



Improving Early Reading Skills in Elementary Students with Structural Analytic Synthetics Method Based on Flashcards

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Abstract: The low early reading skills of first-grade students at Rangkang 09 Elementary School, Bengkayang Regency, is a problem that requires immediate attention. Students' limited ability to recognize letters, form words, and understand simple texts hinders the development of their basic literacy. This study aims to improve early reading skills through the SAS (Structural Analytic Synthetic) method, which helps students understand both analytically and synthetically word structures. Using the classroom action research model by Kemmis & Taggart, implemented over two cycles, the study involved 30 first-grade students as participants. Data were collected through observations, reading tests, and documentation and analyzed using descriptive quantitative methods to measure changes in student reading ability. The finding shows that there is a significant improvement in student performance after two cycles which suggest that the SAS method is viable for early literacy instruction. Furthermore, the study underscores the role of teacher proficiency in the successful implementation of this method, emphasizing the need for targeted teacher training to maximize educational outcomes. This research contributes to the body of knowledge by highlighting the efficacy of the SAS method in enhancing early reading skills among primary students. These findings provide valuable insights for educators and policymakers to improve literacy rates through evidence-based instructional strategies.

Keywords: structural analytic synthetic, students' early reading skills, flashcards

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Introduction

Spelling and reading are essential language skills that students must master. Reading is defined as the process of perceiving and comprehending the content of written texts, either aloud or silently (Dayu & Setyaningsih, 2022; Kennedy & McLoughlin, 2023; Parker & Pardini, 2023). High reading frequency contributes significantly to the improvement of students' vocabulary. Reading activities involve complex cognitive processes, including organizing thoughts, critical evaluation, integrating information, and problem-solving, which facilitate substantial knowledge transfer for readers. This highlights the critical importance of reading skills, particularly during the early stages of elementary education (Ardhian et al., 2020; Gunawan et al., 2023; Porter et al., 2024). Recognizing letters and reading is a fundamental competency for first-grade students, as letters function as symbols in the language system. Children who recognize letters are more likely to be drawn to written texts in their surroundings, such as store names, street signs, warning boards, brands, picture books, and movie titles (Anggito & Sartono, 2022; Atma et al., 2021).

Reading is an interactive process that enables individuals to interpret and derive meaning from written sentences. This skill plays a crucial role in fostering critical thinking, broadening perspectives, and enriching children's knowledge (Bozgün & Akın-Kösterelioğlu, 2021; Primamukti & Farozin, 2018; Purnasari et al., 2023). Through reading habits, children understand the importance of literacy, supporting their cognitive development from an early age (Alifah et al., 2024; Resti & Wibowo, 2024; Masfufah & Wibowo, 2024). Early reading in elementary school students involves letter recognition,

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word formation, associating sounds with symbols, and initial comprehension of text meaning (Jati & Purwati, 2024; Pramesti & da Ary, 2024; Rahayu & Daud, 2024). This skill trains children to process written text receptively, allowing them to absorb information and acquire new knowledge (Drake & Wash, 2020; Sadewo et al., 2025). For first-grade students, early reading serves as a critical foundation for sharpening thinking skills, deepening understanding, and expanding perspectives, making literacy a fundamental skill to be instilled in primary education (Sari, 2018; Triwahyuningtyas et al., 2022).

Early reading skills serve as a fundamental foundation for students in developing advanced reading abilities, as these skills form the basis for subsequent competencies (Çaliskan & Ulas, 2022; Catts, 2022; Saputro et al., 2024). Without a strong foundation in reading, students will struggle to comprehend texts quickly and effectively. This study highlights the significance of reading and the processes involved in training students in reading skills.

Teachers play a pivotal role in fostering students' reading abilities. As educators, teachers are not only responsible for delivering lessons but also for modeling reading practices. This includes providing appropriate teaching methods and tailoring learning materials to match each student's abilities. Interview results reveal that many first-grade teachers still rely on conventional, less interactive methods, which hinder students' motivation to practice reading skills. This presents a clear gap in current teaching approaches, where the need for more dynamic and engaging reading methods remains unmet.

In this context, the author, with over 10 years of teaching experience at Rangkang 09 Elementary School, recognizes the need to explore methods that can improve students' early reading abilities. The SAS (Structural Analytic Synthetic) method is proposed as an effective alternative to assist students struggling with reading. This method involves introducing complete sentences, which are then analyzed into their basic components, such as words, syllables, and letters, thereby strengthening students' understanding of the relationship between letters and sounds. The novelty of this research lies in the integration of illustrated flashcards as a supporting tool, which enhances the SAS method and provides a more interactive learning experience. By implementing this method, students' reading challenges are expected to be addressed, fostering a more active and effective learning environment. This research will contribute to the existing body of knowledge by offering an innovative approach to early reading instruction, addressing the gaps in current pedagogical practices.

Methods

This study aimed to enhance the early reading skills of first-grade students at Rangkang 09 Elementary School by implementing the SAS method. The research employed a Classroom Action Research (CAR) approach in two cycles. Each cycle consisted of the stages of planning, implementation, observation, and reflection, allowing the researcher to evaluate and improve teaching practices based on the results from the previous cycle (Altrichter et al., 2002). This approach was directly aligned with the research objectives, focusing on iterative improvement of teaching methods to enhance early reading skills. The research subjects comprised 30 students, who were purposively selected based on their initial reading abilities to ensure the findings were relevant to the study group's context.

The research process begins with carefully structured lesson planning, where the researcher designs instructional materials and tools to support the implementation of the SAS method. During the learning sessions, students were systematically introduced to letters, sounds, and word formation using engaging media to enhance participation. Observations were conducted to gather data on student interactions and progress in reading skills, while pre-test and post-test assessments were administered before and after the method's application to measure learning outcomes (Kemmis, 2009).

The data analysis approach combined quantitative and qualitative approaches (Kemmis et al., 2014). Quantitative data were derived from reading test results, which indicate improvements in students' reading abilities. Qualitative analysis included observation notes and interviews to evaluate students' motivation and perceptions of the learning process. Success criteria were established based on significant improvements in reading test scores and increased student motivation and engagement during the lessons. This study is expected to contribute significantly to developing more effective reading instruction methods for elementary school students.

Results and Discussion

Results

Description of Initial Diagnostic Results Before Action

In the early phase of the study, it was identified that student participation in the early reading learning process in the first grade at Rangkang 09 Elementary was very low. Observations indicated that students tended to be passive and less engaged in learning activities, leading to low motivation to learn reading. This low level of participation directly affected their ability to understand and apply reading skills and indicated that the current teaching approach was ineffective in capturing students' attention and increasing their active involvement in the reading process.

The diagnostic results showed that the reading instruction provided by the teacher still relied on conventional methods, which were often lecture-based and involved reading together without variation or interaction that could support active learning. This monotonous approach hindered the creation of an engaging learning experience and reduced its effectiveness in developing early reading skills in first-grade students. Additionally, this situation was exacerbated by the limited learning resources available at Rangkang 09 Elementary School, located in the Indonesia-Malaysia border area, where educational resources are restricted. These limitations included a lack of appropriate reading books, visual learning media, and teaching aids, which in turn limited the teacher's efforts to create varied and engaging learning experiences, thus affecting students' learning outcomes in mastering early reading skills.

Description of Cycle 1 Action Implementation

Before implementing the first cycle action, the researcher conducted a pre-cycle test to understand the first-grade students' early reading abilities at Rangkang 09 Elementary School. The test was designed to identify the students' participation levels and basic reading skills, revealing that most students had difficulties recognizing letters and syllables and displaying low enthusiasm for the learning activities. These findings were crucial in planning appropriate interventions for the subsequent cycle. Following the pre-cycle test, the researcher collaborated with the first-grade teacher to discuss the primary issues faced in reading instruction. The discussion led to a consensus that the conventional methods currently in use were ineffective in increasing students' interest and active involvement. As a result, the researcher and teacher planned the application of the SAS method for Cycle 1, expecting it to provide a more structured and engaging approach to learning. The planning phase aimed to outline the steps for the action implementation, focusing on improving students' reading and storytelling skills. Emphasis was placed on letter recognition, syllable reading, and increasing student participation. With careful preparation, the goal was for classroom activities to become more varied and interactive, supporting the enhancement of students' reading abilities despite the limited learning resources available in the Indonesia-Malaysia border region.

The research planning discussed between the researcher and the collaborating teacher in Cycle 1 includes systematic and structured steps. First, the researcher and the teacher collaborated in discussing the issues arising from the use of Picture Cards as a teaching medium, to identify a more effective approach to improving students' early reading skills in the first grade at Rangkang 09 Elementary School. This discussion aimed to reach a mutual understanding regarding the strategies to be applied. Next, the research schedule was designed with a frequency of two meetings per week, on Mondays and Wednesdays, from 08:00 to 09:10. This schedule was intended to ensure that students received adequate exposure to the reading and storytelling activities during the learning process.

In the next planning phase, the researcher and the teacher formulated the use of Picture Cards as a tool to improve the students' early reading skills. The learning materials were prepared, including reading sheets and storytelling content that were relevant and tailored to the needs of first-grade students. These materials aimed to develop fundamental reading skills. The teaching module was designed based on the principles of the Merdeka Curriculum, with the topic "Recognizing Letters, Syllables, and Simple Sentences," covering elements of the Indonesian language. The Independent Curriculum is the newest curriculum implemented in Indonesia and brings new components and objectives (Mustadi, Wibowo, Zubaidah, et al., 2024); Wibowo & Sujarwo, 2022; Wibowo et al., 2022). The steps in the module were designed to encourage group work among students, with activities involving the use of Picture Cards (Liswantiani et al., 2024; Wibowo et al., 2024; Anriana et al., 2024). Additionally, research instruments were prepared, including observation sheets, early reading assessment sheets, field notes, and

documentation tools, all of which were to be used to systematically monitor and evaluate the development of students' early reading abilities.

The implementation of Cycle I includes several stages: the execution of Pre-Test I, Learning Activity 1, Learning Activity 2, and the execution of Post-Test I. The results of the pre-test in Cycle I are shown in Figure 1.

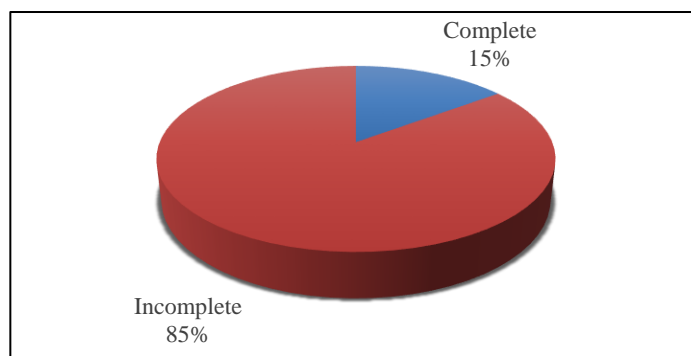


Figure 1. The Results of the Pre-test in Cycle I

Figure 1 illustrates the pre-test results of the students in Cycle I, showing that the average percentage is below the minimum completeness threshold. This finding indicates that the students are still facing difficulties in developing their reading skills at the beginning. Therefore, follow-up action is required through the implementation of learning using the SAS method, supported by picture card media.

In the first learning activity, students were directed to recognize and name the letters of the alphabet from A to Z, including both uppercase and lowercase letters. The activity began with a sequential introduction to the letters, accompanied by visual representations of each letter's uppercase and lowercase forms, aiming to help students memorize the shapes and sounds of the letters. After the introduction, students were invited to take turns naming the letters to practice correct pronunciation and reinforce their memory. This lesson utilized engaging methods, such as the use of picture cards or other visual aids, allowing students to associate the visual and phonetic aspects of the letters being taught. Additionally, the role of vowel letters in the formation of syllables and words was emphasized. The teacher provided simple examples of words containing vowels and demonstrated how omitting vowels affected pronunciation. Through prompting questions, students were encouraged to think critically about the importance of vowels, such as by questioning the consequences of speaking without vowels. At the end of the activity, students continued by writing and observing the forms of both vowel and consonant letters, reinforcing their skills in recognizing and writing the alphabet accurately.

The learning objectives for introducing syllables are designed to equip students with the basic ability to identify and pronounce simple syllables consisting of two or three letters, such as "ba," "ca," and "da." This understanding not only helps students recognize sounds but also enables them to distinguish between various syllabic sounds. Introducing syllables with the C-V (consonant-vowel) pattern, such as "ba," "bu," "ka," and "me," is a crucial step in the reading process, as these syllables serve as fundamental sound units in word formation. Mastering this syllabic concept lays a solid foundation for students to grasp more complex words, enabling them to gradually develop their reading skills. By recognizing that words following the C-V-C-V (consonant-vowel-consonant-vowel) pattern, such as "baju," "kuda," and "meja," are built from a combination of C-V syllables, students can more easily recognize and read longer words. Prompting questions such as "What syllable is formed by combining the letters 'B' and 'A'?" or "Can you find an object around you whose name consists of a C-V syllable?" aim to encourage students to think critically and connect their learning to their surroundings. Through the combination of two syllables, like "ba" and "ju," students will understand how syllabic combinations form new words, thus improving their reading ability and understanding of the meaning of words in everyday life contexts.

The implementation of Post-Test I aims to evaluate the achievement of the learning objectives set in Cycle I and measure the improvement in students' early reading skills after they have undergone the intervention carried out during the cycle. The results of Post-Test I can be seen in Figure 2.

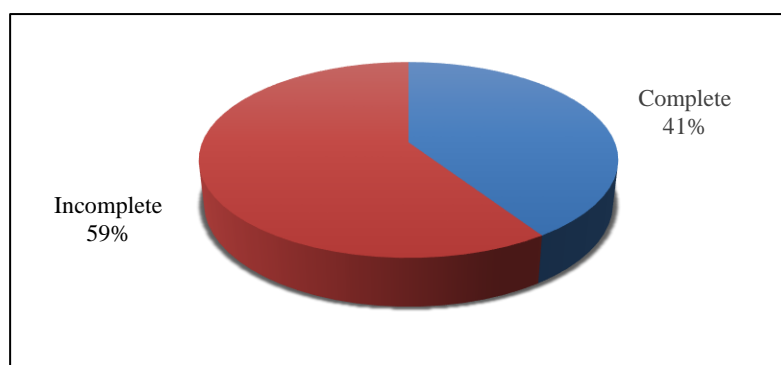


Figure 2. The Results of Post-test I

The observations conducted by the observer, based on the observation sheets used to evaluate the achievement of learning outcomes, show that in Learning Activity I, the teacher's involvement was recorded at 78.95%, while student involvement reached 73.68%. In Learning Activity II, there was a significant increase in teacher involvement, which reached 89.47%, followed by a rise in student involvement to 76.32%. Thus, the average teacher involvement throughout Cycle I was 84.21%, while the average student involvement was 76.32%. Overall, the average learning achievement in Cycle I reached 80.26%, indicating the effectiveness of the implemented teaching method.

An improvement in early reading skills among students was observed in Cycle I, although the results achieved did not meet the minimum completion criteria. Based on reflections on the actions taken during this cycle, several important aspects need to be addressed for future improvement. First, although there is an indication of improvement in early reading skills, the observations show that the achievement is still below the minimum standard. This indicates that students still require additional support in the learning process. Therefore, it is essential to plan more effective actions for Cycle II to ensure more significant development in their reading skills.

Furthermore, the teacher did not fully maximize the use of picture cards during the lesson. Although these media were designed to enhance student engagement and interest, the lack of optimal utilization of these materials negatively affected student participation in the learning process (Istiqomah & Wibowo, 2024); (Elindasari et al., 2024); (Mustadi, Wibowo, & Prehadini, 2024). In addition, observations also showed that student participation remained relatively low, indicating that the current teaching method has not fully motivated students to engage actively. Therefore, further efforts need to be made to stimulate motivation and increase student involvement in the upcoming learning cycle.

Description of Cycle 1 Action Implementation

The action planning process for Cycle 2 integrates various aspects identified from the reflections in Cycle 1. This stage aims to facilitate the preparation for the next learning activities so that both the researcher and the teacher are better equipped to implement the actions in Cycle 2. The primary focus of this stage is to enhance the teacher's understanding of how to implement the picture card media effectively, with the hope that the use of this learning tool can be maximized. Additionally, the lesson planning aims to increase active student participation, which is expected to improve early reading skills in line with the established targets.

The implementation phase of Cycle 2 includes several aspects, such as conducting pre-test II, Learning Activity 3, Learning Activity 4, and administering post-test II. The pre-test II is designed to assess the students' initial abilities related to the material to be learned, providing a clear picture of their readiness level. The results of pre-test II will be presented in Figure 3, which will help further evaluate and analyse the development of students' reading abilities in this cycle.

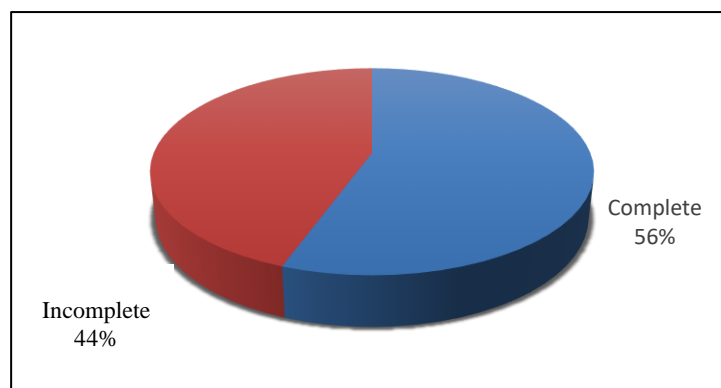


Figure 3. The Results of Pre-test II

The learning activity focused on introducing simple sentences aims to enhance students' ability to construct and understand sentences. In this stage, students are encouraged to form syllables into simple words, such as "buku" (book) and "rumah" (house), so they can recognize and understand the basic structure of words, which is the first step in constructing sentences. Additionally, students are allowed to read and comprehend simple sentences consisting of 3-4 words, such as "Ibu pergi ke pasar" (Mother goes to the market), allowing them to learn to read and understand the context of the sentence. Understanding simple sentences is crucial, as sentences function as a series of words to convey a message or information. This activity trains students to grasp the meaning of sentences and interact with their environment more effectively. To stimulate creativity and critical thinking, the teacher inserts prompting questions, such as, "If you hear the words 'Ibu pergi' (Mother goes), where do you think she is going? Try to continue this simple sentence!" These questions encourage students to imagine and strengthen their understanding of sentence structure.

Learning Activity 4 focuses on the ability to read simple sentences, where the teacher begins the lesson by providing examples of sentences relevant to daily life, such as "Ibu memasak di dapur" (Mother is cooking in the kitchen) or "Budi bermain di taman" (Budi is playing in the park). Students are then asked to read these sentences alternately, emphasising clear pronunciation and correct intonation. During this session, the teacher observes the students' ability to understand the structure of sentences and helps them recognize sentence patterns consisting of subjects, predicates, and objects. In addition to improving reading skills, this activity also aims to build students' confidence when interacting with texts. The understanding gained during this activity includes the awareness that simple sentences can convey clear and easily understood messages and the importance of reading well to comprehend information in storybooks or daily instructions. To encourage discussion and reflection, the teacher may ask prompting questions, such as, "Why is it important for us to be able to read simple sentences well? How can the sentences we read help us in our daily activities?" These questions are designed to encourage students to think more deeply about the relevance of reading skills in the context of their lives.

The result of the action activities in Cycle 2 is measured by administering Post-Test II. The results of this Post-Test II are presented in Figure 4.

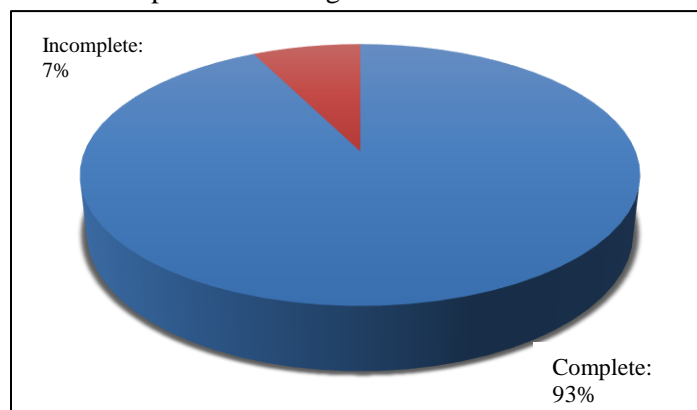


Figure 4. The Results of Post-Test II

Observations were conducted by the observer following the observation sheet to evaluate the achievement of learning outcomes. The results of the observations during the learning process in the classroom action research for Cycle 2 can be seen in Table 8, which shows the achievement levels of both teacher and student activities. In Table 8, it is evident that in Lesson 3, the teacher's activity reached 94.74% and the students' activity reached 89.47%, while in Lesson 4, the teacher's activity reached 100% and the students' activity reached 94.74%. Overall, the average teacher activity reached 97.37%, the average student activity reached 92.11%, and the overall achievement for Cycle 2 was 94.74%.

The learning activities in Cycle 2 had a positive impact on improving the students' early reading skills, as evidenced by the comparison of the results from pre-test II and post-test II. However, further attention is needed in some areas, such as the importance of mastering the teaching material by the teacher before instruction and the implementation of teaching in line with the stages of the model applied.

Discussion

The research results indicate a significant improvement in students' early reading skills, as reflected in the cycle data, showing an increase in the average reading ability of students from Cycle I to Cycle II. Although in Cycle I many students faced difficulties in recognizing letters, forming words, and reading simple sentences, Cycle II demonstrated rapid progress in their abilities due to the intervention of the SAS method. This method effectively helped students understand the relationship between the form, sound, and meaning of letters and words, making it easier for them to form words and build foundational reading skills with greater confidence (Desyandri et al., 2024; Hartono et al., 2023; Pangestu et al., 2024; Rindengan, 2023).

(Barrett et al., 2024) explain that the systematic steps in the SAS method, such as letter recognition, word analysis, and sentence construction, provide a solid foundation for students to develop reading skills. The research indicates that this method is effective in helping students overcome early reading difficulties, as its structured and gradual approach enables them to learn to read in a more focused and sustainable manner. Furthermore, the use of picture cards has proven to be effective in increasing student motivation to actively participate in the learning process. Picture cards serve as visual aids that help students link words with relevant images (Allen, 2024; Chandra & Chand, 2024; Maldonado Ramírez, 2021; Schmidt et al., 2024), making the learning experience more engaging and interactive, while also boosting students' enthusiasm for learning to read (Harokah et al., 2024; Toding & Wibowo, 2024; Efendi et al., 2024).

In Cycle I, some students showed reluctance to engage in reading activities. However, this situation changed in Cycle II, where the use of picture cards successfully encouraged most students to become more active, enthusiastic, and motivated in attempting to read the words on the cards. This activity contributed not only to word recognition but also to an increased understanding of the context of the words being read. Moreover, the teacher's role was crucial in improving reading skills, as the SAS method was applied in a fun and communicative manner. The teacher creatively used picture cards to encourage interaction and student participation, making the learning process more engaging and catering to various learning styles (Hastomo, 2024; Rahayu & Daud, 2024).

Each picture card used by the teacher was designed according to the interests and abilities of the students, which helped boost their confidence and motivation to participate in reading activities (Rahayu & Daud, 2024; Wati et al., 2024; Zainuddin et al., 2023). In addition, the teacher provided special attention and guidance to students who were experiencing difficulties, contributing to the overall improvement in early reading skills at Grade 1, Rangkang 09 Elementary School. This study shows that the implementation of the SAS method, supported by picture card media, significantly improved students' reading abilities. This improvement was evident not only in reading scores but also in increased active participation and motivation throughout the learning process (Santoso et al., 2024; Halimah & Wibowo, 2024; Awaliyah et al., 2024). This success reinforces that the combination of the structural analytical synthetic method with engaging visual media is an effective solution to help students develop basic literacy skills in elementary school (Brilatin & Wibowo, 2024; Viantorus et al., 2024; Wibowo et al., 2023). By integrating a structured method with engaging learning media, students can more easily grasp the fundamentals of reading, thus supporting their literacy development from an early age (Causarina & Ahmadi, 2024; Rachael, 2021; Rozy & Sukardi, 2023; Sayekti et al., 2023).

This study has several limitations that need to be considered to provide a more comprehensive understanding. First, the research was conducted only at Rangkang 09 Elementary School, which has specific characteristics in terms of students, learning environment, and available facilities that may differ from other elementary schools. This limits the generalization of the study's findings, as the results may not fully reflect the success of implementing the SAS method with picture card media in elementary schools with different conditions. Another limitation is related to the relatively short duration of the research, which was conducted within only two cycles of learning. Not all aspects of students' reading development could be thoroughly observed during this limited time frame. Some aspects, such as students' reading endurance or their deeper understanding of reading, may require a longer period to be measured accurately (Bang et al., 2023; Shaaban & Mohamed, 2024).

Furthermore, the implementation of the SAS method with picture card media requires time for students to adapt to an approach that differs from conventional teaching methods. Within the two short cycles, students' adaptation may not have been optimal, meaning that the results obtained may not fully reflect a stable and sustained development of reading skills (Maurer et al., 2021; Ng et al., 2023). This suggests that the method needs to be implemented over a longer period to achieve maximum results. The teacher's involvement as the primary implementer is also a crucial factor in the success of this method, as the teacher's ability to effectively use the method and media greatly influences the study's outcomes. Since the research was conducted in one school, the teacher's skills and experience may be a limiting factor, especially if the teachers involved have varying levels of experience. Lastly, it should be noted that the evaluation instruments used in this study may only measure basic aspects of early reading skills, so other aspects, such as contextual understanding or interpretative abilities, may not have been fully assessed. Therefore, further research is recommended to consider more comprehensive assessment tools and to conduct the study over a longer period with a larger sample size to provide a more in-depth understanding of the effectiveness of the SAS method supported by picture card media.

Conclusion

This study demonstrates that the application of the SAS method supported by picture card media significantly improves early reading skills of first-grade students at Rangkang 09 Elementary School over two cycles. In the first cycle, there was an increase in the average percentage of reading skill achievement by 25.93%, although some students had not yet met the minimum completion criteria. In the second cycle, this percentage increased to 37.03%, with mastery reaching 92.59%. The quality of teaching also improved, with an average implementation rate of 80.26% in the first cycle and 94.74% in the second cycle, indicating the effectiveness of this method in enhancing early reading skills. The implications of these findings are important for the development of basic literacy at the elementary school level, where the use of an analytic and synthetic approach complemented by visual aids has been proven to facilitate a more engaging reading learning process. This finding emphasizes the crucial role of teachers in applying the SAS method with creativity and flexibility, highlighting the need for teacher training to optimally use visual media. Additionally, support in terms of facilities and adequate resources from educational institutions and policymakers is necessary to implement innovative and interactive teaching strategies, ensuring the optimal development of students' literacy.

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