Effectiveness of Implementing Card Sort Media with Madiun Gastronomic Content for Improving Procedure Text Writing Skills

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Abstract— The aim of this research is to describe the effectiveness of Card Sort media with Madiun Gastronomic Content on elementary school students' procedural text writing skills. The research method uses a quasi-experimental design with two groups, namely the experimental class and the control class. The results of the research showed that the control class tended not to experience a significant increase, whereas in the experimental class there was an increase. The average value of procedural text writing skills in the control class at pretest was 51.61, posttest 74.14, an increase of 44%. Meanwhile, the average score for procedural text writing skills in the experimental class at the pretest was 51.96 and at the posttest it was 83.31, an increase of 61%. Based on the comparison between the N-gain of the control and experimental classes, it shows that the N-gain of SD N Prambon has a significance of 0.33. Referring to the provision that there is a significant difference, if the significance value is <0.05, then the school used in testing the Card Sort product has a significant difference between the control and experimental classes so that the Card Sort learning media is effective in increasing the ability to write procedural text skills significantly.

Keywords— Media Card Sort, Gastronomy, Writing Skills, Procedure Text.

I. INTRODUCTION

Language skills in the school curriculum include four aspects, namely: listening skills, speaking skills, reading skills, writing skills [1]. These skills are closely related to the processes underlying the mind. The more skilled a person is at language, the brighter and clearer his thoughts will be [2]. Writing skills are active-productive skills. This skill is seen as occupying the most complicated and complex hierarchy among other types of language skills [3]. Writing is the process of forming meaning and a series of related text creation activities: generating, arranging and developing ideas in sentences: composing, forming, rereading text, editing and revising [4]. Writing is a way of sharing ideas, feelings, thoughts, desires and experiences with readers in written form, besides that, writing is a process of discovering ideas to hone thinking skills, open up opportunities for learning, help strengthen social relationships and encourage success at university and the workplace . This is considered the most difficult skill for students because they must be able to produce good writing [4].

Learning in elementary schools contains text-oriented teaching and learning activities. Therefore, students must be able to produce texts well, not only limited to language knowledge, but also useful as a source of actualization for their users in the social and cultural realm of education. [5]. Carrying out learning to write fluently and producing expressive text is the most difficult language skill of the four language skills for all students, writing requires more time and precision [6].

Writing is a productive skill and a creative act of expressing ideas. Writing can also help students develop their thoughts and feelings. Students must remember several aspects of writing in order to write well [7]. One of the writing lessons in elementary school is writing procedural texts. Writing procedure texts is one of the writing competencies possessed by students to produce or do something. In everyday life, students often use procedure texts. Usually, students read texts about how to operate an item, how to prepare or make something, how to act in several situations such as schools, companies, and communities, and how to get to some places, such texts are called procedure texts. [8]. Procedure texts are factual in nature and have a core structure, namely definitions, materials and tools, process [9].

One of the factors that has encouraged the emergence of Indonesia as a pluralistic society that fosters a diverse national cultural diversity is the rich culinary heritage of the country. The diversity of types of food consumed by the public, both in terms of taste, shape, ingredients, cooking techniques, presentation methods, customer demographics, and the origin of the food, is one approach to describe the nature of this diversity [10]. It is very important to include regional specialties into

daily education so that students can understand the process of making them through a fun learning experience. Integrating it into learning material is one approach that can be taken.

Learning media can be characterized as tangible or intangible instruments that are deliberately used as a bridge between educators and students to better understand lesson content and increase its effectiveness and efficiency. When choosing which media to use, the following factors need to be considered: (1) the user's age, environment, social culture, and subject characteristics; (2) media accessibility; (3) use of media to facilitate learning or only as a complement; and (4) the likelihood that users will find the material interesting. passionate, facilitating and adding interest to the process [11]. Creative media greatly influences children's interest in reading [12]. To overcome problems in schools, media innovation and learning strategies, including the use of card media, are very important.

One of the learning tools developed by Melvin L. Silberman (2002) for his book Active Learning 101 Ways to Learn for Active Students is the card sort learning tool. Since the medium (card type) consists of short cards with instructional content on them, they are very basic. Boredom in class can be reduced thanks to the rise of body movement media. In accordance with the theory that language is a stimulus-response process, this media is also very useful for honing speaking and writing skills. Because Card Sort media only consists of short cards containing instructional content, this is a fairly basic type of media. A collaborative teaching method that can be used to teach concepts, qualities, classifications, facts about objects, or interview information is card sorting according to the teacher's learning tactics and methodology [12].

Card Sort is a learning media that can be applied in an active and cooperative learning atmosphere, used to review material or teach ideas, facts, classifications and attributes about an object. The body movements common in this medium may liven up a boring or uninteresting lesson. Apart from that, developing writing and speaking skills in line with the language process—which is considered a stimulus and response process—using this media is very helpful [13].

Several deficiencies were found during observations of method text materials and Indonesian language teaching

and learning activities in grade 4 at various State Elementary Schools in Dagangan sub-district. One of the problems is that students have difficulty compiling procedural texts because so far they have only read procedural texts in textbooks and arranged them in a certain order.

Many students' procedural text writing assignment results did not match the assignment format. It is important to pay attention to the procedural texts written by students because there are still errors in terms of written content and language [14]. Procedure texts about recipes and procedure texts about how to use tools are two sub-materials that students will learn when learning to compose procedure texts in elementary school. Recipe procedure texts explain how to make food or drinks. On the other hand, process texts related to manuals relate to how to use something [15].

Card Sort is an example of learning media that has been developed by previous academics and has been proven to improve learning outcomes in problem solving. Research [12]produces problem-based Card Sort learning materials that are useful for increasing students' reading literacy levels.

Additional research was conducted by [16]. The researchers used a cooperative learning model such as puzzles, with the help of Card Sort, to provide opportunities for students to engage with each other, participate actively in the learning process, be encouraged to voice their opinions, and have responsibility for learning both individually and in pairs as peer tutors. for the subject matter studied. In addition, research [17]shows that making teaching materials or similar for learning to write procedural texts is needed to improve student learning outcomes.

The absence of learning resources that teachers use in daily learning, teachers almost never use learning resources when teaching Indonesian language skills is the cause of students not actively learning to produce procedural texts. Textbook illustrations are usually the only materials used when learning how to write procedures text [18].

Apart from that, today's students do not know the characteristics of their own region, including regional specialties. Students are still not familiar with regional crafts and all their characteristics, such as the manufacturing process. Researchers will test the

effectiveness of the card sort media developed with regional gastronomic content which includes a QR-Code learning video about how to make regional specialties as Madiun gastronomy. The benefits of QR-Code in the world of education are that it makes learning more interesting, motivates students' interest in learning, apart from creating fun activities, QR-Code can also display animated learning videos [19]. The use of QR-Code can be used as part of a learning technology innovation and is easy to use considering that nowadays the average parent or student already has a smartphone. [20].

Objective of The Study

The specific aim of this research is to find out whether card sort media can help elementary school children's ability to write procedural texts or not. Theoretically, this research can advance our understanding of how to teach media learning in elementary schools, which will help students write procedural texts more effectively. Moreover, its pragmatic advantage lies in its potential to provide a basis for additional relevant studies.

Statement of the Problem

This research aims to find out the process and results of developing Card Sort media with Madiun Gastronomy content to improve the ability to write procedural texts in elementary schools that are valid and practical? This research specifically aims to answer the following questions:

1. Are the average pretest and posttest scores of the control group significantly different?
2. Did the average pretest and posttest scores of the experimental group change significantly?
3. Are the abilities of students in the experimental group and the control group significantly different?

II. METHODS

A. Research Design

This research uses a quasi-experimental approach using a pretest-posttest control group design with a quantitative research type.

Two groups were randomly selected for this design: the control group consisted of fourth grade students at SD Negeri Mruwak 03, while the experimental group consisted of fourth grade students at SD Negeri Prambon. Table 3.3 below shows the pretest posttest control group design.

Table 1. Desain pretest and posttest

Kelompok	Pretes	Perlakuan	Postes
Eksperimen	Q₁	X₁	Q₂
Kontrol	Q₁	X₂	Q₂

B. Research Subjects

According to Arikunto (2013), data sources are topics from which data can be collected. The subject from which data is collected is known as the data source; if the data source is incorrect then the information collected will be meaningless (Sugiyono, 2015). The subjects in this research were class IV students at SD Negeri Prambon and SDN Mruwak 03, totaling 43 students. Pretest and posttest findings were used as data sources. The test results are intended to determine how well procedural text writing skills can be used in Card Sort media.

C. Research Instrument

The results of the score on the ability to write procedural texts were used as a research tool in this study. The questions are in the form of descriptions that are made in accordance with the specified competency achievements and contain indicators of procedural text writing skills. Instrument validity and reliability tests were carried out in order to produce representative results.

Content validity is used to assess the validity of the procedure text writing skills instrument. The instrument was created in accordance with learning indicators and procedural text writing guidelines. After that, it is evaluated by professionals (expert judgment) to get their opinion.

C. Data Analysis

The data analysis process uses the T test and N-gain score test. The T test was carried out using the results of the gain score, posttest and pretest. Before using the Card Sort learning media, pretest scores were obtained, and after using the Card Sort learning media, posttest scores were obtained.

The aim of the effectiveness assessment is to find out how much influence the Card Sort learning media has on students' ability to write procedural texts. The prerequisite test data analysis process involves steps including: 1) Normality Test; 2) Homogeneity Test; 3) Balance Test; 4) Difference Test; 5) Test N-Gain Score.

III. RESULTS AND DISCUSSION

Results

Table 2. Pretest and posttest results of procedural text writing skills in the experimental class

Test Type	N	Minimum	Maximum	Mean	Standard Deviation
Pretest	21	55	69	62,10	3,590
Posttest	21	83	95	89,52	3,586

The results of the ability to write procedural texts before and after using the Card Sort learning media in the experimental class and control class became data collected during the product testing stage. Table 2 above shows the pretest results for the ability to write procedural texts in the experimental class which uses Card Sort learning materials. Table 2 presents data on students' procedure text writing skills before and after using Card Sort learning media in the experimental class. Before using the Card Sort learning media, the student data is known class IV at SDN Prambon Class A with 21 students, obtained an average score of 62.10; standard deviation of 3.590; minimum score of 55; and the maximum score is 69. Students after using the Card Sort learning media get an average of 89.52; standard deviation of 3.586; minimum score of 83; and the maximum score is 95. Pretest data on procedure text writing skills in the control class which does not use Card Sort learning media can be seen in table 3 below:

Table 3. Pretest and posttest results of procedural text writing skills in the control class

Test Type	N	Minimum	Maximum	Mean	Standard Deviation
Pretest	22	57	69	62,64	3,259
Posttest	22	81	92	86,36	3,094

Table 3 presents pretest and posttest data on procedure text writing skills in the control class. From the pretest, 22 students took the pretest, and the results showed an average score of 62.64, a standard deviation of 3.259, a minimum score of 57, and a maximum score of 69. The posttest results showed a minimum score of 81, a maximum score of 92,skor rata-rata 86,36, dan standar deviasi 3,094. The experimental class and control class showed an increase in procedural text writing skills, as seen from the increase in the average pretest and posttest scores of students. Table 4 below illustrates the improvement in scores in the experimental and control groups:

Table 4. Increased grades in experimental and control classes

No	Student Groups	Average value		Enhancement
		Pretest	Posttest	
1.	Eksperimen	62,10	89,52	27%
2.	Kontrol	62,64	86,36	23%

The normality test, homogeneity test and balance test are used to analyze the effectiveness test data. Table 5 below displays the findings from the examination of the ability to write procedural texts in the effectiveness test:

Table 5. Results of analysis of procedure text writing skills in product effectiveness testing

Testing	Test Type	Sig.	Decision	Conclusion
Normalitas Pretest	Kolmogrov Smirnov	Experiment = 0,200 Control = 0,200	H0 accepted	Normal Data
Normalitas Posttest	Kolmogrov Smirnov	Experiment = 0,164 Control = 0,092	H0 accepted	Normal Data
Homogenitas	Laven's test	Pretest = 0,591 Posttest = 0,620	H0 accepted	Data Homogen
Balance	Independent sample t-test	Pretest = 0,755	H0 accepted	There isn't any difference

Difference	Independent sample t-test	Thitung = 5,205	H0 rejected	There is difference

The data is normally distributed as shown by data analysis of procedural text writing skills carried out using SPSS version 26. Data normality was tested using Kolmogrov-Smirnov, and the pretest score obtained had a significance level of 0.200 for the experimental class. and 0.200 for the control class. The data can be determined to be normally distributed by looking at the significance level of the posttest value, namely 0.164 for the experimental class and 0.92 for the control class. It can be concluded that the pretest data for the experimental class and control class came from homogeneous variance based on the homogeneity of the pretest data as proven by the Leven'es test and obtained a significance level value of 0.591 so it can be

concluded. The pretest data for the experimental class and control class came from homogeneous variance. The homogeneity of the posttest data resulted in a significance level score of 0.620, which indicates that the variance of the two groups is homogeneous. After the homogeneity and normality tests are completed, a balance test is carried out. The pretest value obtained was 0.755 indicating that the data came from two balanced populations. The significance of additional tests, especially the t test using the independent sample t test, shows that t is 5.205 (> 2.008), which indicates that H0 is rejected or that there is a significant difference in students' ability to write procedural texts between the experimental class and the control class.

Table 6. *Effectiveness test results*

School	Sig.	TS	Ket.	Decision	Conclusion
SD N Mruwak 03	0,00	0,05	0,00 <0,05	H0 rejected	The experimental class is better than the control class

Data obtained from the pretest and posttest were analyzed using gain scores in both classes. The aim of the gain score analysis is to find out how much the students' ability has increased in producing procedural

texts in the control and experimental classes. Table 7 below displays the findings of the gain score analysis for the experimental class and control class:

Table 7. *Gain score analysis results*

School	Class	N	Min	Max	Mean(%)	Sig.
SDN Prambon	Experiment	21	22,73	76,00	42,31	0,33
SD N Mruwak 03	Control	22	8,00	61,90	35,06	

It can be seen from the statistics in Table 7 that the lowest and maximum values for the experimental class are greater than the values for the control group. Likewise, the average percent growth score for the experimental class was 42.31, which was greater than the average growth score for the control class of 35.06. So it can be concluded that the % gain score in the experimental class is higher than the gain score in the control class. This shows that the use of Card Sort learning media is able to improve procedural text writing skills in students with the lowest scores and also in students with the highest scores, as well as in the majority of students in the experimental class.

Based on the comparison between the N-gain of the control and experimental classes, it shows that the N-gain of SD N Prambon has a significance of 0.33. Referring to the provision that there is a significant difference, if the significance value is <0.05, then the

school used in testing the Card Sort product has a significant difference between the control and experimental classes so that the Card Sort learning media is effective in increasing the ability to write procedural text skills significantly.

Discussion

SDN Prambon class B was used as the control class and SDN Mruwak 03 class A as the experimental class for the efficacy test. By presenting pretest questions to both groups, exam prerequisites can be ascertained. The prerequisite test results show that the variance of the two groups is homogeneous and the data is normally distributed. Meanwhile, students in the control class used textbook material, while those in the experimental class used Card Sort learning resources. Students were given posttest questions after both classes were given the contents of the procedure text. According to research [21]in the effectiveness test, carry out a pretest and

posttest as a measure of the level of effectiveness of the media being developed [22]

The posttest results show that the experimental class and the control class have different abilities in writing procedural texts. In the Procedure Text material, Elementary School Class IV can use the Card Sort learning media effectively because the experimental class and those who use it have a greater average ability to write procedure text compared to the control class. This is in accordance with research which shows the important and beneficial impact of educational media on student learning outcomes [23]. The findings of the t test and gain score calculations which show that the Card Sort learning media has effectiveness in the high category in improving students' procedural text writing skills, is another way to see how effective the learning material is. According to research findings conducted by [24]that substantial findings were obtained from the efficacy test using the N-gain test. The t test using the Independent Sample T-Test obtained a t value of 5.205 (>2.008), which means that H0 was rejected or there was a significant difference in the ability to write procedural texts for the experimental class and the control class.

Based on the comparison between the N-gain of the control and experimental classes, it shows that the N-gain of SD N Mruwak 03 has a significance of 0.033. Referring to the provision that there is a significant difference, if the significance value is <0.05 then the school used in testing the Card Sort product has a significant difference between the control and experimental classes so that the Card Sort learning media is effective in increasing the ability to write procedural text skills significantly. The use of learning resources by students also encourages involvement and enthusiasm for the material. This is in line with research [25]which presents learning material through the use of image, audio and video media will make students more enthusiastic about participating in class when various interactive learning resources are used. Learners gain intrinsic motivation to participate in their education when various media are used [26]

The Card Sort learning media not only displays media in the form of text, but also includes additional images, QR-Code which is integrated with learning videos, namely the process of making regional specialties. Teachers can achieve learning goals more quickly and easily if they incorporate educational media into their lesson plans [27]. This is because the use of learning media has proven successful in the field of education. It is recommended that educators incorporate technology into their lesson plans.

The results of this research show that to improve learning outcomes, especially procedural text writing skills, educators can use Card Sort learning materials which contain content related to regional gastronomy. Students are enthusiastic about learning when using Card Sort learning media which displays content related to regional cuisine. Apart from that, it can highlight the diversity in the surrounding environment, especially traditional cuisine which is currently being replaced by fast food. Students can also understand lesson material more easily thanks to the way media which includes procedural texts, images, as well as audio and video are organized and presented, especially procedural text material. This encourages maximum achievement of learning objectives.

IV. CONCLUSIONS

Pretest-posttest control group design was used with a quasi-experimental approach to evaluate the effectiveness of the Card Sort learning media. The efficient Card Sort learning media product was developed at the testing stage to help class IV Indonesian language learners write procedural texts more proficiently. Independent Sample T-Test findings show a significance level of 0.000 (<0.05). On average, students' procedure text writing skills after using Card Sort learning media are better than before using Card Sort learning media, as evidenced by the N-gain results of 42.31% and 35.06% which is in the medium category. These results support the rejection of H0 and acceptance of Ha. The N-gain test score shows that the use of the developed Card Sort learning media has been effective in improving the procedural text writing skills of class IV students in learning Indonesian procedural text material.

will still be many things that need to be improved. Therefore, the author really hopes for criticism and suggestions to improve this research.

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