

Analysis of reading comprehension skills among elementary school students: What should professional teachers do?

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ABSTRACT

Reading comprehension is a fundamental skill for academic success in elementary school, yet many students continue to struggle to understand text content, particularly at the fourth-grade level. While prior studies have examined reading comprehension broadly across elementary grades, few have combined test, observation, and interview data to build a context-specific profile of a single fourth-grade cohort. This study addresses that gap by analyzing the reading comprehension skills of fourth-grade students at SDN 106 Palembang, a public elementary school in Palembang, South Sumatra, Indonesia, and identifying the factors associated with their performance. Using a qualitative descriptive design supported by a reading comprehension test, data were collected from 30 fourth-grade students through tests, classroom observations, and teacher interviews. The findings show that students' reading comprehension remains at a moderate-to-low level: many students had difficulty identifying main ideas, summarizing or drawing conclusions from text, and interpreting implied meaning, and a majority showed low engagement during reading activities. These difficulties appear to be associated with internal factors (limited reading interest, motivation, and vocabulary) and external factors (limited variety in teaching methods and learning media). The study contributes context-specific, triangulated evidence on fourth-grade reading comprehension and highlights the need for elementary teachers to implement more interactive, varied, and media-supported reading instruction to strengthen students' comprehension skills and engagement.

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1. Introduction

Reading comprehension is one of the essential skills that elementary school students must acquire, as it extends beyond recognizing letters to understanding the meaning conveyed within a text (Torppa et al., 2020). This skill serves as a crucial foundation for students' success across school subjects. However, many students are not yet able to fully comprehend the content of what they read, particularly in identifying the main idea, concluding, and understanding implied information (Nouwens et al., 2021).

Various studies indicate that this low level of reading comprehension is influenced by both internal and external factors. Internally, low reading interest, limited learning motivation, and restricted vocabulary mastery are frequently cited as primary causes (Capin et al., 2021). Externally,

a lack of variety in teaching methods, limited learning resources, and a suboptimal instructional role of teachers also contribute to students' low reading proficiency.

Recent studies point to several strategies for improving reading comprehension instruction. The use of digital comics and the Cooperative Integrated Reading and Composition (CIRC) model have both been shown to enhance students' comprehension. School literacy programs and thematic teaching materials have likewise been reported to support improvement in students' reading comprehension (Gernsbacher, 2024). Collectively, these findings suggest that reading comprehension is shaped not only by individual student characteristics but also by the quality of instruction and the surrounding literacy environment (Rankohi et al., 2024).

Despite this growing body of research, most existing studies examine reading comprehension broadly across elementary grade levels, or rely on a single data source such as test scores alone. Few studies integrate test, observation, and interview data to construct a more comprehensive, context-specific picture of reading comprehension among a defined cohort of students, such as fourth-graders in a particular school setting (Hall et al., 2020). This gap limits the extent to which findings can inform targeted, classroom-level interventions (Butcher, 2024).

This study addresses this gap by analyzing the reading comprehension skills of fourth-grade students at SDN 106 Palembang and identifying the internal and external factors that influence their performance, drawing on triangulated evidence from tests, observations, and interviews. Reading comprehension is one of the fundamental literacy skills that elementary school students need to master because it enables them to understand, interpret, and use information obtained from written texts (Kendeou et al., 2020). Reading is not merely the ability to recognize letters or words but also involves constructing meaning, identifying main ideas, drawing conclusions, and interpreting implicit information contained in a text. These skills are essential because they influence students' academic achievement across various subjects (Mccarthy & Mcnamara, 2021).

Reading comprehension is broadly defined as the process of constructing meaning from written text by connecting textual information with the reader's prior knowledge. The construction-integration model describes comprehension as occurring across three levels: the surface form of the text, the textbase (its explicit propositional content), and the situation model (an integrated mental representation formed by combining textual information with background knowledge and inference) (Hattan et al., 2026). Difficulties tend to increase from the textbase level toward the situation-model level, since the latter requires readers to go beyond what is explicitly stated (Duke et al., 2021).

Within this framework, reading comprehension skills can be assessed through several main indicators, namely: (a) identifying the main idea of a text, (b) summarizing the content of the reading, (c) drawing conclusions based on the information obtained, (d) understanding implied information that is not conveyed directly, and (e) answering questions that require interpretation skills, not just memorizing information. These five indicators reflect the ability of students to understand the text comprehensively, process the available information, and connect various pieces of information to obtain deeper meaning. These indicators then become the basis for compiling reading comprehension ability tests and are used as analysis categories to interpret data obtained through tests, observations, and interviews in this study.

2. Method

2.1. Research design

This study uses a qualitative descriptive approach, supplemented by a quantitative reading comprehension test used to describe rather than statistically infer students' comprehension performance (Jalil et al., 2024). Test results are reported as descriptive percentages and triangulated with observation and interview data to provide an in-depth, context-based picture of students' reading comprehension skills. This design was chosen because it allows the study to capture not only how many students struggle with reading comprehension, but also the classroom conditions and behavioral patterns that may help explain why, which a test score alone cannot reveal (Mccarthy & Mcnamara, 2021). Thus, this approach provides a more comprehensive picture of students' reading comprehension abilities within real-world learning contexts, including the types of difficulties and behavioral patterns that emerge during the reading process.

2.2. Participants

This study was conducted at SDN 106 Palembang with 30 fourth-grade students as participants. The participants were selected using purposive sampling because fourth grade represents a transitional stage from learning to read to reading to learn. This stage was considered critical for identifying reading comprehension difficulties and aligned with the study's objective of examining fourth-grade students' reading comprehension.

2.3. Data collection tools

Data were collected using three complementary instruments: a reading comprehension test, classroom observation, and semi-structured interviews. The test was used to measure students' proficiency in identifying main ideas, summarizing content, drawing conclusions, and interpreting implied meaning (Marsh et al., 2024). Observations and interviews were conducted to gather in-depth information about the classroom learning process and the factors influencing students' reading comprehension. Documentation was additionally used to support and corroborate the findings.

2.4. Research procedures

Data collection proceeded in three stages. First, the reading comprehension test was administered to all 30 participants. Second, classroom observations were conducted during reading instruction to record students' engagement and behavior. Third, semi-structured interviews were conducted with the classroom teacher to gain further insight into the factors underlying students' performance.

2.5. Data analysis techniques

Data were analyzed using the interactive model of data reduction, data display, and conclusion drawing/verification (Zammiti et al., 2021). Data obtained from the test, observations, interviews, and documentation were triangulated to examine whether findings converged across sources, thereby strengthening the credibility of the conclusions. This process enabled the researcher to identify consistent patterns across the different data sources and to develop a more comprehensive understanding of students' reading comprehension difficulties.

3. Results and Discussion

This section begins by examining the quantitative results of students' reading comprehension across five key indicators, as presented in Table 1. The findings are then explored further through classroom observations to identify patterns of students' comprehension difficulties and learning behaviors. Finally, interview findings are examined to provide deeper insights into the factors underlying the quantitative results.

Table 1. Summary of students' reading comprehension test results

Indicator	% of students with difficulty
Identifying the main idea	43%
Summarizing content / drawing conclusions	53%
Understanding implied meaning	60%
Answering questions requiring interpretation (only able to answer simple/literal questions)	47%
Low engagement in reading activities	57%

Observations indicated that student engagement during reading activities was generally low: students were often passive, easily lost focus during longer texts, and interacted minimally with reading materials. Interview data with the classroom teacher corroborated these observations, indicating that students' interest in reading remained low and that independent reading habits had not yet been well established. Test results further indicated that most students found it easier to comprehend information stated explicitly than information requiring inference, and while many could answer simple, literal questions, fewer could answer questions requiring interpretation or synthesis (Alqahtani, 2026; Strijker et al., 2020).

The findings indicate that fourth-grade students at SDN 106 Palembang have not yet developed reading comprehension skills that meet grade-level expectations, particularly for tasks

requiring inference and synthesis rather than literal recall. This pattern is consistent with the construction-integration model (Butcher, 2024; Nik Takhsami et al., 2023; Zhang et al., 2023). The model suggests that comprehension at the situation-model level, which requires readers to integrate textual information with prior knowledge, is more demanding than comprehension at the textbase level.

Several internal and external factors appear to be associated with these difficulties. Internally, students' low reading interest, limited motivation, and restricted vocabulary likely constrain their capacity to engage with more complex textual demands, consistent with prior findings. Externally, the limited variety of teaching methods and the underuse of engaging learning media may reduce opportunities for students to practice inferential and interpretive reading skills, echoing earlier research on the instructional determinants of reading comprehension (Chang-Arana et al., 2020; Lin et al., 2025; Setiyadi et al., 2025).

Compared with prior studies, the present findings both confirm and extend existing evidence. Consistent with previous research, this study found that elementary students' reading comprehension tends to fall within the moderate-to-low range. However, the present study provides a more detailed account by focusing specifically on fourth-grade students at a single elementary school. The triangulation of test, observation, interview, and previous studies data enabled the study to identify which reading comprehension indicators posed the greatest difficulties for students (Hackemann, 2022; Lai et al., 2025). Furthermore, the findings illustrate how these difficulties were manifested behaviorally during classroom reading activities (Fan et al., 2026; Coşkun & Göktaş, 2026).

These findings have important practical implications for learning, particularly in improving elementary school students' reading comprehension. Consistent with previous research on the use of digital comics and the CIRC model, the results of this study indicate that a more interactive learning approach supported by instructional media can help address gaps in inference skills and increase students' motivation to read (Nada et al., 2024; Reinita & Jannah, 2023). The use of engaging and contextual media can also encourage students to more actively connect information in the text with prior knowledge, thus supporting the formation of deeper understanding. Furthermore, strengthening the literacy environment at the school and classroom level, through the provision of diverse reading materials, ongoing reading activities, and teacher mentoring, can support consistent and sustainable improvement in reading skills.

Although previous research has examined reading comprehension skills in elementary school students in general, this study contributes more specific evidence in the context of one group of fourth-grade students through triangulation of test data, observations, and interviews (Mulyono et al., 2025). This integrated approach allows the study to not only identify the number of students experiencing difficulties on specific comprehension indicators but also describe behavioral patterns that emerge during the classroom learning process (Capin et al., 2022). Furthermore, observation and interview data help uncover various possible learning factors contributing to these difficulties, such as student engagement, learning strategies, and teacher support. Thus, the research findings provide a more concrete and applicable basis for designing classroom-level learning interventions than relying solely on test data.

Taken together, these findings point to several concrete actions professional teachers can take. First, because students struggled most with implied meaning and interpretive questions rather than literal recall, teachers should explicitly teach inferencing, for example, by modeling think-alouds and asking graduated questions that move from literal to interpretive rather than assuming these skills develop on their own. Second, given the internal factors identified (low reading interest, motivation, and vocabulary), teachers can build vocabulary instruction into everyday reading activities and select texts that connect to students' interests to sustain engagement. Third, since low classroom engagement and limited variety in teaching methods were also observed, teachers should diversify instruction with more interactive and media-supported strategies, such as structured cooperative reading activities and visually engaging materials, rather than relying on a single, teacher-centered approach. Finally, teachers are encouraged to routinely check comprehension at the inferential level, not just the literal level, so that difficulties like those found in this study are identified and addressed early rather than only becoming visible in end-of-unit assessments (Lynch et al., 2025).

This study has several limitations that should be considered when interpreting its findings. First, the study was conducted at only one elementary school and involved a relatively small sample of 30 fourth-grade students, which may limit the transferability and generalizability of the findings to students from different schools, regions, or educational contexts. Second, the study focused primarily on identifying and describing students' reading comprehension difficulties rather than examining the effectiveness of specific instructional strategies for addressing those difficulties. In addition, although the study combined quantitative results with observation and interview findings, the scope of the data was limited to a single grade level and educational setting. These limitations suggest that the findings should be interpreted within the specific context of the participating school and students (Jalil & Ramli, 2025).

Future research could extend the present findings by involving students from multiple schools, geographical regions, and grade levels to provide a more comprehensive understanding of reading comprehension difficulties in elementary education. Researchers could also employ mixed-methods or longitudinal designs to examine changes in students' reading comprehension over time and to explore more deeply the factors contributing to comprehension difficulties. The use of validated and piloted reading comprehension instruments would further strengthen the reliability and comparability of findings across different educational contexts. Moreover, future studies could investigate the effectiveness of specific instructional interventions, including digital learning media, cooperative learning models, or other evidence-based approaches, in addressing particular dimensions of reading comprehension. Such research would not only extend the descriptive findings of the present study but also contribute practical evidence for developing more targeted and effective reading instruction in elementary schools.

4. Conclusion

Based on a study of 30 fourth-grade students at SDN 106 Palembang, this study found that students' reading comprehension skills remain at a moderate-to-low level. Specifically, 43% of students had difficulty identifying the main idea, 53% had difficulty summarizing content and/or drawing conclusions, 60% struggled to understand implied meaning, 47% could only answer simple rather than interpretive questions, and 57% demonstrated low engagement in reading activities. These difficulties appear to be associated with internal factors, including low reading interest, limited learning motivation, and restricted vocabulary, as well as external factors, including limited variety in teaching methods, underuse of learning media, and a literacy environment that does not yet fully support students' reading development. As this study is descriptive and does not test causal relationships, these associations should be interpreted as patterns observed in the data rather than confirmed causes. Based on these findings, schools and professional teachers may consider implementing more varied and interactive reading instruction, incorporating engaging learning media, and strengthening literacy culture within the school environment as directions for improving students' reading comprehension.

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