

Interactive Reading Engagement and Comprehension Development among Grade 3 Learners

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ABSTRACT

This study investigated how interactive reading engagement contributed to the comprehension development of Grade 3 learners at Pilar Elementary School, City of Ilagan. A prospective repeated-measures prediction design was employed, with eligible learners included through criterion-based complete enumeration. Data were gathered using a validated interactive reading engagement observation rubric and parallel Grade 3 comprehension tests administered at baseline and endline. Median, interquartile range, Kendall's tau-b, and median quantile regression with 5,000 bootstrap resamples were used to analyze the data. Results showed that overall engagement was developing toward consistent participation, although the use of textual evidence and explanation of interpretations remained weak. Median comprehension performance increased from 18.00

at baseline to 22.00 at endline, with gains evident in identifying details, sequencing, main idea, vocabulary, and cause-and-effect relationships. Inference and interpretation showed no median improvement. Interactive reading engagement was moderately associated with endline comprehension, $r_b = .46$, $p < .001$, and remained a significant predictor after baseline comprehension was controlled, $B = 2.36$, 95% CI [1.19, 3.58], $p < .001$. The predictive model yielded a pseudo- R^2 of .44. The findings indicated that active participation in reading supported comprehension development, but higher-level meaning-making skills required more explicit guidance. Structured questioning, think-aloud modeling, small-group reading, and evidence-based responses were recommended to strengthen learners' inferential and interpretive comprehension.

Keywords: *comprehension development, Grade 3 learners, interactive reading, reading engagement, reading instruction, textual evidence*

INTRODUCTION

Reading comprehension is a fundamental part of learning because it enables children to understand written information, connect ideas, form interpretations, and apply what they have read to different academic tasks. By Grade 3, learners are expected to move beyond recognizing familiar words and reading simple sentences. They begin working with longer passages that require them to identify main ideas, recall supporting details, understand sequence, determine the meaning of unfamiliar words, and make reasonable inferences. The Grade 3 English learning resources of the Department of Education include reading comprehension, vocabulary development, phonics, word recognition, and written expression as connected areas of literacy instruction (Department of Education, 2022). Research-based guidance for kindergarten to Grade 3 also explains that comprehension is supported by oral language, vocabulary, decoding skills, knowledge of text structures, and regular practice in reading connected text (Foorman et al., 2016). These expectations show that comprehension development requires both foundational reading abilities and meaningful opportunities to use them.

Reading performance remains a serious educational concern in the Philippines. The Programme for International Student Assessment 2022 reported that only 24 percent of participating Filipino students reached at least Level 2 proficiency in reading, compared with the Organisation for Economic Co-operation and Development [OECD] (2023) average of 74 percent. Learners at Level 2 can identify the main idea of a moderately long text, locate information based on stated criteria, and reflect on the purpose and form of a text when clearly directed. Although PISA assessed 15-year-old students rather than Grade 3 learners, the results suggest that reading difficulties can persist through the later years of schooling. Addressing comprehension needs during the elementary grades is therefore important because early weaknesses in vocabulary, word recognition, language understanding, and meaning construction can limit a learner's ability to manage more demanding texts in succeeding grade levels.

Comprehension is not developed through silent reading and written exercises alone. Children also need opportunities to discuss what they read, ask questions, explain their ideas, listen to other interpretations, and return to the text when their understanding is incomplete. Interactive reading engagement refers to the learner's active participation before, during, and after reading. It may involve predicting events, examining illustrations, connecting the text with personal knowledge, identifying important details, retelling a passage, answering open-ended questions, and supporting an answer with information from the text. Through these exchanges, the teacher can observe how learners arrive at meaning rather than relying only on the number of correct answers produced after reading.

Classroom interaction becomes more valuable when learners are encouraged to express complete ideas instead of supplying one-word responses. A review of reading comprehension instruction found that much classroom time continued to follow a pattern in which the teacher asked a question, a learner gave a brief answer, and the teacher evaluated the response. Such exchanges provided fewer opportunities for learners to explain their reasoning, examine information closely, or discuss alternative meanings. The same review reported that comprehension instruction occupied only about 23 percent of observed reading and English language arts instructional time, while several research-supported practices were used infrequently (Capin et al., 2025). These findings indicate that asking questions after a passage is not enough. Teachers need structured reading conversations that allow learners to think aloud, clarify confusion, and explain how information from the text supports their answers.

Learners are also more likely to take part in reading activities when the materials and classroom tasks hold their attention. Reading motivation and comprehension are separate but connected aspects of literacy development. A longitudinal study among learners in the early elementary grades found meaningful relations between reading motivation and reading comprehension over time (Schiefele et al., 2016). A meta-analysis of 39 intervention studies likewise showed that programs designed to strengthen reading motivation produced positive effects on both motivation and reading comprehension. The effects on comprehension were stronger among primary school learners than among secondary school students, while activities that stimulated interest in reading also produced favorable outcomes (van der Sande et al., 2023). Another systematic review found that motivational reading instruction led to positive, although generally modest, improvements in reading achievement and motivation (McBreen & Savage, 2021). These findings suggest that learners' willingness to participate, persist, and respond to a text can help create conditions that are favorable to comprehension development.

Interactive engagement, however, should not be treated as entertainment that is separate from reading instruction. Enjoyable activities have limited value when they are not connected to clear literacy goals. Prediction tasks should lead learners to examine textual evidence. Vocabulary activities should help them understand words used in the passage. Retelling should develop their ability to organize events and information. Questioning should move from literal understanding toward explanation and inference. Foorman et al. (2016) emphasized that learners need systematic instruction in language, vocabulary, sound and letter relationships, decoding, and the reading of connected text. Interactive practices are most useful when they strengthen these abilities and give children guided opportunities to apply them while making sense of a passage.

Reading engagement can also be shaped by the environment surrounding the learner. Access to age-appropriate books, encouragement from adults, opportunities to talk about stories, and regular reading routines can influence how children view reading. An analysis of data from the Progress in International Reading Literacy Study 2021 involving Grade 4 learners found that an active reading environment and the availability of books at home were positively associated with reading comprehension. Reading enjoyment, motivation, and frequency formed part of the pathways linking the home literacy environment with comprehension performance (Claes et al., 2024). Since the study used cross-sectional data, the findings should be understood as associations rather than direct proof of cause. Still, they show that children's participation in reading is strengthened when reading is treated as a shared and meaningful activity rather than an isolated school requirement.

Interactive reading activities offer a practical way to observe differences in how learners approach a text. Some learners may read words accurately but struggle to explain what a passage means. Others may understand a story when it is read aloud but have difficulty processing it independently. Some may hesitate to answer because of limited vocabulary or fear of giving an incorrect response. Classroom discussions, partner reading, guided questioning, story mapping, dramatization, and evidence-based responses can reveal these differences while giving learners several ways to participate. Such information can help teachers select materials, adjust questions, provide vocabulary support, and organize reading groups according to demonstrated needs.

The study examine the reading participation and comprehension development of learners at Pilar Elementary School, Schools Division Office of the City of Ilagan. It explore how learners engage in interactive reading experiences and how this engagement is associated with their ability to understand written texts. The study is expected to provide school-based evidence that may guide the selection of reading activities, classroom questioning practices, instructional materials, and learner support strategies. By examining engagement and comprehension together, the research recognizes that reading development involves not only the ability to pronounce written words but also the willingness and opportunity to question, explain, connect, and construct meaning from what is read.

Literature Review

Interactive Shared Reading

Interactive shared reading allows learners to participate in meaning-making while a teacher or another skilled reader guides them through a text. Participation may include examining illustrations, predicting what may happen, answering questions, clarifying unfamiliar ideas, and relating events to personal experiences. Such activities expose children to words, sentence patterns, and ideas that may be more advanced than those they can process independently. Noble et al. (2019) conducted a meta-analysis on shared book reading and found a positive but modest effect on children's language development. The effect became smaller when shared reading interventions were compared with active control activities, which suggests that reading a book with children does not automatically produce strong language gains. The manner in which the reading activity is conducted remains important.

Classroom Dialogue and Learner Participation

Reading comprehension can become visible through classroom dialogue because learners reveal what they understand when they explain, question, compare, and defend their interpretations. Teacher questions that require only short factual answers may check recall, but they provide limited information about how learners formed their understanding. Howe et al. (2019) examined teacher-student dialogue in 72 classrooms and found that elaborating on previous contributions and questioning earlier responses were positively associated with curriculum mastery when learners participated extensively. Although the participating children were older than Grade 3 learners, the findings show that the value of classroom talk depends on the quality and extent of learner participation. In reading lessons, teachers may apply this principle by asking learners to explain why a character acted in a certain way, identify the part of the passage that supports an answer, or compare different interpretations. Learners should also be given enough time to respond, listen to classmates, revise an earlier answer, and raise

their own questions. These exchanges can help teachers recognize incomplete understanding while guiding learners toward clearer interpretations of the text.

Reading Motivation and Active Engagement

Learners differ in their reasons for reading, and these differences may influence the attention and effort they give to reading tasks. Some children read because they enjoy stories, want to learn something, or feel curious about a topic, while others participate mainly to receive rewards, obtain grades, or avoid correction. Troyer et al. (2019) studied more than 4,000 learners from Grades 3 to 5 across 59 elementary schools and reported positive associations among intrinsic reading motivation, reading amount, and reading comprehension. Extrinsic reading motivation showed negative associations with reading amount and comprehension. The researchers also found that reading amount did not fully explain the relationship between motivation and later comprehension, indicating that the quality of reading experiences and the materials provided should also be considered.

Vocabulary Knowledge and Text Comprehension

Vocabulary knowledge supports comprehension because learners cannot build an accurate understanding of a passage when several important words remain unfamiliar. Directly giving a definition may help a child answer an immediate question, but deeper word learning requires opportunities to examine, discuss, and apply the word within meaningful language. Wright and Cervetti (2017) reviewed 36 vocabulary intervention studies that included comprehension outcomes. Their analysis showed that teaching the meanings of target words generally supported comprehension of texts containing those words. Instruction involving active processing, such as explaining meanings, connecting words with ideas, or applying them during reading, was usually more effective than relying only on dictionary definitions. The review also found limited evidence that teaching individual words or a small number of word-learning strategies produces broad improvement across all comprehension tasks.

METHODS

Research Design

The study employed a prospective repeated-measures prediction design. This nonexperimental design examined whether learners' engagement during interactive reading activities predicted measurable improvement in reading comprehension across the data collection period. Reading comprehension was measured at the beginning and end of the study, while interactive reading engagement was observed during regular classroom reading sessions. No teaching condition was assigned, and the researcher did not alter the prescribed reading instruction of the class. The design was selected because it established the temporal order between engagement and subsequent comprehension performance while allowing the learners to remain in their normal learning environment. It also provided a stronger basis for examining comprehension development than a one-time survey or a purely descriptive correlational design.

Research Locale

The study was conducted at Pilar Elementary School, located in Purok 3, Barangay Pilar, City of Ilagan, Isabela, under the Schools Division Office of the City of Ilagan. The school was selected because it offered Grade 3 classes in which reading instruction formed a regular part of the English learning program. The locale allowed the researcher to observe interactive reading behaviors as they occurred during actual classroom lessons. Permission to conduct the study was obtained from the appropriate school and division authorities before any participant recruitment or instrument administration took place.

Participants and Sampling Technique

The participants consisted of eligible Grade 3 learners enrolled at Pilar Elementary School during the period of data collection. A criterion-based complete enumeration technique was used, through which all learners who satisfied the inclusion conditions were invited to participate. Eligibility required official enrollment in Grade 3, regular participation in classroom reading activities, submission of written parental or guardian consent, provision of child assent, and completion of the required comprehension assessments and engagement observations. Learners who did not obtain parental permission, declined to participate, or had substantially incomplete records been not included in the final analysis. No personal profile variables were collected because the investigation focused only on interactive reading engagement and comprehension development.

Research Instrument

Data were gathered using the Interactive Reading Engagement and Comprehension Battery developed for the study. The first component was an observation rubric that measured learners' participation during interactive reading sessions. It covered sustained attention, contribution to reading discussions, use of textual evidence, response to questions, interaction with classmates, and persistence when a passage became difficult. Each indicator was rated using a four-point behaviorally anchored scale. The descriptors specified observable learner behaviors to reduce dependence on general impressions and promote consistency in scoring.

The second component consisted of parallel Grade 3 reading comprehension tests. Form A was administered at the beginning of the study, while Form B was administered at the end. Each form contained age-appropriate narrative and informational passages followed by questions on explicit details, sequence, main idea, vocabulary in use, cause and effect, inference, and interpretation. The test items were aligned with the prescribed Grade 3 reading competencies. Parallel forms were used to reduce recall effects and ensure that the endline scores reflected comprehension performance rather than familiarity with the initial questions.

A panel composed of specialists in elementary reading instruction, educational measurement, and Grade 3 teaching evaluated the instruments for clarity, developmental suitability, curriculum alignment, relevance, and adequacy of content coverage. The Interactive Reading Engagement Observation Rubric obtained a scale-level content validity index based on the average method of $S-CVI/Ave = .95$, while the parallel comprehension tests obtained an $S-CVI/Ave = .96$. These values indicated excellent agreement among the validators regarding the relevance and suitability of the items. Indicators that received comments concerning wording, reading difficulty, or overlap were revised before pilot administration. Content validation combined expert judgment with quantitative item evaluation, as recommended by Boateng et al. (2018).

The revised instruments were pilot-tested among Grade 3 learners from a comparable public elementary school that was not included in the main investigation. The pilot administration assessed the clarity of directions, suitability of the passages, completion time, item difficulty, item discrimination, response consistency, and feasibility of classroom administration. The Interactive Reading Engagement Observation Rubric obtained a Cronbach's alpha coefficient of $\alpha = .92$, indicating excellent internal consistency. McDonald's omega was also calculated and produced a coefficient of $\omega = .93$, providing additional evidence that the engagement indicators consistently measured the same construct. The close values of alpha and omega indicated that the reliability estimate was stable across the two procedures.

The parallel reading comprehension tests obtained a Kuder-Richardson Formula 20 coefficient of $KR-20 = .89$, which indicated good internal consistency for dichotomously scored items. Item difficulty indices ranged from .38 to .79, showing that the test contained questions with appropriate levels of difficulty for Grade 3 learners. Item discrimination indices ranged from .31 to .67, indicating that the retained items adequately distinguished learners with stronger comprehension performance from those who required further reading support. Questions with weak discrimination, unclear distractors, or excessive difficulty were revised or removed before the instruments were finalized.

Selected engagement observations were independently scored by a second trained evaluator to determine the consistency of ratings across observers. The analysis produced an intraclass correlation coefficient of $ICC = .91$, indicating excellent interrater agreement. This result showed that the behavioral descriptors were sufficiently

clear for different observers to assign comparable ratings. The final Interactive Reading Engagement and Comprehension Battery retained only the indicators and test items that demonstrated acceptable content validity, internal consistency, item performance, interrater reliability, and practical suitability for Grade 3 learners.

Data Gathering

The researcher first secured approval from the authorized education officials and the school head. After approval was granted, the parents or guardians received an information sheet describing the purpose of the study, the activities expected from the learners, the voluntary nature of participation, the measures used to protect privacy, and the right to withdraw. The study was explained to the learners through simple and age-appropriate language before their assent was obtained.

The baseline reading comprehension test was administered under uniform classroom conditions. The researcher read the directions aloud, answered questions about the procedure without explaining the test answers, and ensured that learners completed the assessment independently. The answer sheets were collected immediately and were marked using a scoring guide prepared before the administration.

Interactive reading engagement was then observed across several regular reading sessions. The observations covered activities such as guided reading, shared reading, text-based questioning, prediction, partner discussion, retelling, and explanation of answers. The researcher used the same behavioral descriptors during every observation. Observation dates were distributed across the data collection period so that the engagement score did not depend on a single lesson or temporary classroom condition. The ratings obtained across sessions were averaged to form each learner's engagement score.

The second observer independently rated selected sessions without consulting the researcher's scores. The two sets of ratings were compared only after the observation records had been completed. Differences in scoring were examined to identify unclear descriptors, but original ratings were not changed merely to produce closer agreement.

At the end of the observation period, the parallel reading comprehension test was administered using the same general conditions applied during the baseline assessment. The completed instruments were checked for missing responses and scoring errors. Data were entered into a password-protected file through double-entry verification. Each learner was represented by a study code rather than a name. The coded baseline score, endline score, engagement rating, and observation records were matched before the statistical analysis was performed.

Data Analysis

The analysis began with an examination of missing values, scoring consistency, unusual observations, and the distribution of the study variables. Medians and interquartile ranges were used to summarize engagement and comprehension scores because these statistics were less affected by extreme values than means and standard deviations. Score distributions and confidence intervals were also examined before inferential procedures were conducted.

Comprehension development was represented by the change between baseline and endline performance. However, a simple difference score was not used as the principal outcome because it could be influenced by the learner's starting score. Endline comprehension was therefore analyzed while baseline comprehension was statistically controlled. This approach determined whether interactive reading engagement explained endline performance beyond what could already be expected from the initial assessment.

Kendall's tau-b was used to examine the preliminary association between interactive reading engagement and comprehension because it accommodated tied scores and did not require normally distributed variables. The main analysis used median quantile regression, with endline comprehension as the criterion variable and interactive reading engagement as the principal predictor. Baseline comprehension was entered as a control variable. Median regression estimated the relationship at the middle of the comprehension distribution and reduced the influence of extreme scores and unequal error variance. Quantile regression was selected because it examined conditional portions of an outcome distribution without relying solely on the conditional mean (Koenker et al., 2017).

Bias-corrected bootstrap confidence intervals based on 5,000 resamples were generated for the regression coefficients. The unstandardized coefficient, bootstrap standard error, 95 percent confidence interval, and probability value were reported. Statistical significance was evaluated at the .05 level, but interpretation did not depend on the probability value alone. The direction, magnitude, and confidence interval of the engagement coefficient were considered when determining whether interactive reading engagement predicted comprehension development. The analysis also reported the pseudo coefficient of determination to indicate how much variation in the conditional median of endline comprehension was accounted for by the model.

Ethical Consideration

The study protected the dignity, safety, privacy, and voluntary participation of the Grade 3 learners. Written informed consent was obtained from parents or legal guardians, while assent was obtained directly from the children. The learners were informed that joining the study was optional, that they could stop at any point, and that their decision would not affect their grades, class standing, access to learning materials, or relationship with their teacher.

The reading activities and assessments presented no greater risk than ordinary classroom reading tasks. Learners were not embarrassed, publicly ranked, labeled as poor readers, or required to disclose personal information. Assessment results were not announced to the class or used as academic grades. When a learner experienced discomfort or fatigue, the activity was paused or discontinued without penalty. Ethical procedures reflected the principles of voluntary participation, protection from harm, privacy, and respect for children's rights in educational research (British Educational Research Association, 2024).

Names were excluded from the analytical dataset. Codes were used on answer sheets, observation forms, and electronic records. The code list was stored separately from the research data, and access was restricted to the researcher. Electronic files were protected through passwords and secure storage, while printed materials were kept in a locked location. Results were presented only in summarized form so that no individual learner could be identified. These measures were consistent with the privacy and data security principles of Republic Act No. 10173, or the Data Privacy Act of 2012.

The researcher also managed the possible conflict created by conducting research within a school setting. Participation was not requested in a manner that placed pressure on learners or parents. Any classroom teacher who assisted with scheduling was not informed about individual responses. The researcher reported the findings honestly, retained results that did not support the expected relationship, and avoided changing scores, removing valid cases, or selecting analyses merely to obtain statistical significance.

RESULTS AND DISCUSSION

Table 1. Observed Interactive Reading Engagement of Grade 3 Learners

Engagement Indicator	Median Interquartile Range		Descriptive Interpretation
Sustained attention during reading	3.00	1.00	Consistently demonstrated
Participation in reading discussions	3.00	1.00	Consistently demonstrated
Responses to teacher questions	3.00	1.00	Consistently demonstrated
Interaction with classmates	3.00	1.00	Consistently demonstrated
Persistence with difficult passages	2.50	1.00	Developing
Use of textual evidence	2.00	1.00	Developing
Explanation of interpretations	2.00	1.00	Developing
Overall interactive reading engagement	2.75	0.75	Developing toward consistent engagement

The overall median of 2.75 showed that the learners generally participated in interactive reading activities, although their engagement was not consistently strong across all observed behaviors. The learners

showed better engagement in visible classroom actions, such as paying attention, joining discussions, responding to questions, and interacting with classmates. These behaviors suggested that the reading activities were able to attract participation and maintain classroom involvement.

The lowest medians were obtained for the use of textual evidence and the explanation of interpretations. Many learners attempted to answer questions but did not consistently identify the sentence, event, or detail that supported their response. Some responses were brief, based on personal opinion, or disconnected from the passage. This pattern indicated that verbal participation did not always represent deeper engagement with the meaning of the text. Learners appeared more comfortable answering what happened than explaining why it happened or how they arrived at an interpretation.

The result suggested that interactive reading engagement among the learners remained uneven. Participation was evident, but analytical engagement required further development. Howe et al. (2019) explained that classroom dialogue became more valuable when learners elaborated on ideas, questioned earlier contributions, and actively participated in the exchange. The findings supported the need for reading discussions that moved beyond recitation and encouraged learners to justify their answers using information from the passage.

Table 2. *Baseline and Endline Reading Comprehension Performance*

Comprehension Area	Baseline Median	Baseline IQR	Endline Median	Endline IQR	Median Change
Explicit details	4.00	2.00	5.00	1.00	1.00
Sequence of events or ideas	3.00	1.00	4.00	1.00	1.00
Main idea	2.00	1.00	3.00	1.00	1.00
Vocabulary in use	2.00	2.00	3.00	1.00	1.00
Cause and effect	2.00	1.00	3.00	1.00	1.00
Inference	2.00	2.00	2.00	2.00	0.00
Interpretation	2.00	1.00	2.00	2.00	0.00
Overall comprehension score	18.00	6.00	22.00	5.00	4.00

The overall median comprehension score increased from 18.00 at baseline to 22.00 at endline. The median increase of four points indicated that comprehension performance improved during the period in which the learners participated in interactive reading activities. The narrower interquartile range at endline also suggested that the scores became slightly less dispersed. However, the remaining spread showed that learners did not improve at the same rate.

The clearest gains were observed in explicit details, sequencing, main idea, vocabulary in use, and cause-and-effect relationships. These areas were frequently practiced through prediction, guided questioning, retelling, and partner discussion. Learners appeared to benefit when they were asked to locate information, arrange events, explain word meanings, and connect actions with consequences.

No median improvement was observed in inference and interpretation. These areas remained the most difficult components of comprehension. Some learners identified details correctly but struggled to combine those details to form an unstated conclusion. Others repeated information from the passage without explaining the motives, messages, or implications conveyed by the text. The findings showed that the overall increase in comprehension did not mean that all comprehension skills had reached a satisfactory level.

The difficulty in vocabulary, inference, and interpretation was consistent with the principle that comprehension required more than word recognition and literal recall. Wright and Cervetti (2017) found that vocabulary instruction was more useful when learners actively processed word meanings and applied them to the text being read. The results indicated that Grade 3 learners needed continued support in using word knowledge and textual clues to construct meanings that were not directly stated.

Table 3. *Kendall's Tau-b Associations Among the Study Variables*

Variable Pair	Kendall's Tau-b	Probability Value	Interpretation
Interactive reading engagement and baseline comprehension	.24	.018	Weak positive association
Interactive reading engagement and endline comprehension	.46	< .001	Moderate positive association
Interactive reading engagement and comprehension change	.38	.002	Moderate positive association
Baseline comprehension and endline comprehension	.51	< .001	Moderate positive association

Interactive reading engagement had a moderate positive association with endline comprehension, $\tau_b = .46$, $p < .001$. Learners who consistently attended to the text, participated in discussions, responded to questions, persisted with difficult passages, and explained their ideas tended to obtain higher comprehension scores at the end of the study.

Engagement was also positively associated with comprehension change, $\tau_b = .38$, $p = .002$. This result indicated that learners with stronger engagement generally showed greater improvement from baseline to endline. The association was meaningful but not strong enough to suggest that engagement alone determined comprehension development. Differences in decoding ability, vocabulary knowledge, prior knowledge, attendance, language experience, and independent reading practice could also have contributed to the variation in performance.

The weaker association between engagement and baseline comprehension, $\tau_b = .24$, $p = .018$, showed that learners with stronger initial comprehension tended to participate somewhat more actively. Better readers may have found it easier to answer questions and explain ideas because they already possessed the skills needed to understand the passage. This possibility supported the decision to control baseline comprehension in the predictive analysis.

The moderate relationship between engagement and endline comprehension supported the findings of Troyer et al. (2019), who reported positive associations among intrinsic reading motivation, reading amount, and comprehension. The present pattern further suggested that engagement should not be treated only as visible participation. The behaviors most closely connected with comprehension involved sustained attention, persistence, interpretation, and the use of textual evidence.

Table 4. *Median Quantile Regression Predicting Endline Reading Comprehension*

Predictor	Regression Coefficient	Bootstrap Standard Error	95% Bootstrap Confidence Interval	Probability Value
Constant	4.18	1.72	0.84 to 7.61	.015
Baseline comprehension score	0.58	0.09	0.41 to 0.75	< .001
Interactive reading engagement	2.36	0.61	1.19 to 3.58	< .001

Model pseudo $R^2 = .44$

The regression model produced a pseudo coefficient of determination of .44. This result indicated that baseline comprehension and interactive reading engagement jointly accounted for a substantial portion of the variation in the conditional median of endline comprehension. The remaining variation suggested that other learner, instructional, and environmental factors also influenced reading performance.

Baseline comprehension significantly predicted endline comprehension, $B = 0.58$, 95% bootstrap CI [0.41, 0.75], $p < .001$. For every one-point increase in baseline comprehension, the median endline score increased by approximately 0.58 point when engagement was held constant. Learners who began with stronger comprehension generally continued to perform better at endline. The coefficient below one indicated that initial differences were not reproduced at exactly the same magnitude, which was consistent with the slight reduction in score dispersion shown in Table 2.

Interactive reading engagement remained a significant predictor after baseline performance was controlled, $B = 2.36$, 95% bootstrap CI [1.19, 3.58], $p < .001$. A one-unit increase in the four-point engagement rating was associated with an estimated 2.36-point increase in the median endline comprehension score. The confidence interval did not include zero, which strengthened the evidence that engagement contributed independently to comprehension performance.

The regression result was educationally important because it showed that learners' initial reading ability did not fully explain their later performance. Learners who became more involved in discussing, questioning, explaining, and revisiting the text tended to achieve stronger endline comprehension scores even when differences in starting ability were considered. Interactive engagement therefore appeared to provide a meaningful instructional pathway through which learners could strengthen comprehension.

The result did not establish that engagement directly caused the improvement because the study did not randomly assign learners to instructional conditions. The predictive relationship may also have operated in both directions. Learners who understood the text more easily may have participated more actively, while active participation may have helped them understand the text more fully. Even with this limitation, the temporal arrangement of baseline testing, repeated engagement observations, and endline assessment provided stronger evidence than a single administration of both variables.

Table 5. *Summary of the Major Findings*

Study Target	Major Result	Statistical Evidence	Decision
Determine the level of interactive reading engagement	Engagement was developing toward consistent participation, but textual evidence and interpretation remained weak	Overall median = 2.75; IQR = 0.75	Further instructional support was needed
Determine comprehension development	Overall comprehension improved, but inference and interpretation showed no median gain	Baseline median = 18.00; endline median = 22.00; median change = 4.00	Improvement was evident but incomplete
Examine the association between engagement and endline comprehension	A moderate positive association was found	$r_b = .46$; $p < .001$	Significant association
Examine the association between engagement and comprehension change	More engaged learners generally showed larger gains	$r_b = .38$; $p = .002$	Significant association
Determine whether engagement predicted endline comprehension beyond baseline ability	Engagement remained a significant independent predictor	$B = 2.36$; 95% CI [1.19, 3.58]; $p < .001$	Significant predictive contribution
Evaluate the explanatory strength of the predictive model	Baseline performance and engagement explained a substantial portion of the endline score variation	Pseudo $R^2 = .44$	Model had meaningful explanatory value

The findings collectively showed that interactive reading engagement contributed to comprehension development among Grade 3 learners. The strongest evidence came from the median quantile regression, in which engagement significantly predicted endline comprehension even after the learners' baseline scores were

controlled. This result supported the use of classroom practices that gave learners opportunities to predict, question, discuss, retell, clarify, and explain written texts.

The results also revealed an important instructional problem. Learners participated more readily in activities requiring attention, oral responses, and social interaction than in tasks requiring textual justification, inference, and interpretation. The presence of classroom participation could therefore create an impression of successful engagement even when deeper comprehension remained limited. Teachers needed to distinguish between learners who were merely willing to answer and learners who could explain an answer using appropriate evidence.

The lack of median improvement in inference and interpretation suggested that these skills required more deliberate and sustained instruction. Learners needed modeling of how readers combined details, connected prior information, recognized implied relationships, and checked whether an interpretation was supported by the passage. Think-aloud demonstrations, evidence-based questioning, guided inference charts, and paired explanation activities could address these difficulties.

The improvement in literal and organizational comprehension remained encouraging. Gains in explicit details, sequencing, main idea, vocabulary, and cause and effect showed that structured interaction supported several important reading processes. Capin et al. (2025) observed that comprehension instruction became more productive when teachers used practices that moved learners beyond brief recall responses. The findings reinforced the importance of allowing Grade 3 learners to speak about texts, revise incomplete answers, and explain their reasoning.

Interactive reading engagement should therefore be treated as a structured instructional process rather than a collection of enjoyable activities. Participation needed to remain connected with clear comprehension goals. Questions had to require learners to return to the passage, identify supporting details, explain relationships, and evaluate their own understanding. Through these practices, interaction could become a means of developing comprehension rather than simply increasing classroom activity.

The findings supported the continuation of interactive reading activities at Pilar Elementary School while identifying the need to strengthen the analytical quality of those activities. Particular attention should be given to textual evidence, inference, vocabulary application, and interpretation. Learners who demonstrated low baseline comprehension and inconsistent engagement would benefit from smaller guided-reading groups, additional modeling, repeated exposure to manageable passages, and immediate feedback during discussion.

Overall, the study showed that Grade 3 learners made measurable progress in comprehension, but the progress was neither uniform nor complete. Interactive reading engagement was positively associated with development and remained a significant predictor after initial comprehension was considered. The results justified a reading program that combined active participation with explicit instruction in the more demanding processes of meaning construction.

CONCLUSION

The interactive reading engagement made a meaningful contribution to the comprehension development of Grade 3 learners, as shown by the improvement in overall comprehension scores and the significant predictive effect of engagement after baseline performance was controlled. Learners participated more consistently in activities involving attention, discussion, questioning, and peer interaction, but they continued to experience difficulty in using textual evidence, drawing inferences, and explaining interpretations. These findings indicated that active participation alone did not ensure deeper comprehension unless classroom interaction was supported by explicit guidance in higher-level reading skills. Grade 3 teachers should therefore sustain interactive reading practices while placing greater emphasis on think-aloud modeling, evidence-based questioning, guided inference, vocabulary development, retelling, partner explanation, and small-group reading support. Learners with weak comprehension and inconsistent engagement should be given shorter and appropriately leveled texts, repeated

opportunities to respond, and immediate corrective feedback. School administrators should provide suitable reading materials, assessment resources, and professional development focused on interactive comprehension instruction. Future research should examine additional factors such as decoding ability, reading motivation, attendance, home literacy support, and access to books, and should consider longer intervention periods and comparison groups to determine the sustained effect of interactive reading engagement on comprehension development.

References

- Boateng, G. O., Neilands, T. B., Frongillo, E. A., Melgar-Quinonez, H. R., & Young, S. L. (2018). Best practices for developing and validating scales for health, social, and behavioral research: A primer. *Frontiers in Public Health*, 6, Article 149. doi:10.3389/fpubh.2018.00149.
- British Educational Research Association. (2024). *Ethical guidelines for educational research* (5th ed.). British Educational Research Association.
- Capin, P., Dahl-Leonard, K., Hall, C., Yoon, N. Y., Cho, E., Chatzoglou, E., Reiley, S., Walker, M., Shanahan, E., Andress, T., & Vaughn, S. (2025). Reading comprehension instruction: Evaluating our progress since Durkin's seminal study. *Scientific Studies of Reading*, 29(1), 85–114. doi:10.1080/10888438.2024.2418582.
- Claes, R., Laga, J., Denies, K., Bleukx, N., Dockx, J., Van Keer, H., & Aesaert, K. (2024). The interplay between students' home literacy environment, reading attitudes and comprehension: A serial mediation analysis using PIRLS 2021-data. *Large-Scale Assessments in Education*, 12, Article 43. doi:10.1186/s40536-024-00233-8.
- Department of Education. (2022). *Self-learning module: Quarter 1, English, Grade 3, Modules 1 to 12* [Self-learning module]. DepEd Learning Portal.
- Foorman, B., Beyler, N., Borradaile, K., Coyne, M., Denton, C. A., Dimino, J., Furgeson, J., Hayes, L., Henke, J., Justice, L., Keating, B., Lewis, W., Sattar, S., Streke, A., Wagner, R., & Wissel, S. (2016). *Foundational skills to support reading for understanding in kindergarten through 3rd grade* (NCEE 2016-4008). National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.
- Howe, C., Hennessy, S., Mercer, N., Vrikki, M., & Wheatley, L. (2019). Teacher–student dialogue during classroom teaching: Does it really impact on student outcomes? *Journal of the Learning Sciences*, 28(4–5), 462–512. doi:10.1080/10508406.2019.1573730.
- Koenker, R., Chernozhukov, V., He, X., & Peng, L. (Eds.). (2017). *Handbook of quantile regression*. Chapman and Hall/CRC. doi:10.1201/9781315120256.
- McBreen, M., & Savage, R. (2021). The impact of motivational reading instruction on the reading achievement and motivation of students: A systematic review and meta-analysis. *Educational Psychology Review*, 33(3), 1125–1163. doi:10.1007/s10648-020-09584-4.
- McNeish, D. (2018). Thanks coefficient alpha, we'll take it from here. *Psychological Methods*, 23(3), 412–433. doi:10.1037/met0000144.
- Noble, C., Sala, G., Peter, M., Lingwood, J., Rowland, C. F., Gobet, F., & Pine, J. M. (2019). The impact of shared book reading on children's language skills: A meta-analysis. *Educational Research Review*, 28, Article 100290. doi:10.1016/j.edurev.2019.100290.
- Organisation for Economic Co-operation and Development. (2023). *PISA 2022 results, Volumes I and II: Country notes, Philippines*. OECD Publishing.
- Republic Act No. 10173. (2012). *Data Privacy Act of 2012*. Republic of the Philippines.
- Schiefele, U., Stutz, F., & Schaffner, E. (2016). Longitudinal relations between reading motivation and reading comprehension in the early elementary grades. *Learning and Individual Differences*, 51, 49–58. doi:10.1016/j.lindif.2016.08.031.
- Troyer, M., Kim, J. S., Hale, E., Wantchekon, K. A., & Armstrong, C. (2019). Relations among intrinsic and extrinsic reading motivation, reading amount, and comprehension: A conceptual replication. *Reading and Writing*, 32(5), 1197–1218. doi:10.1007/s11145-018-9907-9.
- van der Sande, L., van Steensel, R., Fikrat-Wevers, S., & Arends, L. (2023). Effectiveness of interventions that foster reading motivation: A meta-analysis. *Educational Psychology Review*, 35, Article 21. doi:10.1007/s10648-023-09719-3.

Wright, T. S., & Cervetti, G. N. (2017). A systematic review of the research on vocabulary instruction that impacts text comprehension. *Reading Research Quarterly*, 52(2), 203–226. doi:10.1002/rrq.163.