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Development of SiCaTu Busy Book Learning Media Assisted by Canva to Improve Elementary School Students' Early Reading and Writing Skills

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A B S T R A C T

This research was motivated by problems in students' beginning reading and writing skills at elementary school levels due to the lack of interactive learning environments and engaging learning media. This study aimed to develop, determine the feasibility, and examine the effectiveness of the Busy Book Si Cerdas Baca Tulis (SiCaTu) learning media in improving elementary school students' beginning reading and writing skills. This research employed a Research and Development (R&D) method using the ADDIE model. The subjects consisted of four validation experts and twelve students from grades 1 to 5. Data were collected through interviews, expert validation questionnaires, and pretest-posttest instruments. The needs analysis indicated the necessity of more engaging learning media to support students' beginning reading and writing skills. The results showed that the SiCaTu Busy Book was highly feasible, with an average validation score of 95%. The media was also effective, indicated by an N-Gain score of 0.401 (moderate category) and a Wilcoxon test significance value of 0.0005 (<0.05). Thus, the SiCaTu Busy Book can support the improvement of students' beginning reading and writing skills through interactive and engaging activities.

1. Introduction

Language proficiency plays a fundamental role in education as the foundation for developing literacy skills and supporting students' active engagement in learning (Siregar & Ikawati, 2025). Language skills consist of four interconnected components: listening, speaking, reading, and writing (Pamuji & Setyami, 2021). Among these skills, reading and writing are closely related abilities that contribute to the cognitive development of elementary school students. Berninger in Oguntade

(2025) stated that both skills involve similar cognitive systems, including verbal intelligence, motor coordination, and memory functions, which mutually reinforce each other. Therefore, early reading and writing skills serve as essential foundations for students' success in acquiring knowledge and competencies across other learning areas (Arini et al., 2022; Octaviany & Prasetyaningtyas, 2025).

At the elementary school level, reading and writing skills are categorized into two developmental stages, namely early reading and writing skills for lower grade students and advanced reading and writing skills for upper grade students (Ayu et al., 2025; Pertiwi & Pratikno, 2024). Early reading and writing skills constitute the initial stages of the learning process in elementary schools (Komalasari et al., 2025; Puspita et al., 2022). Early reading skills focus on students' abilities to recognize and pronounce letters, words, and simple sentences, as well as to read with limited fluency and speed (Kusno et al., 2020). Meanwhile, Aini in Suryana et al. (2024) defines early writing skills as basic writing activities that include tracing letters, completing incomplete letter forms, copying and reproducing letter shapes, and rewriting words or sentences through dictation.

Although early reading and writing skills are generally introduced in grades 1 and 2, some upper grade elementary school students still experience difficulties in mastering these foundational literacy skills. Preliminary observations at SDN Dukuh 08 Pagi revealed that several students from both lower and upper grades faced challenges, including incomplete alphabet recognition, limited fluency in reading words and simple sentences, writing inaccuracies, and difficulties distinguishing letters with similar phonemes. These difficulties may be associated with limited attention and retention, potentially influenced by the lack of engaging learning media to support the learning process.

These conditions highlight the need for interactive learning media to create an engaging learning environment. This is consistent with the view expressed by Sari et al. (2023) that the use of media can create an engaging learning environment and actively involve students in the learning process. Generally, the use of learning media significantly contributes to instructional effectiveness by facilitating the optimal achievement of learning objectives. As stated by Rachmawati et al. (2025) stated that learning media constitute a part of instructional resources that function to stimulate students' learning interest, thereby promoting effective learning processes and the achievement of educational objectives. In addition, the use of instructional media can also improve students' understanding of the material (Zulkaida et al., 2025).

The problems identified in this study are consistent with previous findings. Pertiwi and Pratikno (2024) reported that first grade students at SD Negeri Dlemer 2 Kwanyar still experienced difficulties in reading skills. Similarly, Suryana et al. (2024) indicated that 4 out of 6 first grade students had not yet acquired early writing skills, while Khaerawati et al. (2023) revealed that 27 out of 109 upper-grade students at SDN 1 Selebung were still unable to read fluently. These findings indicate that early reading and writing instruction requires greater attention to optimally develop students' foundational literacy skills across grade levels.

Therefore, appropriate learning support and instructional strategies are needed to help students achieve the expected literacy competencies.

If problems related to early reading and writing skills among elementary school students remain unresolved, they may hinder the achievement of learning objectives and students' academic development at subsequent educational levels (Sugiarsih et al., 2026). Larner in Wicaksono (2020) stated that students who have not mastered reading skills properly may experience difficulties in understanding learning materials and participating in further learning processes. Similarly, difficulties in early writing skills may negatively affect students' future development (Utari & Rambe, 2023). Furthermore, reading and writing skills contribute not only to academic development but also to students' communication and socialization abilities (Sele et al., 2024). Therefore, mastery of early reading and writing skills serves as an essential foundation for students' overall development.

Based on the conditions, an interactive and engaging learning medium is needed to support early reading and writing instruction in elementary schools. Interactive media not only presents information but also enables students to interact and explore learning materials more actively according to the learning activities provided, thereby increasing their active involvement in learning (Sawitri et al., 2024). One of the media with these characteristics is Busy Book, a printable learning medium containing materials and simple activities designed to stimulate students' thinking skills, improve concentration, and actively engage them in the learning process (Alwi et al., 2023; Rahmadani et al., 2021).

The effectiveness of Busy Book in supporting the learning process has been demonstrated through several previous studies. Ningsih et al. (2023) showed that Busy Book was able to improve the language skills of children aged 5–6 years. Another study conducted Afrianti and Wirman (2020) also found that this media was effective in stimulating early reading skills, such as recognizing letter symbols and constructing simple sentences. Meanwhile, the study by Rodia and Mawardah (2024) showed that Busy Book had a significant effect on early writing skills among children with autism. This finding indicates the potential of Busy Book in supporting early writing skills. These findings demonstrate that Busy Book has the potential to improve early reading and writing skills.

Based on the background described above, the researcher was interested in developing the SiCaTu Busy Book (Si Cerdas Baca Tulis) assisted by Canva as a learning medium for early reading and writing instruction among elementary school students. The novelty of this study lies in the development of a concrete Busy Book resource designed using the Canva app as a teaching aid for early reading and writing instruction at the elementary school level. This study aims to develop the SiCaTu Busy Book media and determine its feasibility and effectiveness in improving elementary school students' early reading and writing skills.

2. Methodology

This study employed a Research and Development (R&D) approach. Research and Development is a research approach that focuses on designing a product through needs analysis, followed by testing to determine the level of effectiveness and feasibility of the product so that it can be widely implemented within its intended context of use (Slamet, 2022). The model used in this development study was the ADDIE model, which consists of five structured stages, namely Analysis, Design, Development, Implementation, and Evaluation. The ADDIE model is one of the popular and practical models used for developing instructional materials, including learning media (Batubara, 2021).

The ADDIE model is a systematic and sequential instructional media design model used to solve learning problems by adapting learning resources to students' needs and characteristics (Tegeh and Kirna in Syahid et al., 2024). The model consists of interconnected stages that guide the development process in a structured manner. Each stage is carried out systematically to support the achievement of the intended development objectives. Therefore, the ADDIE model was selected in this study because it was considered appropriate and suitable for use in the development process of the SiCaTu Busy Book media as an effort to address students' early reading and writing problems. The development process in this study follows the five interconnected phases of the ADDIE model. These phases serve as the primary framework for the development of the SiCaTu Busy Book media and are presented in Figure 1.

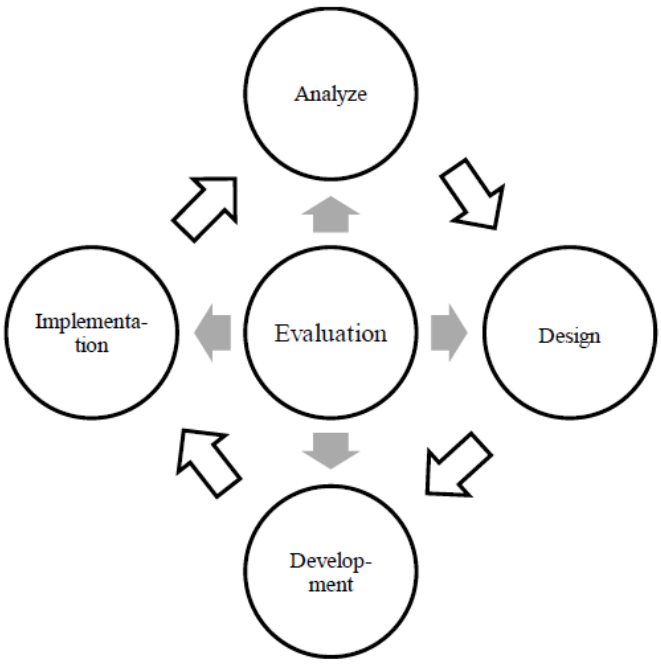


Figure 1. ADDIE Model Phases (Waruwu, 2024)

The stages of the ADDIE model implemented by the researcher are presented in Table 1 below.

Table 1. ADDIE Model Phases

No.	Phases	Acitivity
1.	Analyze	The researcher conducted a problem identification and needs analysis. The identification focused on determining students' initial reading and writing skills, as well as analyzing their learning needs as a basis for developing instructional materials.
2.	Design	The researchers established and designed early reading and writing activities based on the results of the students' needs analysis, structured in stages from letter recognition, syllable reading, and word reading to writing practice. Additionally, the researchers created flowcharts and storyboards for the teaching materials to ensure a systematic development process.
3.	Development	The researcher developed the learning media according to the design that had been prepared. The tool used by the researcher in developing the product was Canva, while other supporting tools required included whiteboard markers, Velcro, and ring binders to complete the concrete media as a whole. This stage involved material experts, media experts, and pedagogical experts as validators to realize the developed product.
4.	Implementation	The product trial was conducted. The product trial was carried out with students to evaluate the feasibility and effectiveness of the developed media in the learning process.
5.	Evaluation	Conduct an evaluation of the results of the expert validation and media testing to determine whether the development objectives have been met and to draw conclusions based on the results of the development work that has been carried out.

This study involved material experts, media experts, pedagogical experts, and instrument experts as validators, as well as 12 elementary school students at SDN Dukuh 08 Pagi who were selected using a purposive sampling technique. This sampling technique was chosen because not all students possess the characteristics of the research subjects that align with the needs and objectives of the study. Therefore, the researcher selected subjects based on the criteria of students who experienced difficulties in early reading and writing skills, as well as students from grades 1 to 5 who had not yet achieved optimal early reading and writing abilities based on the results of initial interviews and observations conducted by the researcher. The selected sample was expected to provide data that corresponded with the focus and objectives of the study.

Data collection in this study was conducted using both quantitative and qualitative approaches. Quantitative data were collected through questionnaires and pretest-posttest tests, while qualitative data were collected through interviews with five teachers during the analysis stage. The research instruments used included interview guidelines, validation questionnaires, and test sheets for students' early

reading and writing skills. The reading and writing ability test instruments in the form of pretest-posttest were used to measure students' abilities before and after the implementation was conducted. The test instruments were developed based on the blueprint presented in Table 2.

Table 2. Pretest-Posttest Instrument Guidelines

Aspect	Indicator	Test Format	Activity
Early Reading Skills	Identifying letter sounds	Oral test	Mentioning the sounds of letters A–Z
	Combining letters into syllables	Oral test	Reading syllables
	Reading words and sentences at a slow pace	Oral test	Reading simple words and sentences
Early Writing Skills	Writing neatness	Practical test	Writing letters using guiding lines and writing simple words based on example
	Completeness of letters in writing	Practical test	Writing simple sentences based on the teacher's oral instructions
	Appropriateness of writing with objects	Practical test	Writing the names of pictures being observed

An oral test was used for the early reading aspect because reading ability needs to be directly observed through students' pronunciation of letters, syllables, words, and sentences. Through this test, the researcher was able to assess students' reading performance directly based on the established indicators. Meanwhile, a practical test was used for the early writing aspect to assess students' ability to produce written work based on the aspects of neatness, completeness of letters, and the appropriateness of writing with the given objects. The results of this test provided information regarding students' early writing skills according to the predetermined assessment criteria.

The data obtained through the instruments used in this study were analyzed using qualitative and quantitative descriptive analysis. Qualitative analysis was used to examine and interpret the interview data collected during the analysis stage. Meanwhile, quantitative analysis was employed to process the validation scores obtained from experts as well as the pretest-posttest scores obtained from students. Through this analysis, the researcher was able to evaluate the validity and effectiveness of the developed media. In the validator questionnaire, a fourpoint Likert scale was used to assess each aspect of the media. The data obtained from the questionnaire were then analyzed based on the criteria presented in Table 3.

Table 3. Feasibility Criteria

Persentage	Criteria	Description
0 – 25%	Highly Infeasible	Requires total revision
26% - 50%	Infeasible	Requires major revisions
51% - 75%	Feasible	Requires necessary revisions
76% - 100%	Highly Feasible	No revision required

Source: Adapted and modifed (Candra & Rahayu, 2021)

The pretest and posttest data obtained from the implementation of the learning media were subsequently analyzed using several statistical techniques. First, the N-Gain analysis test was employed to determine the level of effectiveness of the developed media in improving students' learning outcomes. This analysis was conducted by comparing the scores achieved before and after the intervention, thereby providing an overview of the extent to which students' abilities improved. In addition, the Wilcoxon signed-rank test was used to examine whether there were significant differences between the pretest and posttest results. The criteria used to interpret the N-Gain scores were adjusted according to the classification presented in Table 4 below.

Table 4. Effectiveness Level

Average	Criteria
$g > 0,7$	High
$0,3 \leq g \leq 0,7$	Moderate
$0 < g < 0,3$	Low
$g \leq 0$	Fail

Source: Adapted (Wahab et al., 2021)

3. Results and Discussion

Result

Needs Analysis

At the analysis stage, the researcher conducted interviews with five classroom teachers consisting of Grade 1, Grade 2, Grade 3, Grade 4, and Grade 5 teachers to identify the number of students who had not yet achieved optimal early reading and writing skills, as well as to identify the learning needs related to early reading and writing. The interviews were conducted to obtain information directly from teachers regarding students' learning conditions in the classroom. The interviews focused on students' skill conditions, the learning media used, and the need for learning media that could support students' early reading and writing skills. The information obtained from the interviews was used as a basis for developing learning media that aligned with students' needs and learning characteristics.

The interview results showed that 12 students from Grades 1 to 5 experienced difficulties in early reading and writing skills. Each student demonstrated different levels of difficulties. Some students were unable to fully recognize the letters A–Z, while several students were already able to recognize letters but experienced difficulties in reading syllables, words, and sentences. A Grade 5 teacher stated that, "The students actually already know and recognize the names of letters; however, they are still unable to read syllables and remain confused." Another teacher from Grade 3 also explained that, "Some students are actually able to read syllables and simple words, but when reading sentences, they still read haltingly. However, there is one student who has not yet fully recognized the letters A–Z." These findings indicate that students' early reading skills in each grade level vary.

In addition to reading difficulties, the interview results showed that several students had not yet achieved optimal early writing skills. The teachers stated that some students still experienced difficulties in writing words and complete sentences with accurate and complete letter arrangements. Several students wrote words with incomplete letters or produced writing that did not convey any meaningful content. Furthermore, some students experienced difficulties in writing neatly, as indicated by disorganized handwriting that was difficult to read. The early writing difficulties experienced by these students were considered to be caused by their difficulties in connecting the sounds of letters they heard with their written forms, particularly in writing closed-syllable words.

The use of conventional printed textbooks in the learning process appeared to be less effective in attracting students' learning interest. A Grade 1 teacher stated that, "So far, we have only used regular reading and writing textbooks. However, there is actually a need for more engaging concrete media that may encourage students to become more enthusiastic in learning." Another teacher from Grade 5 also stated that, "Concrete media specifically designed for reading and writing instruction is indeed needed because elementary school students are still at the concrete operational stage of thinking." Based on these findings, there is a need for concrete and engaging learning media that can facilitate students' early reading and writing practice in a gradual manner. This need became the basis for the development of the SiCaTu Busy Book.

Product Description

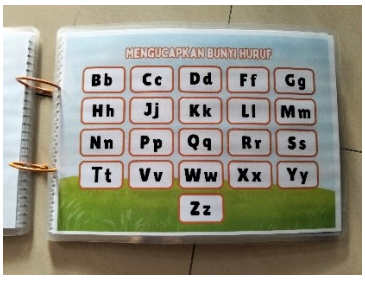
The results of this study led to the creation of a learning resource in the form of a busy book called SiCaTu (Si Cerdas Baca Tulis), which was developed using the ADDIE model. This resource was designed to serve as a teaching aid to support the early reading and writing skills of elementary school students. The objectives of developing this resource are to improve elementary school students' early reading and writing skills, to increase students' interest in the learning process, and to meet the needs of students at the concrete operational stage of cognitive development. The development of this resource was based on findings from the analysis phase, which indicated the need for a learning resource that is more engaging, interactive, and capable of actively involving students in the learning process to optimally support the development of their early reading and writing skills.

The materials presented in the SiCaTu Busy Book were adjusted according to the indicators of early reading and writing aspects. The indicators of early reading include recognizing and identifying letter symbols, associating letters with their sounds, and reading simple words at a slow pace (Dalman, 2017; Mufiidah et al., 2019). Meanwhile, the indicators of early writing include writing neatness, completeness of letters in writing, and the appropriateness of writing with objects (Gunawan et al., 2019; Herliana et al., 2019; Prawiyogi et al., 2022). The use of these materials was intended to ensure that each activity contained in the media could support the achievement of skills that still require reinforcement among students.

The developed media is in the form of a concrete Busy Book with a size of 22 × 31 cm. The SiCaTu Busy Book consists of 21 activities with a total of 28 pages. Each activity is divided into four stages. The first three stages cover aspects of early reading skills, while the final stage covers aspects of early writing skills. The first stage, namely the vowel recognition stage, consists of three activities. The second stage, namely the consonant recognition stage, consists of three activities. The third stage, namely the stage of combining letters into syllables, words, and simple sentences, consists of six activities. Finally, the fourth stage, namely the writing skills practice stage, consists of nine activities.

The SiCaTu Busy Book has sustainable characteristics that allow it to be used repeatedly. The basic material of the media, which uses laminated paper, allows the use of wipe-and-clean markers in writing skill activities to be erased, enabling the activity sheets to be reused. This feature makes the media more practical for repeated classroom use without requiring the replacement of activity sheets. In addition, the use of Velcro on the components within the Busy Book helps maintain the overall durability of the media and supports repeated use of the learning activities. One of the activities from the four stages of the SiCaTu Busy Book is presented in Table 5.

Table 5. Content of the SiCaTu Busy Book

No.	Activity Content	Description
1.		The activity on this page is matching the initial letter sounds found in the early stage. The purpose of this activity is to strengthen students' ability in using vowel letters at the early of words after students are able to correctly pronounce vowel sounds with appropriate phonemes.
2.		The activity on this page focuses on learning the sounds of consonants. This activity aims to help students practice the accurate pronunciation of each consonant's phoneme.
3.		The activity on this page involves reading syllables by dragging consonants into the boxes on the left and right sides of the page. This activity is designed to practice reading open and closed syllables, both two-letter and three-letter ones. It is intended to help students develop their ability to read syllables and closed words.

4.		The activity on this page is designed to help students practice neat handwriting by writing along guide lines. The goal of this activity is for students to be able to write with letters of relatively uniform size, appropriate spacing between letters, and a consistent line of writing that does not waver.

The implementation of the SiCaTu Busy Book was conducted individually with each student using a phonics approach, which focused on recognizing the sounds of each letter and the relationship between letters and their sounds as the foundation for reading syllables, words, and simple sentences. Each student followed a series of manipulative activities provided in the SiCaTu Busy Book gradually according to their respective abilities. During the learning process, the researcher provided guidance and feedback when necessary so that students could complete each reading and writing activity optimally. This approach enabled the development of each student's abilities to be observed in greater detail throughout the implementation process.

Feasibility of Product and Test Instrument Validation

The feasibility of the SiCaTu Busy Book as a learning medium in early reading and writing instruction was assessed based on the percentage scores obtained from evaluations involving material experts, media experts, and pedagogical experts. These evaluations were conducted to determine the feasibility of the media in terms of the suitability of language skills content, the visual condition of the media, and the alignment of the media with elementary school learning principles. Meanwhile, to determine the feasibility and appropriateness of the pretest-posttest items used, the researcher involved instrument experts to assess the suitability of the test items in measuring early reading and writing skills. The results of the expert validation are presented in the following Table 6.

Table 6. Percentage Results of Expert Validation

Validation Aspect	Percentage (%)	Description
Material Expert	95%	Highly Feasible
Media Expert	91%	Highly Feasible
Pedagogical Expert	95%	Highly Feasible
Instrument Expert	98%	Highly Feasible
Average	**95%**	**Highly Feasible**

Based on Table 6, the validation results show that the SiCaTu Busy Book media obtained a "highly feasible" category from all validators. The material expert assessment obtained a score of 95%, indicating that the material presented in the media is in accordance with the stages and objectives of early reading and writing instruction. Meanwhile, the media expert assessment obtained a percentage of 91%, indicating that the aspects of appearance, design, color, illustrations, and ease of use of the media have met the feasibility criteria. Furthermore, the pedagogical

expert obtained a percentage of 95%, indicating that the SiCaTu Busy Book media is in line with elementary school learning principles and is able to support the learning process effectively.

In addition, the instrument validation obtained a percentage of 98% in the "highly feasible" category. This result indicates that the pretest and posttest instruments used were appropriate for measuring students' early reading and writing skills. Overall, the average validation result reached 95% in the "highly feasible" category. The validation results demonstrate that the developed media and research instruments met the established assessment criteria. These findings indicate that the SiCaTu Busy Book media meets the material, media, pedagogical, and instrument aspects, and is therefore feasible to be used in early reading and writing instruction in elementary schools.

Product Effectiveness

The effectiveness of the media in improving students' early reading and writing skills was measured based on the pretest and posttest results obtained by the students. The analysis of the results was conducted using the N-Gain calculation to determine the level of improvement, and the Wilcoxon Signed-Rank Test was used to test the significance of the improvement. These analyses were carried out using the scores obtained before and after the implementation of the developed media. The presentation of these results provides an overview of the effectiveness of the media based on students' learning outcomes. The results of the N-Gain analysis and the Wilcoxon Signed-Rank Test are presented in Table 7 and Table 8.

Table 7. N-Gain Test Result

Average Pretest	Average Posttest	N-Gain	Category
66,83	81,17	0,401	Moderate

Based on Table 7, the average pretest score of students was 66.83, which increased to 81.17 in the posttest after the use of the SiCaTu Busy Book media. The increase in the average score indicates a positive change in students' performance after participating in the learning activities using the developed media. The N-Gain calculation result obtained a score of 0.401, which falls into the moderate category. These results indicate that the developed SiCaTu Busy Book media is able to improve students' early reading and writing skills with a moderate level of improvement. This finding is consistent with the N-Gain classification used in this study.

Table 8. Wilcoxon Signed Rank Test Result

Test	Z	Asymp. Sig. (2-tailed)
Pretest-Posttest	-2,803	0,0005

Based on Table 8, the Asymp. Sig. (2-tailed) value obtained was 0.0005 (< 0.05). The obtained significance value met the established criterion for determining statistical significance. This result indicates a significant difference between the pretest and posttest scores after the use of the SiCaTu Busy Book media. Thus, the

developed SiCaTu Busy Book media is proven to be effective in supporting the improvement of students' early reading and writing skills in elementary schools. The result also supports the effectiveness findings obtained from the N-Gain analysis and further confirms the positive impact of the media on students' early reading and writing skills.

To determine the improvement of each indicator of early reading and writing skills after the use of the SiCaTu Busy Book, an analysis was conducted on each measured ability indicator through the pretest and posttest. The analysis was carried out by comparing students' performance on each indicator before and after the implementation of the developed media. The percentage of each indicator was calculated based on the accumulation of students' total scores on each indicator. This calculation was used to provide a clearer description of the level of achievement for each assessed indicator. The percentage results of the early reading and writing skills indicators in the pretest and posttest are presented in Table 9 and Table 10.

Table 9. Improvement of Early Reading Skills Indicators

Indicator	Pretest (%)	Posttest (%)
Identifying letter sounds	83,3%	95,8%
Combining letters into syllables	65,2%	76,3%
Reading words and sentences at a slow pace	55,5%	79,8%

Based on Table 9, all indicators of early reading skills showed an increase in scores after the use of the SiCaTu Busy Book. The indicator of Identifying letter sounds increased by 12.5%. Meanwhile, the indicator of combining letters into syllables increased by 11.1%. Furthermore, the indicator of reading words and simple sentences at a slow pace showed an increase of 24.3%. Overall, the results demonstrate positive changes across all assessed early reading skill indicators. These findings indicate that the highest improvement occurred in the indicator of reading words and simple sentences at a slow pace, while the lowest improvement occurred in the indicator of combining letters into syllables.

Table 10. Improvement of Early Writing Skills Indicators

Indicator	Pretest (%)	Posttest (%)
Writing neatness	91,6%	95%
Completeness of letters in writing	50%	79,1%
Appropriateness of writing with objects	52,7%	70,8%

Based on Table 10, all indicators of early writing skills showed improvement after the implementation of the SiCaTu Busy Book. The handwriting neatness indicator increased by 3.4%, while the indicator of letter completeness in writing increased by 29.1%. Furthermore, the indicator of writing conformity with objects showed an increase of 18.1%. Based on the percentage increase across the three indicators, the greatest improvement occurred in the indicator of letter completeness in writing, while the lowest improvement occurred in the handwriting neatness indicator. Thus, the use of the SiCaTu Busy Book was able to support the improvement of various

aspects of students' early reading and writing skills, although the level of improvement varied across each indicator.

Discussion

The development of the media was based on the results of the needs analysis, which indicated that students from both lower and upper elementary grades still experienced difficulties in early reading and writing skills. The interview results showed that teachers required concrete and engaging learning media to support early reading and writing instruction. These needs then became the basis for the development of the SiCaTu Busy Book, which was designed with various manipulative activities to actively engage students during the learning process. This characteristic is aligned with the cognitive developmental characteristics of elementary school students. This finding is consistent with Piaget's theory of cognitive development, which states that elementary school students are at the concrete operational stage, where they can understand concepts more easily through the use of concrete objects or media that can be directly manipulated (Piaget, 1953).

The validation results from material, media, and pedagogical experts showed that the SiCaTu Busy Book was categorized as highly feasible. This indicates that the media has fulfilled the aspects of material content suitability, language, media presentation, and alignment with elementary school learning principles, making it suitable for use as supporting media in early reading and writing instruction. This finding is consistent with the study conducted by Imbanop et al. (2025), which showed that the use of Busy Book was highly feasible in improving early reading skills. In addition, the study by Rodia and Mawardah (2024) demonstrated that Busy Book had a significant effect on early writing skills.

The results of the implementation show that the SiCaTu Busy Book is effective in improving students' early reading and writing skills. This improvement is closely linked to the use of the media in individual instruction using a phonics-based approach. The phonics approach helps students understand the relationship between letters and sounds, thereby facilitating the process of reading syllables, words, and simple sentences. This finding aligns with the research by Lindström-sandahl et al. (2023), which shows that the individualized implementation of phonics effectively improves early reading skills. Additionally, the interactive nature of the media enables manipulative activities such as arranging letters, forming words, and writing within the SiCaTu Busy Book. This allows students to be directly engaged in every stage. This environment significantly contributes to providing students with opportunities to gradually practice their early reading and writing skills. These findings are consistent with the research by Yulianto et al. (2025), which showed that the use of media involving active student participation effectively improves the early reading and writing skills of elementary school students.

The analysis of the improvement of each indicator showed that all indicators of early reading and writing skills increased after the use of the SiCaTu Busy Book, although the magnitude of improvement varied across indicators. In the aspect of early reading skills, the indicator of reading words and simple sentences at a slow

pace showed the greatest potential for improvement. This was because, prior to the implementation, this indicator represented the lowest level of ability compared to other indicators; therefore, a significant improvement occurred after the use of the SiCaTu Busy Book. Meanwhile, the indicator of combining letters into syllables showed a lower level of improvement because students still experienced difficulties in reading closed syllables, whereas open syllables and simple words could generally be read well. This condition indicates that the ability to read closed syllables still requires more intensive practice because students need to identify the vowel sound at the beginning of a syllable while simultaneously combining it with the following consonant sound.

Similar to the aspect of early reading skills, all indicators of early writing skills also showed improvement, although the level of improvement varied across indicators. The indicator of letter completeness in writing demonstrated the greatest improvement, indicating that the SiCaTu Busy Book provided students with opportunities to practice arranging and writing letters completely through various writing activities during implementation. Meanwhile, the handwriting neatness indicator showed relatively lower improvement, which may be due to most students already having adequate handwriting skills before implementation, resulting in limited room for improvement. However, the indicator requiring further attention was writing conformity with objects, suggesting that students still needed more intensive practice in connecting observed objects with their written representations to produce accurate words.

In addition to the analysis of each indicator, the effectiveness of the SiCaTu Busy Book was also influenced by students' initial ability characteristics. Based on the developmental records during the implementation, students with lower initial abilities showed more significant progress compared to students who had already possessed adequate early reading and writing skills. Meanwhile, several students who had mastered basic skills from the beginning only demonstrated relatively smaller improvements because their initial abilities were already at a good level. These findings indicate that the SiCaTu Busy Book can be applied to students with diverse initial ability levels, although the extent of improvement is influenced by each student's initial condition.

This study has limitations related to the relatively small sample size and the heterogeneous characteristics of the students, as it involved students from grades 1 to 5 with varying levels of early reading and writing skills. This condition indicates that the findings of this study cannot yet be widely generalized to all elementary school students. Nevertheless, the research findings provide an overview that the SiCaTu Busy Book has the potential to be used as supporting media for early reading and writing instruction among students experiencing early literacy difficulties.

4. Conclusion

SiCaTu Busy Book developed using the ADDIE model in this study was considered highly feasible and moderately effective for supporting the improvement of elementary school students' early reading and writing skills. The implementation of the media improved all indicators of early reading and writing skills, although the extent of improvement varied across indicators. The interactive and engaging activities provided in the media were able to gradually train students' early reading and writing skills, allowing the media to support the stages of early reading and writing development experienced by students. These findings indicate that the objectives of this study were successfully achieved. Thus, the SiCaTu Busy Book is a highly suitable and moderately effective tool for improving students' early reading and writing skills.

Future research is expected to develop Busy Book media with a broader range of materials, including the pronunciation of the *ng* and *ny* sounds in early reading instruction. Furthermore, future media development is recommended to strengthen students' abilities in reading simple two-syllable words and closed-syllable words, as well as involve a larger sample size with more homogeneous student characteristics so that the effectiveness of the media can be analyzed more comprehensively.

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