 5-7.
<https://doi.org/10.1177/1362168813510447>
- Barwasser, A., Urton, K., & Grünke, M. (2021). Effects of a peer-tutorial reading racetrack on word fluency of secondary students with learning disabilities and emotional behavioral disorders. *Frontiers in Psychology*, 12, 671385.
<https://doi.org/10.3389/fpsyg.2021.671385>
- Bawat bata makababasa (BBM) Program | Department of Education. (n.d.). <https://www.deped.gov.ph/bawat-bata-makababasa-program/>
- Brest, S. (2022). Developing An Understanding Of Dyslexia And Reading. <https://bellavista.org.za/developing-an-understanding-of-dyslexia-and-reading/>
- Busari, M., & Toluwa, T. (2024). Effectiveness of individualized reading programs in Philippine elementary schools. https://www.researchgate.net/publication/393177568_EFFECTIVENESS_OF_INDIVIDUALIZED_READING_PROGRAMS_IN_PHILIPPINE_ELEMENTARY_SCHOOLS
- Casingal, C. P., & Laud, G. V. (2026). Reading Level Progression in Elementary Schools: A Comparative Study of CRLA Assessment Data from Beginning to End of School Year 2024-2025. https://www.researchgate.net/publication/401563316_Reading_Level_Progression_in_Elementary_Schools_A_Comparative_Study_of_CRLA_Assessment_Data_from_Beginning_to_End_of_School_Year_2024-2025
- Castles, A., Rastle, K., & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. *Psychological science in the Public Interest*, 19(1), 5-51.
<https://doi.org/10.1177/1529100618772271>
- Cubillas, A. U., Cubillas, T. E., & Pizon, M. G. (2025). Impact assessment of the beginning reading para sa mga tsikiting in Butuan City,

- Philippines. *Journal of Education and Learning (EduLearn)*, 19(4), 1966-1978. <https://doi.org/10.11591/edulearn.v19i4.22435>
- Dean, J., Pascoe, M., & Roux, J. L. (2021). Information and communication technology reading interventions: A scoping review. *Reading & Writing*, 12(1). <https://doi.org/10.4102/rw.v12i1.294>
- DepEdPH. (2024, February 21). *DepEd Reading Program: Catch-Up Friday / DepEd PH*. DepEd PH. <https://depedph.com/deped-reading-program/>
- DeJulio, S., Massey, D. D., Stahl, N., & King, J. (2024). Terminologically speaking, the reading wars. *Reading Psychology*, 45(4), 386–412. <https://doi.org/10.1080/02702711.2024.2309342>
- Duke, N. K., & Cartwright, K. B. (2021). The science of reading progresses: Communicating advances beyond the simple view of reading. *Reading Research Quarterly*, 56, S25-S44. <https://doi.org/10.1002/rrq.411>
- Ehri, L. C. (2003, March 17). *Systematic Phonics Instruction: Findings of the National Reading Panel*. <https://eric.ed.gov/?id=ED479646>
- Ehri, L. C. (2020). The Science of Learning to Read Words: A case for systematic Phonics instruction. *Reading Research Quarterly*, 55(S1). <https://doi.org/10.1002/rrq.334>
- Ehri, L. C. (2015). How Children Learn to Read Words Linnea C. Ehri. *The Oxford handbook of reading*, 293. <http://dx.doi.org/10.1093/oxfordhb/9780199324576.013.19>
- Fulgueras, M. J., & Bautista, J. U. D. Y. (2020). Flipped classroom: its effects on ESL learners' critical thinking and Reading comprehension levels. *International Journal of Language and Literary Studies*, 2(3), 257-270. <https://doi.org/10.36892/ijlls.v2i3.228>
- Gatcho, A. R. G., Manuel, J. P. G., & Hajan, B. H. (2024, June). No child left behind, literacy challenges ahead: a focus on the Philippines. In *Frontiers in Education* (Vol. 9, p. 1349307). Frontiers Media SA. <https://doi.org/10.3389/feduc.2024.1349307>
- Gatcho, A. R. G. (2024). From Consultation to Implementation: Reflective Pathways in Designing Technology-Mediated Community Literacy

- Programs. In *Improving Literacy Through Home, School, and Community Partnerships* (pp. 165-188). IGI Global Scientific Publishing. <http://dx.doi.org/10.4018/979-8-3693-1777-8.ch007>
- Goldenberg, C. (2020). Reading wars, reading science, and English learners. *Reading Research Quarterly*, 55, S131-S144. <https://doi.org/10.1002/rrq.340>
- Goodwin, A. P., & Jiménez, R. T. (2020). The science of reading: Supports, critiques, and questions. <https://www.jstor.org/stable/48587599>
- Hindman, A. H., Morrison, F. J., Connor, C. M., & Connor, J. A. (2020). Bringing the science of reading to preservice elementary teachers: Tools that bridge research and practice. *Reading Research Quarterly*, 55, S197-S206. <https://doi.org/10.1002/rrq.345>
- Hoover, W.A., Gough, P.B. The simple view of reading. *Read Writ* 2, 127–160 (1990). <https://doi.org/10.1007/BF00401799>
- Hoover, W. A., & Tunmer, W. E. (2021). A commentary on some recent claims made against the simple view of reading. *LDA Bulletin*, 53(3), 40-42. https://www.researchgate.net/publication/359246057_A_commentary_on_some_recent_claims_made_against_the_Simple_View_of_Reading
- Jalotjot, D. (2023). Effects of the Simplified PVC Reading Approach through the Implementation of the 'Basa Baya Lahat' Program to the Reading Skills Development of the Struggling Readers. *Psychology and Education: A Multidisciplinary Journal*, 8(6), 1-1. <https://www.ejournals.ph/article.php?id=20719>
- Jamshidifarsani, H., Garbaya, S., Lim, T., Blazevic, P., & Ritchie, J. M. (2019). Technology-based reading intervention programs for elementary grades: An analytical review. *Computers & Education*, 128, 427–451. <https://doi.org/10.1016/j.compedu.2018.10.003>
- Lee, L. W. (2019). Design and development of a Malay word recognition intervention program for children with Dyslexia. *Australian*

- Journal of Learning Difficulties*, 24(2), 163-179.
<https://doi.org/10.1080/19404158.2019.1661261>
- Malubay, S. R., & Manuel, J. P. G. (2022). A SWOT analysis on the implementation of project SCORE at Cupang elementary school main. *Sapienza: International Journal of Interdisciplinary Studies*, 3(1), 246-257. <https://doi.org/10.51798/sijis.v3i1.230>
- Manuel, J.P.G., Gatcho, A.R.G., and Areta, G.C. (2025). Multilingual reading interventionists for junior high school: a response to the Philippines' functional literacy gap. *Frontiers in Education*.
<https://doi.org/10.3389/feduc.2025.1646036>
- Manuel, J. P., Morales, R., Doria, E., & Nery, K. (2024). Bawat Batang Paranaqueno Bumabasa (BPBB), a response to literacy gaps and losses. *Journal of Education and Learning Advancements*, 1(2), 26-40. <https://jelamagste.org/journalofed/index.php/jela/article/view/57>
- Manuel, J. P. G. (2024). Empowering Communities Through Literacy: Policy Insights From Indonesia's AKRAB Literacy Initiative. In *Improving Literacy Through Home, School, and Community Partnerships* (pp. 149-164). IGI Global Scientific Publishing.
<http://dx.doi.org/10.4018/979-8-3693-1777-8.ch006>
- Masrai, A. (2019). Vocabulary and reading comprehension revisited: Evidence for high-, mid-, and low-frequency vocabulary knowledge. *Sage Open*, 9(2).
<https://doi.org/10.1177/2158244019845182>
- McLeod, B. (2025). *Advancing the Study of Lived Experience, Peer Support, and Recovery: A Critical Mixed-Methods Investigation* (Doctoral dissertation, Swinburne).
<https://doi.org/10.25916/sut.30161920>
- Milankov, V., Golubović, S., Krstić, T., & Golubović, Š. (2021). Phonological awareness as the foundation of reading acquisition in students reading in transparent orthography. *International journal of environmental research and public health*, 18(10), 5440.
<https://doi.org/10.3390/ijerph18105440>

- Moats, L. C. (2020). Teaching Reading "Is" Rocket Science: What Expert Teachers of Reading Should Know and Be Able to Do. *American Educator*, 44(2), 4. <https://www.aft.org/ae/summer2020/moats>
- Murray, M. S., Munger, K. A., & Hiebert, E. H. (2014). An analysis of Two Reading Intervention Programs. *The Elementary School Journal*, 114(4), 479–500. <https://doi.org/10.1086/675635>
- On Philippines' participation in PISA 2022 | Department of Education. (2022, March 11). <https://www.deped.gov.ph/2022/03/11/on-philippines-participation-in-pisa-2022/>
- Petscher, Y., Cabell, S. Q., Catts, H. W., Compton, D. L., Foorman, B. R., Hart, S. A., ... & Wagner, R. K. (2020). How the science of reading informs 21st-century education. *Reading research quarterly*, 55, S267-S282. <https://doi.org/10.1002/rrq.352>
- Pocan, J. M., Bailon, L. L., & Pocan, J. P. T. (2022). Strategic reading intervention for left-behind learners. *LLT Journal a Journal on Language and Language Teaching*, 25(2), 367–378. <https://doi.org/10.24071/llt.v25i2.5087>
- Pollard-Durodola, S. D., Gonzalez, J. E., Saenz, L., Resendez, N., Kwok, O., Zhu, L., & Davis, H. (2018). The Effects of Content-Enriched Shared Book Reading Versus Vocabulary-Only Discussions on the Vocabulary Outcomes of Preschool Dual Language Learners. *Early Education and Development*, 29(2), 245–265. <https://doi.org/10.1080/10409289.2017.1393738>
- Rodli, M., & Prastyo, H. (2017). Applying reciprocal teaching method in teaching reading. *Studies in Linguistics and Literature*, 1(2), 112. <https://doi.org/10.22158/sll.v1n2p112>
- Sanden, S., MacPhee, D. A., Hartle, L., Poggendorf, S., & Zuiderveen, C. (2022). The status of phonics instruction: Learning from the teachers. *Reading Horizons: A Journal of Literacy and Language Arts*, 61(1), 5. https://scholarworks.wmich.edu/reading_horizons/vol61/iss1/5/
- Sargiani, R. D. A., Ehri, L. C., & Maluf, M. R. (2022). Teaching beginners to decode consonant–vowel syllables using grapheme–phoneme subunits facilitates reading and spelling as compared with

- teaching whole-syllable decoding. *Reading Research Quarterly*, 57(2), 629-648. <https://doi.org/10.1002/rrq.432>
- Scarborough, H. S., Neuman, S., & Dickinson, D. (2009). Connecting early language and literacy to later reading (dis) abilities: Evidence, theory, and practice. *Approaching difficulties in literacy development: Assessment, pedagogy and programmes*, 10, 23-38. https://www.researchgate.net/publication/306200560_Connecting_early_language_and_literacy_to_later_reading_disabilities_Evidence_theory_and_practice
- Snowling, M. J., Hulme, C., & Nation, K. (Eds.). (2022). *The science of reading: A handbook*. Hoboken, USA: John Wiley & Sons. <https://psycnet.apa.org/doi/10.1002/9781119705116>
- Quimsing, M. J. D., & Cruz, R. O. D. (2024). Technology-based reading application on improving reading literacy level among struggling readers in a public elementary school in the Philippines. *Pedagogy: Journal of English Language Teaching*, 12(1), 15-28. <https://doi.org/10.32332/joelt.v12i1.7757>
- Ware, D. (2020). *Implementing READ 180 to increase reading achievement and improve organizational learning* - ProQuest. <https://www.proquest.com/openview/0be3229c5d787cf4bdbaac5ca865c49e/1?pq-origsite=gscholar&cbl=44156>