

The Effectiveness of Reading Spinning Wheel Learning Media on Initial Reading Ability in Elementary Schools

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Abstract

Purpose: This research aims to know the level of students' initial reading comprehension before and after using spinning wheel learning media and to test the effectiveness of reading spinning wheel media on initial reading ability.

Methodology: The research method used is quantitative Pre-Experimental with One-Group Pretest-Posttest Design. The data collection instruments are pretest and post-test. The subject of this study is grade 1 of SDN 02 Pasekan Ambarawa, with a total of 37 students.

Results: The research results show that the average difference between the pretest and the posttest was 14.46, meaning there was a significant increase in reading comprehension. The N-gain result of the percent of pretest and posttest data is 57.999%, which means that using the reading spinning wheel media is quite effective. The results of the T-test showed a significance result of $0.000 < 0.05$, then H_0 was rejected, and H_a was accepted. This refers to the use of reading spinning wheel media on the initial reading ability of grade 1 students of SDN 02 Pasekan Ambarawa has been tested to be effective.

Applications/Originality/Value: The authenticity of this study is that there are pockets and letter cards to form a syllable, word, or sentence on the media. The pragmatic implication of this study is that innovative and interactive reading spinning wheel media can engage students and create a fun reading learning atmosphere in terms of initial reading skills.

Introduction Section

Listening, writing, reading, and speaking are the four basic skills learned in Indonesian. Students must learn these skills gradually, according to the stage of development. At the elementary school level, mastery of reading and writing skills is essential (Widyaningrum & Hasanudin, 2019). Giving priority to early reading learning at the elementary education level is very important to ensure that students are proficient in reading simple words and sentences fluently and accurately (Magdalena et al., 2020).

Basic education is beneficial for children's growth, especially reading skills. Good reading skills in the early stages of elementary education, especially in grade 1 of elementary school (SD), are critical because they affect children's ability to understand subject matter at the next level. However, learning to read is often faced with challenges, including students' lack of desire and interest in learning to read and teachers' difficulty effectively teaching material. Reading in elementary school is an important part of a student's learning process in the first grade. In this phase, students learn to improve their reading skills, master the necessary reading techniques, and understand the content of the reading well (Wulandari et al., 2022). In the early stages of learning, students will focus on the basics of initial reading. This initial reading ability becomes a strong foundation to improve their speed, breadth, and reading comprehension. Therefore, teachers are very focused on maximizing the development of students' initial reading skills (Chairina, 2020).

The ability to read is the primary skill that students must have. Reading activities allow students to capture the meaning conveyed by the author through texts. By practicing careful reading, students can gain new information and knowledge. Students' reading skills must also be improved because understanding the text will allow them to get more information (Indriasari & Krisnandi, 2023). Reading ability is an important mastery that students must have because by reading, students can expand their horizons in various fields of study (Rahmah, Alfia, Nabila Natasya, 2020). Students' achievement in learning activities in school is highly dependent on the extent to which they master skills (Ramadhan & Tarmini, 2022).

Reading is an aspect of the four Indonesian language skills: reading, writing, speaking, and listening. These four fields are interrelated with each other. Early reading learning is a crucial stage in the development of children's literacy in grade 1 of elementary school (SD). At this level, children are introduced to basic reading skills, which are the foundation for mastering more structured literacy skills in the future. The initial stage of learning to read is known as initial reading, focusing mainly on introducing symbols or signs related to letters (Anisatul et al., 2021). This stage is essential because it is a basis for the child to proceed to further reading stages (Rika Widhi Rahayu & Dwi Wardhani, 2023).

Initial reading allows students to read a simple word or sentence fluently and accurately (Maryono & Budiono, 2021). Therefore, through learning, it is hoped that students learn syllables, letters, and words and can read sentences fluently. Students who have not mastered the beginning reading find it difficult to understand other subjects. In addition, low initial reading ability will hinder them from reaching a more advanced reading level. Reading skills are measured based on several indicators (Hasanah & Lena, 2021), accuracy, clarity in pronouncing letters or syllables, and fluency in reading a simple word or sentence.

Based on interviews and observations conducted at SDN 02 Pasekan Ambarawa, many 1st-grade elementary school children need to be more skilled in reading at the beginning. The subject of this study is 1st-grade students of SDN 02 Pasekan Ambarawa, with a total of 37 students, with 23 boys and 14 girls. Judging from the results of the diagnostic assessment carried out by teachers at the beginning of the school year, ten students were not fluent in reading syllables or words, nine students were quite fluent in reading syllables or words, and 18 students were fluent in reading syllables or words. Students who need to be proficient in early reading often need help with problems such as difficulty reading words and sentences fluently and an inability to pronounce and intonate correctly. Grade 1 students are still upside down in recognizing letters and have difficulty connecting syllables into words, but some can read fluently.

The observations show that the initial activity is less efficient in the school. The classroom atmosphere is often uncontrollable and noisy; only some students listen to the teacher's explanations. Several learning obstacles arise from inappropriate techniques and media, making reading learning less active, effective, and dull (Famelia et al., 2022) (Anggriani et al., 2022). Previous learning conditions also affected students' less optimal reading skills. Media uninteresting learning is the cause of students' low reading ability. Children's learning process generally starts with concrete experiences. Abstract concepts require physical or visual representation to be well understood. Understanding this abstract concept develops through various levels of learning (Kaltsum Honest, 2017). Electronic media presents more entertainment and games, making students reluctant to read (Rinawati et al., 2020). The media used in learning in the classroom still needs to be more varied. To solve this problem, teachers need to choose strategies and optimize students' starting reading skills. Choosing the type of learning media is very important for an educator (Sulastri et al., 2023).

One alternative is using accurate and engaging learning media to encourage students to participate more interactively and provide a fun learning atmosphere. One of the media that teachers can implement is "Media of the Wheel of Reading." Through this spinning wheel of reading, initial reading learning can become more interesting and exciting. It was stated that this media has an interesting form and pattern so that students are enthusiastic about the initial reading learning activity (Hikmawati et al., 2021). The learning medium used is a rotary wheel, a circular tool that can be rotated with letters and syllables. The tool rotates its shaft and stops at one of these parts (Putri, 2020). Teachers act as leaders in the learning process, being at the forefront to help students with learning that suits the needs of the times (Amiruddin & Zulfan Fahmi, 2022). This role requires teachers to be creative in learning by providing learning media such as a spinning wheel of reading as a tool.

Research conducted (Sonia, 2022) (Sonia, 2022) said that the innovative learning media has effectiveness on the initial reading ability of grade 1 elementary school students as evidenced by the results of the H0 test rejected and accepted Ha. In addition, research conducted by (Hasanah & Lena, 2021) (Hasanah & Lena, 2021), shows that innovative pinwheel media significantly affects the ability to read initially. This study has similarities with previous research, namely research methods and bound variables (initial reading ability). The difference between the research to be carried out and the earlier research is the learning media to be used or the independent variable. The media that will be applied for this research is "Media of the Spinning Wheel of Reading." The novelty of this research lies in the media. This reading spinning wheel media has letter pockets and letter cards to form a syllable, word, or sentence from the letters that appear on the reading spinning wheel media.

Based on the background of the above problem, educational research entitled "The Effectiveness of Reading Spinning Wheel Learning Media on Initial Reading Ability in Elementary Schools." The presence of this spinning wheel learning media has the potential to foster a fun atmosphere in early reading learning. This study aims to determine the level of initial reading comprehension of grade 1 elementary school students before and after using the spinning wheel media to read. The second goal is to find out whether the spinning wheel media is effective for learning to read for the first-grade students of SDN 02 Pasekan Ambarawa. The findings of this study will likely provide advantages for teachers and students, in particular, allowing educators to improve and effectively utilize this media as a resource to support students in practicing early reading skills.

Research Methods

The method used in this study is a quantitative with a Pre-Experimental design. Referring to this study Sugiyono, this study uses a One-Group Pretest-Posttest design. This design involves one group of participants who are given an initial test before the experimental treatment. After the treatment was given, participants were given a final test (Sugiyono, 2017). By comparing the results of these two tests, we can measure the effectiveness of the treatment given. The research design is illustrated in the table 1 below:

Table 1. Research Design.

Pre-test	Treatment	Post-test
O1	X	O2

Information:

O1 : Result Pre-test

X : Providing treatment, using learning media of spinning wheels of reading

O2 : Result post-test

The subject of the research was on grade 1 students at SDN 02 Pasekan Am-barawa in the odd semester, namely the 2024/2025 school. The population in this study is the lower class, by taking a sample of grade 1 with a sample of 37 students. The sample can be interpreted as the part of the population that serves as the main source in the study and is a small part of the population that is used to describe all the population numbers (Amin et al., 2023). The sampling technique is purposive sampling.

The design table above shows that students will be given a pre-test to evaluate their initial ability to read before they receive the spinning wheel learning media. The results of the pretest score are used to determine the average score of the initial reading ability before the application of the spinning wheel learning media. Students will receive treatment in the form of the initial Indonesian reading learning process using the media of a spinning wheel of reading. After the use of the spinning wheel media to read, students will be given a posttest. The posttest score aims to determine the average reading ability of students after using the media of the spinning wheel to read. The pretest and posttest values will be analyzed by the N-gain test and the Paired T-test to determine and measure the effectiveness of the use of reading spinning wheel media.

This study uses test and non-test data collection techniques. The test technique is in the form of pretest and posttest to measure the ability to read the beginning, while the non-test technique is observation. The initial reading ability instrument is in the form of a preliminary reading assessment rubric. The data analysis methods used include descriptive word analysis, prerequisite testing through normality tests, homogeneity tests, N-gain tests and hypothesis testing using paired t-tests.

Students are given a pretest with the aim of seeing the initial reading ability before being given the treatment of spinning wheel learning media. To see the effectiveness of the spinning wheel learning media, it can be known through the pretest and post-test values which are then analyzed using the N-Gain and paired t-test. Some of the hypotheses developed in this study are as follows:

1. Hypothesis Zero (H0): "The learning media of the spinning wheel of reading is not effective in improving the initial reading ability of grade 1 students of SDN 02 Pasekan Ambarawa".
2. Alternative Hypothesis (Ha): "Reading spinning wheel learning media is effective in improving the initial reading ability of grade 1 students of SDN 02 Pasekan Ambarawa"

Before the hypothesis test is carried out, the first step is the prerequisite analysis test, namely the normality test and the homogeneity test using the SPSS 25 program. The normality test was carried out to analyze whether the pretest and posttest score data were normally distributed or not. The provisions of the normality test if the data are normally distributed with a significance value of > 0.05 . This normality test uses the Shapiro Wilk Test because the data sample used is less than 50.

The homogeneity test was used to analyze whether the pretest and posttest data obtained homogeneous results or not. This homogeneity test uses the Lavene Test with the condition that if the significance value is > 0.05 , the two data have homogeneous or equal properties.

If the data has met the requirements of normality and homogeneity, the N-Gain test is carried out to determine how much the initial reading ability is improved before and after the application of the reading spinning wheel media. The N-gain criteria according to Hake, 1999 can be seen in table 2:

Table 2. Categories N-gain.

N-Gain	Criterion
$0.7 < \text{N-gain} < 1$	Tall
$0.3 < \text{N-gain} < 0.7$	Keep
$\text{N-gain} < 0.3$	Low

Source: Hake, 1999 in (Hidayah 2023)

The categorization of N-gain score results in the form of percent (%) can be seen in table 3:

Table 1. Categories Interpretation of Effectiveness N-gain score.

N-Gain	Criterion
< 40	ineffective
40-55	less effective
56-75	quite effective
>76	effective

The next step is to conduct *the Paired Sample T-test*. This test serves to find out whether there is a significant average change before and after using the spinning wheel learning media. This test uses the SPSS 25 program with the provision of testing if the significance value of the t-test < 0.05 , H_0 is rejected and H_a is accepted.

Research Results and Discussion

Research Results

This study involved 37 grade 1 students at SD N 02 Pasekan Ambarawa as a sample. Before being given treatment, the students underwent a pretest first. After that, they were given treatment using the media of a spinning wheel to read. After the treatment, students were again given a posttest to measure their initial reading ability. The pretest and posttest data obtained were then analyzed by looking at the highest score (Xmax), the lowest score (Xmin) and the average score can be seen table 4.

Table 4. Descriptive data on initial reading ability.

Data	Min	Max	Mean
Pre-test	30	95	63,24
Post-Test	40	100	77,70

From the analysis of the data in table 4 above the pretest and posttest, it was found that the lowest score for the pretest was 30, while the post-test score was 40. The highest score for the pre-test was 95, while the highest score for the post-test was 100. The average pretest was 63.24, while the average posttest was 77.70. This proves that the average posttest score is higher than the pretest score. To illustrate the comparison of pretest and posttest scores, the researcher pre-sented it in the form of a diagram.

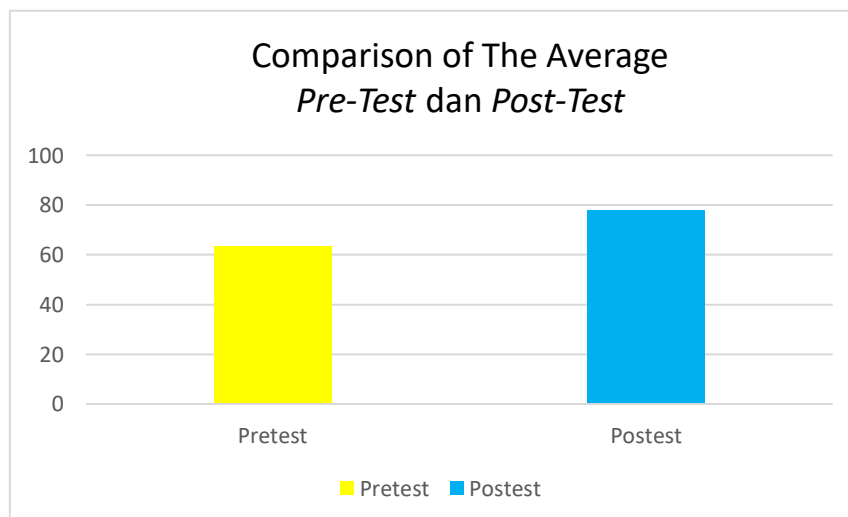


Figure 1. Comparison of Pretest Posttest 1.

Figure 1 shows the comparison between the average pretest score and posttest 1st grade student of SD N 02 Pasekan Ambarawa. The average score of the pretest was recorded at 63.24, while the average posttest increased to 77.70. The

differ-ence in average score between pretest and posttest was 14.46, which showed an increase in students' abilities after receiving treatment using the media of a spin-ning wheel to read. The second is the normality test with the Shapiro Wilk, can be seen in table 5.

Table 5. Results of the Normality Test Calculation.

NO	Data Type	Sig*
1.	Pre-test	0,383
2.	Post-Test	0,147

Third, conducting a homogeneity test using Lavene Test To find out whether the data obtained is homogeneous or not, it can be seen in the following table 6:

Table 6. Homogeneity Test Calculation Results.

Data	Test Type	Sig*	Information
Pre-test and Post-Test Results	<i>Lavene Test</i>	0,183	Homogeneous

According to table 6, the results of the homogeneity test with Lavene Test the value (Sig) Based on Mean is 0.183, which means that the significance value is $0.183 > 0.05$, so that the variance of the group pretest posttest, which is the same or homogeneous.

Fourth, calculating the value of N-gain from Pre-test and post-test from the students who were obtained results based on several criteria, namely high, medium or moderate, and low, as shown in the following table 7:

Table 7. N-gain criteria for pre-test and post-test scores.

Data	N	Mean N-gain		Category
		gain	% gain	
Pre-test and Post-test	37	0,58 %	57,99	Quite effective

In table 7, there are results from the average value N-gain which is 57.99%. This means that the effectiveness of the spinning wheel learning media is classi-fied as quite effective. This is because some students do not pay attention to the material delivered by the teacher. In addition, students tend to only work on evaluation questions without really understanding the simulations given. To sup-port the results of the test analysis N-gain score, and have met the prerequisite test requirements, then it is carried out paired sample t-test, to find out if there is a significant difference between the values Pretest and posttest average in the ability to read at the beginning.

The fifth is hypothesis testing paired sample t-test. This test is used to see if the reading spinning wheel media is effective in learning students' initial reading skills. In addition, the test paired sample t-test can also display the difference before and after using the reading spinning wheel media. Test results paired sam-ple t-test can be seen in the following table 8:

Table 8. Calculation Results of Hypothesis Test (Paired Sample T-test).

Data	Std.Dev	t	Sig (2-tailed)
Pre-test and Post-Test	5,986702	-14,991	0,000

Based on table 8 "paired sample test", the value of Sig. (2-tailed) $0.00 < 0.05$, H0 was rejected and Ha was accepted, it was concluded that there was a differ-ence in pretest and posttest values, meaning that the pre-test scores before using the spinning wheel learning media and the post-test after using the spinning wheel reading media got a significant difference.

Discussion

Elementary School Grade 1 Elementary School Students' Beginning Reading Ability Level

The study results showed that the ability to read in the first grade of elementary school before being given the learning media of the spinning wheel of reading was, on average, exceptionally fluent in reading words. When testing reading skills at the beginning, there were variations in the results of the questions answered by students, as evidenced by the results of the pretest and posttest given before the study. The researcher conducted a preliminary test (pretest) on students, producing the following data: 18 students showed the ability to read certain words and sentences fluently, 14 students had a sufficient category in reading fluency. In comparison, 5 students were not able to recognize letters and were not able to read syllables. The researcher gave students a final trial by using the spinning wheel media to read and assess their proficiency in early reading skills. Data obtained from the final trial revealed that 32 students showed fluency in reading syllables and words, while 5 students could recognize letters and read syllables. The results of this study prove that learning media is very effective and affects students' reading at the beginning. The results of this study are also strengthened by the results of the research (Dewi et al., 2022; Laksmi et al., 2021; Nurani, 2021) (Dewi et al., 2022)(Laksmi et al., 2021)(Nurani et al., 2021), that with the use of the media of the spinning wheel of reading, the initial reading ability has increased from the results of the average score pretest recorded at 63.24, while the average posttest increased to 77.70. The difference in average score between the pretest and post-test was 14.46, which proves that there is an improvement in students' abilities after receiving treatment using the media of a spinning wheel to read.

The Effectiveness of Learning Media with a Spinning Wheel

The results of the research conducted displayed a variety of different results. A striking difference in reading ability in the early stages was seen when comparing the results of the pretest and posttest. Spinning wheel learning media is quite effective compared to alternative learning media in improving the early reading skills of grade 1 students at SDN 02 Pasekan Ambarawa. This is reviewed from the results of the average N-gain score, namely 57.99% in the category of quite effective. The results of this study are in contrast to the results of the research conducted by (Salsabilah et al., 2024) (Salsabilah et al., 2024), in the study it is said that the use of reading spinning wheel media is effective in helping students to develop initial reading skills. This is due to the difference in different subjects and research places so that they produce different data in the study, it is said that the use of reading spinning wheel media is effective in helping students develop initial reading skills. This is due to the differences in different subjects and research places, which produce different data. Based on the hypothesis test, the data obtained from the paired sample t-test hypothesis test regarding the rotary wheel media reading (X) to the initial reading ability (Y) showed a significant difference, as evidenced by a significance value of 2 (2-tailed) 0.00. This means that the value of 0.000 is smaller than 0.05, indicating a considerable influence. Therefore, there was a significant increase in posttest results. Thus, (H₀) is rejected, while (H_a) is accepted. The results of this study lead to the conclusion that the application of wheel media is efficacious in improving the early reading ability of grade I students of SDN 02 Pasekan Ambarawa. The medium of a rotating wheel is an object in the shape of a circle that can be rotated. This media can help students design reading comprehension and digest spoken (Simbolon, 2019). Using this media involves students in initial reading activities, so it can increase effectiveness and provide a pleasant learning experience (Waridah et al., 2023).

The research problem formulation shows that reading rotary wheel media significantly improves students' early reading ability during the learning process. Students show an increased understanding of the material and enthusiasm in utilizing the media of the spinning wheel of reading. In addition, using attractive images and various color patterns of letters on the spinning wheel media effectively enriches the students' reading experience. The findings from this problem formulation strengthen the hypothesis that the spinning wheel media of reading considerably influences early reading skills and has been proven effective in maximizing the early reading ability of first-grade students at SDN 02 Pasekan Ambarawa. The results of the research conducted explain that the use of rotary wheel media is efficacious in improving early reading skills. These results are by the research carried out (Agustin et al., 2024), that the reading spinning wheel media has effectiveness in optimizing the initial reading ability reviewed from the results of the average score analysis pretest and posttest, which has a significant difference. In addition, this research is in line with previous research that states that the innovative pinwheel learning media carried out by Hani Sonia that the use of the media affects students' initial reading ability (Sonia, 2022). With this media, students show an increase in fluency in reading. The spinner wheel serves as a tool for students to engage in reading, aiming to expand their vocabulary. Using this media fosters children's language development through a reading model that actively encourages collaboration between students, teachers, and peers, thereby creating a meaningful and contextual learning environment (Khasanah & Wibaw, 2019).

This reading wheel also has colorful and diverse letters, and the media can be rotated to increase students' attention in learning activities. This is relevant to the research conducted by (Rahman & Amaliya, 2022) that the media used is a learning medium that has distinctive characteristics, especially the brightly colored letters, which function to attract students' attention effectively. This is also in line with research conducted by (Salsabilah et al., 2024) that the media has an attractive visual appeal so that it can improve students' reading ability at the beginning. Teachers use this medium to demonstrate reading techniques, including letter recognition in words, pronunciation of words into sentences, and the development of fluent reading skills accompanied by proper intonation. It has been observed that using rotary wheel media increases students' understanding of reading. However, the research carried out has a renewal or advantage, namely, there

are letter pockets and letter cards to form a syllable, word, or sentence based on the results of letters that appear on the reading wheel media.

The media of the spinning wheel of reading is effectively used in the initial reading learning of grade I elementary school students. The spinning wheel media makes it easier for students to learn to read and helps them pay attention to the pronunciation of the words demonstrated by the teacher while watching the words appear on the wheel. The students were enthusiastic when the teacher spun the wheel, displaying interesting letters. During the research process, researchers also noticed the students' facial expressions as they read the words individually, showing great interest in this method. Several studies also support these findings, showing that spinning wheel media significantly improves students' initial reading skills, making it easier to understand the material while learning (Agustin et al., 2024).

Conclusion

The use of spinning wheel media to read has significant differences. The average score of the pretest was 63.24. The result of the posttest score was 77.70. After using the spinning wheel media to read, there was a change, as evidenced by the difference in the average score of the pretest and posttest, which was 14.46. The reading spinning wheel media used in grade 1 has been tested to be effective with the category of learning outcomes, namely "moderate" in improving initial reading skills. Based on the formulation of the problem, the use of rotating reading media showed a significant improvement in students' initial reading ability during learning activities. This is strengthened by the results of the analysis of the hypothesis test, which is $0.000 < 0.05$, so that (H_0) is rejected, while (H_a) is accepted.

Based on the results of the t-test, the use of reading spinning wheel media has a significant influence, so it can be effective in improving the ability to read initially. Students understand the learning material faster and are enthusiastic about using the media. In addition, there are attractive pictures, and the use of colorful letters also succeeds in making reading learning more interesting and fun for students. This has a positive impact, as this media has great potential to be used as an alternative to learning to read for students. This media can provide a more interactive learning experience and make it easier for students to read. Based on the results of the research, the formulation of the hypothesis is that this spinning wheel media is efficacious in improving initial reading in grade 1 students of SDN 02 Pasekan Ambarawa.

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