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Brainstorming Based Project Learning in a German Reading Classroom

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ABSTRACT

This study aimed to determine the effect of the implementation of brainstorming based project learning models, specifically on the use of brainstorming, in a German reading classroom. This research used experimental research methods. The research design used a pre-experimental one-group pretest-posttest design. Data analysis was conducted using a Quantitative design with a t-test. This study's data included data on pretest scores and post-test scores in the experimental and control classes. In this study, a total of 60 student and two teacher are involved. This result showed that the T-arithmetic > T-table or 4,643 > 1,801 at the significant level 0.05. Brainstorming based project learning models has proven successful in improving German reading skills in students. The problem that always occurs in German learning is reading skills because students think that German is a new language and have difficulty understanding grammar. Also, students' difficulty learning to read German is that students lack vocabulary so that students find it difficult to understand the reading. This study provides insights for teachers to implement brainstorming based project learning in their classrooms. Further research is needed to explore more about a students' reading activities on learning German, which we would like to discuss further within.

Keyword: Brainstorming, German Language Classroom, L2, Project Based Learning, Reading

INTRODUCTION

Learning German for reading skills is closely related to text comprehension skills. Students often face difficulties in learning to read German, for example, in understanding texts, such as determining the theme or title of a text and answering questions related to the text being read. The difficulties experienced by these students also affect when they express ideas or thoughts, both in oral and written form. The challenges found in learning German include aspects of language, such as vocabulary and grammar. The difficulties encountered in learning German include aspects of language, such as vocabulary and grammar. Lack of mastery of vocabulary and grammar can be seen when students often ask the teacher to interpret each German vocabulary while learning. Students also still have difficulty understanding and finding the main idea of the text to read.

In the last ten years, there have also been studies investigating the challenges that students and teachers faced in L2 classrooms. A study by Husain (2012) writing and reading activity is a complex process that involves acquiring various skills that contribute to overall writing difficulties for any language user. The teacher still uses the discussion or lecture learning method, which causes learning to read less attractive and students think that learning to read is a boring activity, (Jaya, 2018). Students have difficulty understanding the text. When students read a text, they cannot understand and cannot explain the meaning of the text. Students have difficulty answering questions. In learning to read German, the teacher uses the translation method and reads German text, (Hidayanti, 2018). The learning method used by the teacher is the translation method. In the process, the teacher translates every word in the text so that it can have an impact on students' lack of reading skills, so students have difficulty understanding a text in German. In learning to read German, students do not have an interest in reading. This is due to inaccurate learning strategies

or methods used by the teacher when learning to read, (Yuan, 2010, Hidayanti, 2018, Dahlberg, 2019). In general, all of these studies discuss problems in learning to write in foreign languages. The discussion above can conclude that students can overcome difficulties in understanding German language reading by using several active learning models and making it easier for students to write.

The Brainstorming based project learning model as a strategy in the written process has not been implemented to write German. So far, only using strategies outside of Brainstorming-based project learning so that the Brainstorming based Project learning model needs to be used to teach reading in German. Based on this problem, the researcher argues that there is a need to improve the learning process with an attractive method so that students can take an active role and be more interested in learning German. This study aims to determine the effectiveness of the Brainstorming based project learning model in reading skills. In the learning process using the Brainstorming based project learning model, it is expected to improve German reading skills. Writing is the ability not only to get ideas from thoughts onto paper but also to generate more meaning and make ideas clear.

LITERATURE REVIEW

The application of the brainstorming model in the learning process as a strategy in the reading process can overcome students' learning obstacles in understanding German reading. Brainstorming based project-based learning has the advantage of being able to process learning activities. The advantage is that the participants have an enthusiasm to build their creative ideas, Michinov (2015). The Brainstorming based Project learning model can be a learning model that facilitates creative thinking in someone, and this model is more effective than the group model, (Paulus, 2002). Project-based learning is an approach to the learning process that can improve students' thinking power in schools and colleges because learning activities focus on student outcomes to complete projects, (Karaçalli, 2014).

Brainstorming techniques are easy techniques and encourage success in writing and reading. Often students have difficulty understanding reading and expressing ideas that match the theme, or even students do not know what to say (Brown, 2001, Aldeirre et al., 2018, Philips, 2008). The Brainstorming model is a technique to provoke and encourage students' creative thinking based on general ideas in group discussions (Weichbroth, 2016). Project-based learning has maintained a wide range of learning outcomes, including conceptual knowledge, basic skills, and motivation (Darling-Hammond, 2008, Guo, 2020). Students can influence students in a more active and effective learning process than using conventional learning models in project-based learning. They can use project-based learning in literacy, mathematics, and social studies lessons. (Jessica, 2020; Kingston, 2018). In conclusion, the above studies show positive results in the brainstorming learning model's effectiveness and project-based learning in reading learning. This learning model is used to improve reading skills.

Brainstorming based project learning models is a learning model that aims to train students to understand based on their understanding and interpret a reading with a project discussion guide done in groups. So that in its implementation, learning to read German can be understood by teachers and students. In this step of the Brainstorming based project, learning Models is a learning model; there are 5 steps, namely: (1) The teacher delivers the learning material, (2) The teacher divides groups of 3-5 people, (3) The teacher shares the discussion theme, and the students create a class project discussion, (4) Monitor project discussions and (5) Evaluation. Using the Brainstorming-based project learning models can make it easier for students to understand the reading. The research results have proven that this research is good to use as a method to help

students remember what they read and can help the teaching and learning process in class, which is carried out by reading German texts. In the implementation process, reading learning activities using the Brainwriting based project learning model gives students the freedom to understand the meaning of reading. Also, in the learning process, students make a reading summary that is made in group discussions.

RESEARCH METHODOLOGY

To collect the data, field observation and tests were conducted in the study. Participants in this study were 60 (40 female, 20 male) male and female students from secondary schools in Indonesia aged 15-17 years. We recruited them to with a simple random sampling method. Simple random sampling technique or simple random sampling to determine the treated class and the untreated class.

This quantitative study used a pre-experimental -one-group pretest-posttest research design. A one-group pretest-posttest design is a type of research design most often utilized by behavioral researchers to determine the effect of a treatment or intervention on a given sample, (Knapp 2016). The instrument using questionnaires and tests. The instrument was used in a reading test with a multiple-choice test consisting of long passages and short readings. The data analysis technique used a Quantitative design to see the differences in reading skills between the experimental class and the control class was the t-test. The data in this study included data on pretest scores and posttest scores in the experimental and control classes to see differences in students' reading skills with the brainstorming based project learning models with conventional learning models. The statistical analysis was aimed at finding out normality distribution, Homogeneity of variance, and Effectiveness test.
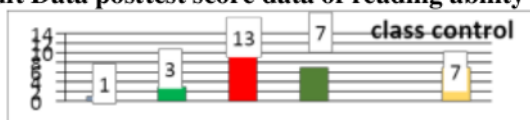
FINDINGS AND DISCUSSION

The results showed that by using the brainstorming based project learning model, German reading skills increased. The details are described below:

1. **Data posttest score data of reading ability in the control class**

Table 1.1

The Analysis result Data posttest score data of reading ability in the control class

The experimental class is a class that gets a learning treatment without using a brainstorming based project learning Model on reading skills. Data Based on the results of the statistical analysis of SPSS for Windows 26.0, the overall minimum value is 21, the maximum value is 29, the average score (mean) is 29.87; mode of 28.00; the median of 28.00; and the standard deviation (standard deviation) of 2.013. We can see the frequency distribution of German reading skills in this group's data in the following table.
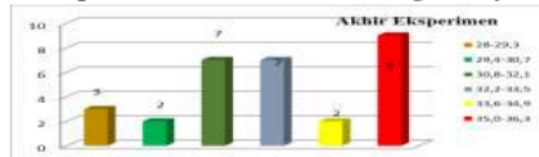
2. Data posttest score data of reading ability in the Experiment class

<div align="center">Table 1.2</div>
<div align="center">**The Analysis result Data posttest score data of reading ability in the Experiment class**</div>

The experimental class is a class that gets a learning treatment with a brainstorming based project learning Model. Data Based on the results of the statistical analysis of SPSS for windows 13.0, the overall minimum score is 28, the maximum value is 36, the average score (mean) is 31.87; mode amounting to 32.00; a median of 32.00; and the standard deviation (standard deviation) of 2.013. We can see the frequency distribution of German reading skills in this group's data in the following table.

3. **The Normality Test**

The normality test was also carried out on the data distribution of the German reading skills scores in the control class and the experimental class. The distribution of normal effective value data is due to the normality test result of the experimental class is 0.175, and the control class is 0.321. The normality test is greater than 0.05.

<div align="center">**Table 1.3. Normality Test**</div>

Class	Asymp. sig.(2-tailed)	Conclusion
Control	0,321	Normal distribution
Experiment	0,175	Normal distribution

The table above shows the results of the gain score calculation, which have normal data distribution. This is because the gain score has a value (asymp. Sig) of more than 0.05, namely 0.325 in the control class and 0.175 in the experimental class.

4. **The homogeneity Test**

After the data distribution normality test was carried out, the homogeneity test was then carried out. The condition is homogeneous if the calculated significance value is greater than the significance level of 0.05. Can see the results of the homogeneity test in the following table:

<div align="center">**Table 1.4. Homogeneity Test**</div>

Asymp. sig.(2-tailed)	Conclusion
0,242	Sig.0,242 > 0,05 =Homogen

From the table above, we can see that the pretest data sig value of the experimental class and control class is 0.242. This shows a sig value of more than 0.05. Thus, obtained the student's reading skills decisions from the homogeneous pretest data. It is said to be homogeneous because the significance value is greater than the significance level.

The T-test aims to test the hypothesis, which is to determine the differences between the groups that take learning to read using the Brainstorming based project learning model and the groups that take learning to read German without using the brainstorming based Project learning model. The T-test is also used to test the effectiveness of using the brainstorming based

project learning model in reading learning compared to reading learning without using the brainstorming project-based learning model.

Table 1.5. T-test

Treatment	T arithmetic	T table	Conclusion
The brainstorming based project-based learning	4,643	1,801	H_0 was rejected / H_1 accepted

Based on the t-test result, there is a difference in the experimental class students' reading skills who use the Brainstorming-based project learning model and the control class students' reading skills using the discussion learning model in testing the hypothesis using the T-test. The data analysis result of the brainstorming-based project learning model toward German reading skills could have gotten T-arithmetic = 4.643 and T-table = 1.801. According to the criteria test, this research concluded that Ho was rejected or H1 was accepted since the result was T-arithmetic > T-table or 4.643 > 1.801. It concluded that there was the influence of the Brainstorming based project learning model significantly toward the German reading skill.

Brainstorming based project learning models is one of the learning models used by teachers in class. In the learning process, the teacher provides reading texts to students, discusses in groups, and answers or expresses opinions or comments on the text. Then in the last session, students discuss together to make the final product on the text that has been read. Students' reading skills using the brainstorming learning model are better than reading skills using conventional learning models. The use of a brainstorming based project learning model also makes it easier for students to learn German text because students can channel ideas and express their opinions in groups. If students experience difficulties, they are welcome to ask the teacher. The classroom atmosphere using brainstorming-based project learning models can create a friendly atmosphere between students and teachers.

This condition makes students' interest and motivation to learn German, especially learning reading skills to increase. A conducive learning situation can support students to master the material presented by the teacher, resulting in good reading skills and significantly better results than those taught by conventional techniques. Project-Based Learning is a way of learning that leads to a training process based on real problems done by yourself through certain activities (projects) (Gijbels, 2005). Project-Based Learning is a learning method that encourages students to apply critical thinking, problem-solving skills and gain knowledge about the real problems and issues it faces. In this project-based learning, educators will play a more role as facilitators who guide students through the learning process. Planning and implementing project activities is a time-consuming and time-consuming activity. Its implementation also requires careful consideration (Habok, 2015; Rogers, 2011).

The learning atmosphere with brainstorming based project learning models is very different from learning with conventional techniques. Students are more active and enthusiastic because of the social interactions in group work to convey their ideas freely. The learning center is for the students, while the teacher only acts as a facilitator to learn independently. Learning with the Brainstorming learning model based on project-based learning is fun and not boring because students can work together to answer questions from the teacher and have their respective roles in the group. Baker and Westrup (2005) state that when students have fun learning, they will take a more active part in the lesson with a variety of interesting and guided learning. Brainstorming can

be seen as a technique where individuals or groups engage in critical thinking to produce broad ideas and creative solutions to a problem.

Brainstorming can be effective, and it's important to approach it with an open mind and a spirit of non-judgment. In other words, if students feel fun, enjoyable, and comfortable during the teaching-learning process, they can catch the maximum comprehension of the lesson material. Teachers' implementation of Project-based learning has greatly affected students' content understanding and development of skills (Kokotsaki, 2016). Brainstorming is one technique for fostering group creativity by which ideas and thoughts are shared among members spontaneously to reach solutions to practical problems (Gogus, 2012; Hosam, 2017). The research above shows that the Brainstorming based project learning model can make it easier for students to understand German reading texts.

CONCLUSION

At the conclusion of this study, the brainstorming based project learning model is effective for reading German. Implementing the brainstorming based project learning model can improve students' reading skills in German. The brainstorming based project learning model can motivate students, train students to work together to complete projects, and make it easy for students to understand German reading given by the teacher. The study of brainstorming-based project learning Models got the students' data result in their German reading skills. Students are also very enthusiastic about getting the material needed and can follow the teaching and learning process well. Students need to be trained in a guided manner to stand a German text in learning reading skills. Therefore, teachers should be able to use a learning model that can improve students' reading skills. In further research, the brainstorming based project learning model expects to facilitate the learning process of Indonesian reading skills and make it easier for students to express their creative ideas in story writing activities. Based on the conclusion, brainstorming based project learning can apply as an alternative in learning to read German to help students in critical thinking skills and understand the meaning of reading in German.

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