



# The Influence of Using Story Dice Media On Students' Critical Reasoning Ability in Learning Indonesian Language Class IV SDN I Cimara

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## Article Information ABSTRACT

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*Background:* This research is motivated by the importance of developing students' critical thinking skills in learning Indonesian, especially in the 21st-century education era which demands good thinking skills from students. *Aim:* The purpose of this study is to explore the influence of using storytelling dice media on the critical thinking skills of fourth-grade students at SDN I Cimara. *Method:* The method used is a quantitative approach with a quasi-experimental design and Nonequivalent Control Group Design, involving 39 students selected through purposive sampling. Fourth-grade students at SDN I Cimara were used as the experimental class using storytelling dice media, while fourth-grade students at SDN 3 Sukarapih served as the control class without the media. Data were collected through observations and tests (pre-test and post-test) to measure students' critical thinking skills. *Result and Discussions:* The results of the analysis showed that the pre-test scores of the experimental class were normally distributed, while those of the control class were not. The homogeneity test showed homogeneous variance. Hypothesis testing using the Mann-Whitney U test indicated no influence of storytelling dice media on the pre-test, but a significant influence on the post-test. The average post-test score of the experimental class (87.81) was higher than that of the control class (60.22), indicating that storytelling dice media is effective in improving students' critical thinking skills. The discussion of the research results emphasizes that the use of storytelling dice media can increase student engagement and interest in learning Indonesian, and address the problems of traditional one-way teaching methods. *Conclusion:* The conclusion of this study is that storytelling dice media is an effective tool for enhancing students' critical thinking skills, and further exploration of innovative teaching methods is needed to improve educational outcomes.

**Keywords:** Dice Storytelling Media, Critical Reasoning Ability

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## INTRODUCTION

Education is a process of developing people's potential and skills, which is influenced by positive practices, and supported by planned (Lubis et al. , 2022:182-183). In Law no. 20 of 2003, that education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential.

Current developments in the world of education emphasize the need for teachers to be more innovative and efficient in the learning process. Creative teachers have the ability to identify opportunities and use these abilities to be more productive in teaching. Teachers have a big responsibility in shaping the nation's future, but are often required to comply with various complex administrative regulations and governance. This can disrupt the concept of the teacher's honor as a companion which should be optimal provided assistance to students (Ariga, 2023:622-633).

Profile Student Pancasila covers capability, character, and competencies that are a necessity for Indonesian students in the 21st century era (Irawati et al. , 2022:1229). The Pancasila Student Profile has six competencies, namely 1) Faith, devotion to God Almighty, and noble character, 2) Independence, 3) Critical reasoning, 4) Creativity, 5) Working together, and 6) Global diversity.

Critical Reasoning is an important aspect of the Pancasila Student Profile, which is essential for helping students understand and solve problems ((Rosmalah et al. , 2022:970). Critical reasoning is a very important learning skill and must be taught to students. This is a complex process that involves receiving and mastering data, analyzing and evaluating data (Arum, Kasimin, 2022:138) . Critical reasoning involves specific and systematic analysis of a problem, the ability to differentiate between problems, and identifying information to design problem-solving strategies. However, in its implementation, critical reasoning skills need to be conveyed

in a way that is easy to understand and enjoyable. Therefore, one way is to use learning media. The ability to reason critically is a very important skill for overcoming problems and facing various challenges that develop over time (Dimensi et al. , 2023:177). However, in its implementation, critical reasoning skills need to be conveyed in a way that is easy to understand and enjoyable. Therefore, one way is to use learning media.

Media is a tool to help convey learning material (Agustini & Masudah, 2020:3). Therefore, the media has an important role as a tool to convey messages or information to other people. This media can function as a guide or intermediary when there is subject matter that is difficult to understand and unclear to students. Learning media refers to the hardware or software used by teachers to convey material to students in the learning process. The use of this media aims to increase the effectiveness and efficiency of learning in accordance with the stated objectives (Magdalena et al. , 2021:316). In general, the use of learning media in teaching and learning activities aims to facilitate interaction between teachers and students, so that the learning process can run more effectively and efficiently.

(Miftah, 2022:4-6) said that there are various types of learning media that can be utilized, especially with the increasingly dominant role of technology in the world of education today. One type of learning media used to make it easier for students to implement critical reasoning skills is storytelling media. Dice storytelling media is media that involves the use of dice as a device to tell a story. This approach can be effective in improving children's cognitive abilities, introducing the concept of numbers, understanding aspects of mathematics, and also acts as a tool for developing language skills. This approach can also be applied in developing storytelling skills, where students use dice to determine the characters, setting and conflict in the story, then create a narrative based on the results of the dice roll (Meuthia & Suyadi, 2021:359). With this media, the use of dice as a Storytelling tools provide diversity and creativity in producing stories, so that each student gets unique and varied results from these activities. This approach not only develops cutting and assembly skills, but also stimulates students' critical reasoning, creative and narrative abilities.

Based on the results of initial observations at SDN I Cimara, it shows that the learning process tends to be one-way with minimal interaction between students and teachers. Students participate less actively and listen more to explanations from the teacher, which can limit the development of their critical reasoning skills. Another problem is students' lack of understanding of the material being taught, so they experience difficulty in developing that understanding. Apart from that, students also tend to get bored quickly during learning, resulting in difficulty in absorbing information properly. Students' lack of focus on learning activities, as well as activities that are monotonous and less interesting, are also obstacles found in the learning process.

Problem on in line with study previously conducted by (Wardhana & Trisnawati, 2016) stated at SDN Purworejo,

Kaliori District that the problem in the learning process was that students still did not play an active role in learning, students' enthusiasm for learning the material was lacking so that students often felt bored during class, because of that It can be seen that during learning, students pay less attention to the teacher during learning. Similarly, research results from (Berjamai & Davidi, 2020) show that there are several factors that hinder the development of critical thinking skills of fifth grade elementary school students in Indonesian language subjects, namely: (1) Students' lack of courage to convey arguments, (2) Limited space for exploration. given by teachers to students, (3) Use of monotonous learning methods, and (4) Lack of effectiveness in classroom management.

Based on exposure on, researcher conclude that use media dice can has a significant impact on students' conqnitve abilities and critical reasoning abilities with this, realizing the importance of the storytelling dice media is very useful in the ongoing learning process in order to improve students' critical reasoning abilities in language learning. Indonesia. Therefore, it is important to examine in more depth the "Effect of Using Dice Storytelling Media on Students' Critical Reasoning Ability in Class IV Indonesian Language Learning at SD Negeri I Cimara".

## METHOD

This research uses a quantitative research approach with the method used, namely the quasi-experimental method with the design chosen being Nonequivalent Control Group Design. The population in this study included all class IV students at SDN I Cimara and SDN 3 Sukarapih, Cibereum District, Kuningan Regency, totaling 39 students. The sampling technique in this research is purposive sampling technique. Purposive Sampling is a sampling technique that is carried out by considering. certain criteria (Karnia Eka Lestari, 2022:110). The sample in this research is planned to take two classes, namely. The sample in this research is planned to take two classes, namely. Next, the population in this research is class IV students at SD Negeri I Cimara who are used as an experimental class and receive treatment using the dice learning media telling stories, while students. Class IV of SD Negeri 3 Sukarapih was used as a control class which did not receive treatment using the dice storytelling learning media.

The data collection techniques used in this research are observation and tests. Observations were carried out to evaluate the extent of learning effectiveness when implementing the Dice Storytelling learning media. Meanwhile, the test was carried out to collect data regarding the improvement of students' critical reasoning abilities before and after implementing the Dice Storytelling learning media. The test instrument applied in this research is a written test, namely Pre-test and Post- test, which consists of 10 descriptive questions that have been validated and designed based on indicators of critical reasoning ability. The data

analysis used is analysis to measure the improvement in students' critical reasoning abilities achieved by students, descriptive statistics and inferential statistic, namely normality tests, homogeneity tests and hypothesis tests.

Based on the results of the pretest and posttest data analysis, students' critical reasoning abilities obtained normality test data

## RESULTS AND DISCUSSION

Table I. Data Normality Test

| Class         | Shapiro-Wilk         |      |      |      |
|---------------|----------------------|------|------|------|
|               | Statistics           | Df   | Sig. |      |
| Results Study | Pre test experiment  | ,923 | 16   | ,189 |
|               | post test experiment | ,888 | 16   | ,051 |
|               | pre test Control     | ,847 | 23   | ,002 |
|               | post control test    | ,878 | 23   | ,059 |

### a. Lilliefors Significance Correction

Based on table I above, it shows that the pretest data for the experimental class has a sig value. 0.189 which means sig. > 0.05 then H<sub>0</sub> is accepted and the data is declared a normal distribution, while the sig. The control class pretest is 0.02, which means sig < 0.05, so H<sub>0</sub> is rejected and the data

is declared to be non-normally distributed. From the pretest results of the experimental class and control class, it can be concluded that the normality test for the two classes is not normally distributed. Then the homogeneity test will be presented in the table below.

Table II. Pretest Data Homogeneity Test  
Test of Homogeneity of Variance

|         |                                      | Levene Statistic | df1 | df2    | Sig. |
|---------|--------------------------------------|------------------|-----|--------|------|
| Results | Based on Mean                        | 2.094            | 1   | 37     | .156 |
|         | Based on Median                      | 2.003            | 1   | 37     | .165 |
|         | Based on Median and with adjusted df | 2.003            | 1   | 29.120 | .168 |
|         | Based on trimmed mean                | 1.991            | 1   | 37     | .167 |

Based on the table above, at the significance level  $\alpha = 5\%$  or 0.05, the sig value is obtained. Decisions are taken based on the provisions of the homogeneity hypothesis, namely if sig > 0.05 (5%) then H<sub>0</sub> is accepted and declared to have homogeneous or equal variance. But if sig > 0.05 (5%)

then H<sub>1</sub> is accepted then the variance is declared heterogeneous or unequal. Table 4.2 shows that the sig. 0.156 which means sig.  $\geq 0.05$  then H<sub>0</sub> is accepted and the pretest data is declared to have homogeneous or equal variance. Next, the results of the posttest homogeneity test are presented.

Table III. Posttest Data Homogeneity Test  
Test of Homogeneity of Variance

|         |                                      | Levene Statistic | df1 | df2    | Sig. |
|---------|--------------------------------------|------------------|-----|--------|------|
| Results | Based on Mean                        | .128             | 1   | 37     | .722 |
|         | Based on Median                      | .205             | 1   | 37     | .654 |
|         | Based on Median and with adjusted df | .205             | 1   | 32.691 | .654 |
|         | Based on trimmed mean                | .194             | 1   | 37     | .662 |

Based on the table above, the test at a significance level of  $\alpha = 5\%$  or 0.05 obtained a sig value. Decisions are taken based on the provisions of the homogeneity hypothesis, namely if sig > 0.05 (5%) then H<sub>0</sub> is accepted and declared to have homogeneous or equal variance. However, if sig < 0.05 (5%) then H<sub>1</sub> is accepted then the variance is declared

heterogeneous or unequal. Table 4.3 shows that the sig value. Posttest data has a sig value. 0.722, which means sig  $\geq 0.05$ , then H<sub>0</sub> is accepted and the posttest data is said to have homogeneous or the same variance. Then next, a hypothesis test (Mann-Whitney U) will be carried out which is presented in the table below.

Table IV. Hypothesis Testing Pretest data  
Test Statistics<sup>a</sup>

|                | Pretest |
|----------------|---------|
| Mann-Whitney U | 182.500 |
| Wilcoxon W     | 318.500 |

|                                 |                    |
|---------------------------------|--------------------|
| Z                               | -. 045             |
| Asymp. Sig. (2-tailed)          | . 964              |
| Exact Sig. [2*(1-tailed Sig. )] | . 966 <sup>b</sup> |

- a. Grouping Variable Kelas
- b. Not corrected for ties.

Based on the table above, it shows that there is a value asymp 0. 964 on pertest data where sig. (2-tailed)  $\geq$  0. 05 (5%) with the conclusion H0 being accepted, which means there is no influence from the application of the Dice

Storytelling learning media on the critical reasoning abilities of class IV students. Furthermore, a table of Mann-Withney U Posttest hypothesis test results is also presented below.

Table V. Hypothesis Testing Data Posttest  
Test Statistics<sup>a</sup>

|                                 | Pretest            |
|---------------------------------|--------------------|
| Mann-Whitney U                  | . 000              |
| Wilcoxon W                      | 276. 000           |
| Z                               | -5. 341            |
| Asymp. Sig. (2-tailed)          | . 000              |
| Exact Sig. [2*(1-tailed Sig. )] | . 000 <sup>b</sup> |

- a. Grouping Variable: Kelas
- b. Not corrected for ties

Based on the table above, it shows that there is a value asymp 0. 000 on pertest data where sig. (2-tailed)  $\leq$  0. 05 (5%) with the H1 decision being accepted, which means that there is an influence from the application of the Dice Storytelling learning media on the critical reasoning abilities of class IV students.

Based on research data conducted by the researcher, the researcher played a direct role as an Indonesian language teacher in class 4 of SDN 1 Cimara and SDN 3 Sukarapih on the material "My World of Indonesia: Children of Merapi". In class 4 at SDN 1 Cimara, treatment was given using storytelling dice media, while in class 4 at SDN 3 Sukarapih, teaching was carried out without using storytelling dice media.

The research results showed that the results of hypothesis testing using the Mann-Whitney U test indicated that in the pretest, there was no influence of the storytelling dice media on students' critical reasoning abilities in the experimental class and control class. However, after being given treatment with the storytelling dice media, the posttest in the experimental class and control class showed that the storytelling dice media had a significant influence in improving students' critical reasoning abilities. Apart from that, there was a significant difference in the average posttest score between class 4 of SDN 1 Cimara, which was given treatment using storytelling dice media, and class 4 of SDN 3 Sukarapih, which did not use this media. In class 4 of SDN 1 Cimara, the average score of students on the posttest was 87. 81, while in class 4 of SDN 3 Sukarapih, the average student score on the posttest was 60. 22. this difference in average values shows that the use of storytelling media has a positive influence on students' critical reasoning abilities.

The influence of using dice storytelling media can be seen from the difference in average scores in class 4 at SDN 1 Cimara

and class 4 at SDN 3 Sukarapih. Learning that uses storytelling media makes students more enthusiastic in following the lesson. Elementary school students in general still love to play, and at the concrete operational stage, they tend to enjoy activities that involve hands-on experience. They like to play, move and work in groups, so the media of storytelling is very suitable for increasing their involvement in learning.

Dice storytelling media in class 4 at SDN 1 Cimara has a positive impact on students. Students become more enthusiastic and happy in learning. They not only listen to the teacher's explanation, but can also directly see and create the objects displayed. The function of this storytelling dice media is to make children participate in lessons more happily, so that their interest in learning Indonesian becomes greater. Children become happy, stimulated, interested and have a positive attitude towards learning Indonesian.

This research was conducted on grade 4 students at SDN 1 Cimara as the experimental group and grade 4 students at SDN 3 Sukarapih as the control group. Before starting the learning process, both classes were given a pretest sheet to measure students' initial abilities. After the learning process is complete, each class is given a posttest sheet. This posttest sheet was used to assess the effect of using picture word dice media on the experimental group after they received treatment.

Overall, the results of this study indicate a significant difference in the average posttest score between the experimental class and the control class. This indicates that the use of storytelling media has a significant influence on students' critical reasoning abilities in Indonesian language lessons for grade 4 students.

## CONCLUSION

Based on the results of the research that has been carried out, it can be concluded that the use of storytelling dice media is effective in improving students' critical reasoning abilities in learning Indonesian in class IV at SDN I Cimara. The learning process in class IV at SDN I Cimara still requires increased interaction between students and teachers, and storytelling media can be a solution to increase student involvement in learning. The results of the research show that the use of storytelling media has a significant positive impact on students' critical reasoning abilities. Therefore, the use of storytelling dice media can be used as a strategy innovative and effective learning in developing students' abilities in Indonesian language subjects.

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