

# THE INFLUENCE OF THE STRUCTURAL ANALYTICAL METHOD (SAS) WITH THE ASSISTANCE OF *BIG BOOK MEDIA* ON ELEMENTARY SCHOOL STUDENTS' BEGINNING READING ABILITY

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## ABSTRACT

This research was motivated by the results of UNESCO and PISA which stated that the literacy rate in Indonesia is still low, especially in beginning reading in elementary school students. The purpose of this study was to measure the initial reading ability of elementary school students, especially in grade I students. This research is a quasi-experimental research with a quantitative approach. Sampling was carried out using purposive sampling techniques. In obtaining data, researchers conducted initial tests (pretest) and final tests (posttest) in the form of preliminary reading tests, observation sheets and interviews. The data technique used is to use descriptive analysis techniques and descriptive statistical analysis by testing hypotheses using t-test statistics. The data obtained is then analyzed using statistical analysis techniques, namely descriptive statistics. Descriptive statistical analysis data obtained average value (pretest) = 69.17 is in the very low category and average value (posttest) = 83.00 is in the high category. From the results of the hypothesis test analysis using paired sample test, a sig value = 0.001 is obtained according to the basis for decision making, if the hypothesis test of the probability value of significance  $< 0.05$ , then  $H_0$  is rejected, and  $H_a$  is accepted. Then significantly the alternative hypothesis ( $H_a$ ) is accepted, and the null hypothesis ( $H_0$ ) is rejected. Based on the hypothesis test, it can be concluded that the synthetic structural analytical method (SAS) with the help of big book media affects the initial reading ability in grade I students of SDN Kebalen 01 Bekasi Regency.

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## 1. INTRODUCTION

Literacy skills are foundational to a child's development and crucial for their early education. These skills encompass letter recognition, spelling, reading fluency, and writing. They form the basis for effective communication and cognitive development. Early literacy skills are typically introduced during early childhood education (PAUD) and kindergarten. However, literacy development begins at home, where children are first exposed to language and communication before they enter formal schooling.

In Indonesia, the state of literacy poses significant challenges. The country's performance in literacy assessments reveals a pressing concern. For example, the 2018 PISA (Program for International Student Assessment) results placed Indonesia at 72nd out of 77 participating countries, indicating a low level of reading literacy. According to UNESCO, Indonesia ranks poorly in global literacy standings, with only 0.001% of the population identified as avid readers. This statistic implies that out of every 1,000 Indonesians, only one person is deeply engaged in reading. Furthermore, the Presidential Staff Office (KSP) reported that 50% of first-grade elementary school (SD) students lack basic reading and writing skills, a situation exacerbated by prolonged distance learning (PJJ) during the Covid-19 pandemic. Studies conducted by the Ministry of Education and Culture and the Ministry of Religion reveal that only 15% of first-grade students meet the expected literacy standards. Field verification by the KSP corroborates this, finding that half of these students struggle with fundamental reading and writing tasks. In response, the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) is focused on improving the quality of educational materials and books to make reading more attractive and accessible for Indonesian children.

One instructional method that has shown promise in addressing literacy challenges is the Structural Analytical Synthetic (SAS) method. This approach allows educators to tailor their teaching strategies to the individual needs and interests of students. It supports the preparation of lessons that are both developmentally appropriate and contextually relevant. Additionally, the SAS method encourages creative thinking and problem-solving, enabling students to engage more deeply with the learning material. By following a structured approach, students can more easily grasp and master reading skills. Another valuable tool in literacy instruction is the use of big books. According to the United States Agency for International Development (USAID), big books are large-format texts that feature colorful illustrations and oversized print. Available in various sizes such as A3, A4, and A5, these books are designed to capture students' attention and enhance their learning experiences. The visual appeal of big books, combined with their supportive images, makes them particularly effective for beginning readers. They help students engage with the text in a meaningful way, improving both reading comprehension and early literacy skills.

The process of teaching beginning reading involves several important steps. First, educators must define the objectives of the reading lesson, ensuring that the content is appropriate for the students' developmental stage. It is also crucial to balance the teaching materials, which may include word cards, letter cards, and sentence cards. Selecting effective methods for delivering the instructional content is another key aspect. Teachers should incorporate practice stages to reinforce learning and conduct evaluations to assess students' progress and understanding. In the context of beginning reading instruction, various instructional activities can be utilized. These include practicing vocal pronunciation and vocabulary, engaging in tone and song pronunciation exercises, mastering punctuation marks, and interpreting key words and phrases within text units. Developing eye contact and expressive reading skills are also important components of effective reading instruction.

The goal of research in this area is to examine the impact of the SAS method, in conjunction with big books, on the beginning reading abilities of elementary school students. By evaluating the effectiveness of these instructional strategies, the research aims to provide insights into how best to support early literacy development. Beginning reading instruction is a critical component of primary education, serving as an initial benchmark for literacy development. Effective instruction at this stage is essential for ensuring that students develop the foundational skills necessary for reading comprehension and overall academic success. Without a solid grasp of beginning reading skills, students may struggle with subsequent learning tasks, which can impede their educational progress. Therefore, it is vital for teachers to design and implement effective reading lessons that foster a positive attitude toward reading and support the development of essential literacy skills.

In Indonesia, there is a growing trend of parents seeking private tutors to teach their children to read before they enter elementary school. This trend reflects an increasing awareness of the importance of early literacy skills. However, many parents, due to low education levels or busy work schedules, may not provide adequate support for their children's reading development. This lack of early literacy support can result in delays and difficulties in learning, as children may struggle with letter recognition and basic reading skills when they begin formal schooling.

Addressing these literacy challenges requires a multifaceted approach. Educators and policymakers need to focus on developing and implementing effective instructional methods, such as the SAS method and the use of big books. Providing engaging and supportive learning materials, and fostering a positive learning environment, are essential for improving literacy outcomes. By leveraging these strategies and addressing the challenges faced by students, educators can make significant strides in enhancing literacy development and fostering a love of reading among young learners.

Therefore, improving literacy in Indonesia necessitates a comprehensive approach that includes enhancing instructional methods, providing engaging educational materials, and supporting early literacy development at home. By employing effective strategies such as the SAS method and utilizing big books, and

by creating a supportive educational environment, educators can help ensure that all students have the opportunity to develop strong literacy skills and achieve academic success.

## 2. METHOD

This research utilizes a specific methodological approach to determine the effectiveness of various instructional treatments on beginning reading skills. The primary aim is to assess whether the treatment provided yields significant outcomes for the subjects under investigation. To achieve this, the study compares the results from two different instructional methods: one involving a specialized intervention and another employing a conventional approach without the intervention. The research design chosen for this study is a non-equivalent control group design, which is a type of quasi-experimental research method.

In a non-equivalent control group design, the research involves comparing two distinct groups: the experimental group, which receives the specialized intervention, and the control group, which follows the conventional instructional method. Unlike randomized controlled trials, this design does not involve random assignment of subjects to the groups. Instead, the groups are pre-existing and selected based on specific criteria relevant to the study. This means that subjects and populations are not chosen randomly but are divided into groups based on the instructional methods they will experience.

The research is planned to be conducted over a span of approximately two weeks. During this period, there will be a total of seven sessions. The initial session will involve a preliminary examination conducted in an introductory class setting. This initial assessment will establish baseline data for both the experimental and control groups. Following this, two treatment sessions will be held. In these sessions, the experimental group will receive the specialized instructional treatment using big books and the Structural Analytical Synthetic (SAS) method. This approach is designed to enhance reading skills through a combination of visual and structural elements. Meanwhile, the control group will continue with the conventional instructional method, which does not include the specialized intervention.

After the treatment sessions, a post-test will be administered to both groups. The purpose of this post-test is to evaluate the effectiveness of the instructional treatments and to measure any changes in reading skills that may have occurred as a result of the interventions. This assessment will help determine whether the specialized instructional methods have had a significant impact compared to the traditional approach. In the context of this research, two classes are involved. The experimental class uses the instructional method that incorporates big books and the SAS approach. This method aims to engage students through visually stimulating materials and structured analytical techniques. In contrast, the control class follows a conventional instructional method, focusing on traditional teaching practices without the additional support provided by the big books and SAS approach.

The research design is carefully structured to allow for a thorough comparison between the specialized and conventional instructional methods. By analyzing the outcomes from both the experimental and control groups, the study seeks to provide valuable insights into the effectiveness of using big books and the SAS method for improving beginning reading skills. The goal is to contribute to a better understanding of effective instructional strategies and to offer evidence-based recommendations for enhancing literacy development in early education settings. Overall, this research employs a non-equivalent control group design to evaluate the impact of specific instructional methods on beginning reading skills. The study's design ensures a rigorous comparison between the specialized intervention and the conventional approach, providing a comprehensive analysis of their relative effectiveness. Through this approach, the research aims to inform educational practices and contribute to the development of more effective reading instruction strategies.

## 3. RESULTS AND DISCUSSION

This research is a quasi-experimental study conducted at SDN Kebale 01, Bekasi Regency. In this study, data is collected in the form of pre-test and post-test scores from both the experimental and control classes. The data is then subjected to prerequisite tests, including normality and homogeneity tests. Once these prerequisites are satisfied, hypothesis testing is performed using a t-test. The pre-test and post-test data are analyzed to determine the impact of using the Structural Analytical Synthetic (SAS) method with the aid of big books on the beginning reading abilities of first-grade students. Additionally, observations are made to assess the initial reading skills of students in the first grade.

In the experimental class, the SAS method is implemented using big books, while the control class receives conventional reading instruction. Pre-test scores are collected before students in both the experimental and control groups receive their respective treatments. Post-test scores are collected after the treatment is administered to evaluate the effects of the intervention. Before treatment begins, each class undergoes a pre-test to determine the students' initial reading abilities. The pre-test for the experimental class involves using big books designed for beginning readers in first grade. After completing the pre-test, instruction starts in the

experimental class with the SAS method and big books, while the control class continues with conventional teaching methods. The final test (post-test) is then administered to both groups.

The results from the pre-test and post-test scores for both the experimental and control classes are analyzed using prerequisite tests to ensure that the data meets the normality and homogeneity assumptions required for statistical testing. The analysis of the average pre-test and post-test scores between the experimental and control classes is presented in the figure.

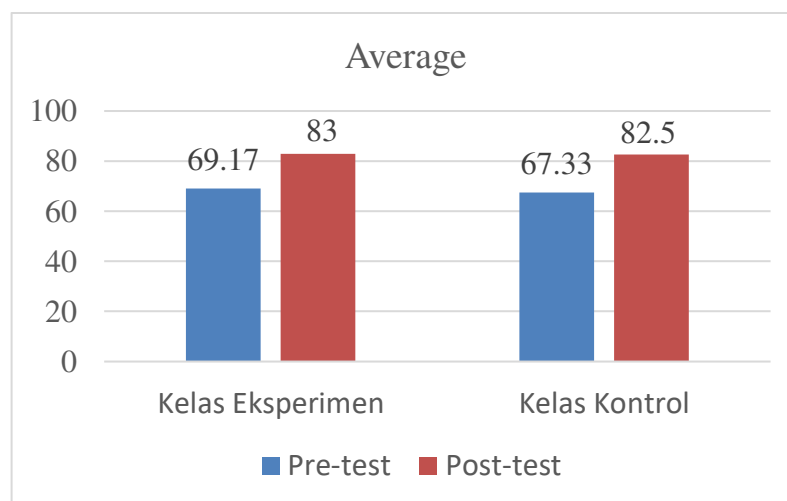


Figure 1. Average Graph of Experimental and Control Classes

Based on the graph of students' scores, it can be concluded that there is a significant difference in beginning reading ability between the experimental and control classes. The experimental class, which received instruction using the Structural Analytical Synthetic (SAS) method with the aid of big books, showed a greater improvement in reading ability compared to the control class, which received conventional instruction.

In the experimental class, the implementation of the SAS method with big books led to an average pre-test score of 69.17, which increased to an average post-test score of 83.00. This indicates a substantial gain in reading ability. In contrast, the control class, which utilized conventional teaching methods, had an average pre-test score of 67.33 and an average post-test score of 82.50. Although the control class also showed improvement, the gains were less pronounced compared to those in the experimental class. The observed differences in learning outcomes between the experimental and control classes can be attributed to the variations in instructional methods and media used. The SAS method combined with big books appears to provide a more effective approach to enhancing beginning reading skills compared to traditional instructional methods.

**3.1 Sample**

The normality test is conducted to determine whether the sample data follows a normal distribution. If the data is normally distributed, parametric statistical methods can be applied for analysis. Conversely, if the data does not follow a normal distribution, non-parametric statistical methods are used. The normality test results indicate whether the distribution of scores from the sample conforms to a normal distribution. If the data meets the criteria for normality, then parametric statistical tests, such as t-tests, can be employed. These tests assume that the data follows a normal distribution and are appropriate for comparing means between groups.

On the other hand, if the data does not meet the normality assumption, non-parametric tests should be used. Non-parametric tests do not assume a normal distribution and are suitable for analyzing data that does not follow a normal distribution. The following summary presents the results of the normality test for the sample data, detailing whether the data follows a normal distribution or not.

Table 2. Sample Normality Test Results

Kolmogorov-Smirnov					
Data	Group	Statistics	df	Sig.	Lightness
Pre-test	Experiment	0.107	30	0.200	Be distribution no
Post-test		0.126	30	0.200	Be distribution no
Pre-test	Control	0.088	30	0.200	Be distribution no
Post-test		0.125	30	0.200	Be distribution no

### 3.2 Homogeneity Test Sample

The homogeneity test is used to determine whether the variances among different groups in the sample are equal. This is important for ensuring the validity of parametric tests, which assume equal variances across groups. In this research, the Levene's test is employed to assess the homogeneity of variances. The criteria for making decisions based on Levene's test are as follows: (1) If the significance value (Sig) is greater than 0.05, this indicates that the variances are homogeneous, meaning that the assumption of equal variances is met; (2) If the significance value (Sig) is less than 0.05, this indicates that the variances are not homogeneous, meaning that the assumption of equal variances is violated. A summary of the results from the homogeneity test is provided below, showing whether the variances across groups are homogeneous or not.

Table 3. Sample Homogeneity Test Results

Group		Levene statistics	df 1	df 2	Sig.	Lightness
Pre-test	Experiment	0.704	1	58	0.405	Homogeneous
	Control					
Post-test	Experiment	0.106	1	58	0.746	Homogeneous
	Control					

### 3.3. Hypothesis Test

After completing the normality and homogeneity tests as prerequisites, we can proceed to hypothesis testing using the t-test if the data meets the necessary conditions. The normality and homogeneity tests ensure that the data distribution adheres to the assumptions required for parametric analysis. Once the data is confirmed to meet these assumptions, a paired t-test can be applied to assess the hypothesis. The paired t-test is used to compare two related samples or measurements, which is suitable for analyzing pre-test and post-test scores in this context. This test is appropriate because the data has satisfied the prerequisites of normality and homogeneity of variances.

The paired t-test evaluates whether there is a statistically significant difference between the mean scores of the pre-test and post-test. This test will determine if the changes observed in the scores are significant or if they could be attributed to random variation. The results of the paired t-test, including t-values, degrees of freedom, and p-values, will provide insights into whether the observed differences between the pre-test and post-test scores are significant. A summary of the hypothesis testing results, including the paired t-test analysis, will be presented in the table. This table will provide a concise overview of the findings, including statistical significance and mean differences, to address the hypothesis prepared earlier.

Table 4. Sample Hypothesis Test Results

Paired Samples Test		Paired Differences							
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		T	df	Sig. (2-tailed)
					Lower	Upper			
Pair 1	Pre-test Post-test	-13.83333	15.23852	2.78216	-19.52349	8.14317	-4.972	29	< ,001

Based on the results presented in Table 2, the normality test, conducted using the Kolmogorov-Smirnov test, indicates that both pre-test and post-test data for the experimental group (rime specific) and control group follow a normal distribution. For the experimental group, the pre-test data has a significance value of 0.200, and the post-test data has a significance value of 0.200. Similarly, for the control group, the pre-test data has a significance value of 0.200, and the post-test data has a significance value of 0.200. Since all significance values are greater than 0.05, the data are normally distributed, meeting the normality assumption required for parametric testing.

In Table 3, the homogeneity test results are presented. According to Levene's test, which assesses the equality of variances, the data are considered homogeneous if the significance value is greater than 0.05. For the pre-test data, the significance value is 0.405, indicating that the variances are homogeneous. Similarly, for the post-test data, the significance value is 0.746, confirming that the variances remain homogeneous. This indicates that the assumption of equal variances is satisfied for both pre-test and post-test data. With the prerequisites of normality and homogeneity confirmed, the next step is to conduct the paired sample t-test to evaluate the hypothesis. According to the decision rule for the t-test, if the significance value is less than 0.05, the null hypothesis (H0) is rejected in favor of the alternative hypothesis (Ha). As shown in Table 4, the significance value for the paired t-test is 0.001, which is less than 0.05. This result indicates a statistically significant difference, suggesting that the Structural Analytical Synthetic (SAS) method, in conjunction with the use of big books, has a significant impact on improving the beginning reading abilities of students in the experimental group compared to the control group.

In addition to the hypothesis tests, descriptive analysis was conducted to further examine the application of the SAS method and big books. This analysis provides insights into how the SAS method influences the reading abilities of first-grade students. The findings demonstrate that the SAS approach, combined with big books, effectively enhances beginning reading skills. The improvement observed in the experimental group underscores the efficacy of this method in fostering better reading development in primary school students. In conclusion, the analysis confirms that the SAS method, supported by the use of big books, significantly influences the beginning reading abilities of elementary students. The data indicates that this instructional approach leads to notable improvements in reading skills, highlighting its potential as an effective educational tool..

**4. CONCLUSION**

Firstly, the hypothesis test using paired samples revealed a significance value (sig) of 0.001. According to the decision rule for hypothesis testing, if the significance probability value is less than 0.05, the null hypothesis (H0) is rejected and the alternative hypothesis (Ha) is accepted. Since the significance value obtained is indeed less than 0.05, it confirms the acceptance of the alternative hypothesis (Ha) and the rejection of the null hypothesis (H0). This result indicates that the Structural Analytical Synthetic (SAS) method,

supported by the use of big books, has a significant impact on the beginning reading abilities of first-grade students at SDN Kebale 01, Bekasi Regency.

Secondly, the implementation of the SAS method, in conjunction with big books, has shown positive results in the classroom. The use of the SAS approach, alongside big books, has led to an increase in students' reading abilities. Observations of student activities and performance indicate that this instructional method effectively enhances learning outcomes. The results suggest that the SAS method, combined with big books, not only helps improve students' reading skills but also makes the learning process more engaging and enjoyable for them.

Overall, it can be concluded that the SAS method, with the aid of big books, is a valuable educational tool. It effectively supports students in developing their reading abilities and encourages active participation in the learning process. This approach proves beneficial in addressing reading difficulties and fostering a positive attitude towards reading among students.

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