The Effectiveness of Brain Mapping Method In Students' Reading Comprehension by Using Blogger Based in Merdeka Curriculum

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Abstract

Most of the students got low scores in reading and understanding the material in online classes, this situation should be attention to Merdeka Curriculum. Most of the students lack interest in learning reading in an online class, because the learning methods in reading did not attract students, so the students had difficulty in answering explicit and implicit questions in reading comprehension. The purpose of this research is to determine the significant differences before and after using the brain mapping method in students' reading comprehension. This research designed as quantitative research that used one group pre-test and post-test design. sample amounted to 35 students. Collecting data used documentation and reading comprehension tests which were analyzed using Paired T-test with the help of SPSS 18 for Windows and N-Gain using Microsoft Excel. The post-test average learning outcome (77,29) was greater than the pretest (69.00). The results of the paired t-test showed the significance value (2-tailed) was 0.000 means there was significant effectiveness before and after using the Brain Mapping method toward Blogger as the online media for learning reading. The results of N-Gain showed the students' learning outcomes improved from 35 students, 21 (60%) students got improvement in the medium category and 14 (40%) students got improvement in the low category. Brain mapping method combined with rewards and interesting materials can improve student achievement where students are more active and enthusiastic in the online teaching and learning process.,
Keywords: *Brain _Mapping; Reading _Comprehension; Blog; Merdeka_Curriculum*

Efektifitas Brain Mapping Pada Kemampuan Reading Mahasiswa Melalui Blgger Pada Kurikulum Merdeka

Abstrak

Fakta bahwa banyak sIswa mendapat nilai rendah dalam mata kuliah reading pada kelas online, hal ini harus di perhatikan terutama dalam melaksanakan Kurikulum Merdeka. Kurangnya minat siswa untuk belajar membaca di kelas online, karena penggunaan metode dan materi pembelajaran yang kurang sesuai dengan kondisi, sehingga siswa kesulitan menjawab pertanyaan reading comprehension secara eksplisit dan implisit. Tujuan dari penelitian ini adalah untuk mengetahui perbedaan yang signifikan sebelum dan sesudah menggunakan metode brain mapping menggunakan media blog dalam pemahaman membaca siswa. Penelitian ini merupakan penelitian kuantitatif, yang menunjukan rata-rata hasil belajar mahasiswa dalam posttest (77,29) lebih besar dari pretest (69,00). Hasil uji t-test menunjukkan nilai signifikansi (2-tailed) sebesar 0,000 artinya ada keefektifan yang signifikan sebelum dan sesudah menggunakan metode Brain Mapping terhadap Blog sebagai media online untuk pembelajaran membaca. Hasil N-Gain menunjukkan hasil belajar siswa meningkat dari 35 siswa, 21 (60%) siswa mengalami peningkatan pada kategori sedang dan 14 (40%) siswa mengalami peningkatan pada kategori rendah. Metode brain mapping yang dipadukan dengan reward dan materi yang menarik dapat meningkatkan prestasi siswa dimana siswa lebih aktif dan antusias dalam proses belajar mengajar secara daring.

Kata Kunci: *Brain_Mapping; Reading_Comprehension; Blogger; Kurikulum_Merdeka*

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INTRODUCTION

Revolution industry 4.0 not just influenced civilization in development and technology, but in education also (Vu Anh & Le Quoc, 2019). The government changes the habits of the learning process (Martin et al., 2020). In education, the teacher and lecturer are not just doing the learning process directly by transferring knowledge to the students, it is the old style, they should be master technology to support the learning process (Ilyas, 2020). The lecturer need the motivation and habitual to learn the technology as learning media (Weilage & Stumpfegger, 2022). Besides, the style of student's learning also different based on the condition (Truong & Murray, 2019). The condition of the students' learning process was change since COVID 19. Because of that the teacher and lecturer should have skill to create the suitable technology as media in process the transfer knowledge (Dunn & Kennedy, 2019).

Fortunately, the revolution industry also supports by the government regulation in education in Merdeka Curriculum (Nur Saputra, 2021). The Freedom learning which has been implementing on the last two years, slowly improved the lecturers skill and ability by using various technology in the learning process (Houlden & Veletsianos, 2021). So, getting more and new information and theories based on the students' material as the process transfer knowledge for the students also important beside and improve the skill in technology are need walking together.

The students' condition since pandemic era was change in the learning process (Sevi & Aydin, 2020). The students should study at home in online class (Cheuk-Hung Chan et al., 2020). In reading activities, it such bored activity by old activity (Sastry et al., 2019). It is not because the lecturer gives monotone learning method by using WhatsApp Group, then the assignment submitted in Google Class Room. Unfortunately, the lecturer rarely gives the feedback such as score or result of learning process. Besides, in some case the lecturer gives the reading material toward Zoom, it makes the students should have more money to buy pulse. Learning reading toward zoom also ineffective if the lecturer just presents the reading material in lecture method. The lecturer also not familiar with zoom application, so when the lecturer used it, they confused how to share screen operate it in learning process. The students should have skill and ability learning both of online and offline class to understanding reading material (Rasita et al., 2021)

. The students need more practice learning reading in online class as their habitual, and the students also need suitable media in learning reading toward online class (Castro-Calvo et al., 2021). The implications of this research are expected to be able to develop and learn reading comprehension as the better and easier and be useful for English teachers, lecturer, students, and future researchers.

By using blog is one way to handle the lecturer problems and students' problem by learning online class and offline class (Famularsih, 2020). Blog is media which suitable in online class. By using blog to learn reading, the lecturer could save the material with easy (Garcia et al., 2019). The lecturer could attach some videos toward YouTube and others sources. Using this media is cheaper t access by the students so, they do not need more money to buy pulse for learning process. The way to learn blog also easy to understanding by the lecturer. They just need have google account and they could follow the next step based on the information. The lecturer material in blog could be revised many times as much as the lecturer need. The lecturer also could upload various materials such as class information, students score, students' assignment, and others.

The material which has been designed trough blog is easy to access by the students (Pilkington, 2018), then the students also do not need pay the expensive data plan in online class (Habidin et al., 2019). Besides, if the students need others information related to all material which has been discussed during this semester, they could opened it so many times in one click (Nacak et al., 2020). By using blog both of students and lecturer do not need more space memory to save all the material in their phone, laptops or PC. Therefore, when the

students and lecturer have trouble with their PC, all the material are still ready to access in Blog because all the material are ready upload in Google drive. The suitable media for Reading sill in online class, will accompany the students get the maximum knowledge and skill (Kocisky et al., 2018). As the window to the world that is very important for studied. The lecturer should be prepared it, one of the most important is reading comprehension. It is because all knowledge that exists on this earth goes through the initial process of mastering knowledge by reading.

The students who read as usually activity was different with the students who have skill in reading comprehension (Rosiana & Cahyanti, 2022). Reading comprehension need process to study. Here, the students do not only read what they see but understands all aspects and contents of a text (Oakhill et al., 2019). Students must comprehend and understand through their ability in describing of the words, expression, and sentences. By reading comprehension, the students will acquire of what messages and information. Besides, the students will have the basic problem-solving skill, if the students have good reading skill. That is the reason why the lecturer should have appropriate media for the students in reading skill.

It can be concluded that the feasible method can improve students' reading comprehension better. Students are more active in the teaching and learning process by online class in blog. So that students can understand the whole text more easily and are able to answer reading comprehension questions.

METHODS

The research was quantitative research and used an experimental design. Experiment design is a design of research that uses to find out an effect of a certain treatment. The type of experimental design was used pre-experimental with one group pre-test and post-test design. The researchers using this method to exploratory research to test the feasibility study, Next the researchers could check the potential treatment to solve the students' problems or no. The researcher used non-probability as the sampling technique to know the students' achievement regardless of students background/characteristic, this sampling conducted for students STKIP PGRI Nganjuk in the academic year of 2021/2022 who is students taking English for Specific Purposes, with a population 67 students in the Math Department and Civic Department and a sample consisting of 35 students.

The collecting data used documentation only to know the students' information from the lecturer such as name, gender, and student number, to record activity in teaching and learning through picture and paper test as the researchers' evidence in conducting the research. So that the documentation can complement the data without affecting the results of the research finding. Besides, the research used tests namely pre-test and post-test. Assessment of student learning outcomes was measured using the test method as follows:

Table 1: Pre-Test and Post-Test Instrument

No	Categories	Indicators	Instrument	
1.	Explicit	The correct answer gets 10 The answer was correct but less complete gets 5	1. 2. 3. 4.	Refers to Paragraph Structure General Question General Question
2.	Implicit	The correct answer gets 10 The answer close (same meaning) to correct gets 5	1. 2. 3. 4. 5. 6.	The purpose of the text Title Main idea of the paragraph Conclusion Conclusion detail Synonym word

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The answer is correct but other synonym gets 5	
Total Score	100

The table above describe the students problems which designed as the research questions by finding out the effectiveness of using Blogger in reading skill and how is the students understanding in reading comprehension by using Blogger.

The students' scores in a category and in the shape of a pie chart and inferential statistics to answer the third research questions by using paired t-test with the help of SPSS 18 for windows and n-gain using Microsoft Excel.

Table 2: Category of interpretation of N-gain improvement

Limitation	Category
$g \geq 0.7$	High
$0.3 < g \leq 0.7$	Medium
$g \leq 0.3$	Low

The pre-requisite of the paired t-test is the data that must be normally distributed and have homogeneity so that a normality test must be carried out to determine whether the data was normal using the Skewness-Kurtosis test and to find out whether the data has homogeneity was carried out by the Levene statistics test.

RESEARCH FINDING AND DISCUSSION

In an online class, more than 60 % of lecturers using WhatsApp as the media for teaching learning and Google Class Room as media to submit the students' assignments without clearly explanations, unfortunately, it was not interesting anymore in learning reading comprehension. This media makes the students difficult looking for the information and material which has been spread out by the lecturers because the new message comes. Using audio and visual is also difficult for students because they should download it and it needs space memory in their phone. Sometimes, material in meeting 6 will have a correlation with the previous meeting. Unfortunately, the audiovisual which has been shared, sometimes it has been deleted. Even though WhatsApp could make group video calls like zoom and google meet, it is still ineffective because the video and the speaker's explanation unclear. Based on the scores of the students' pre-test results, the following results were obtained:
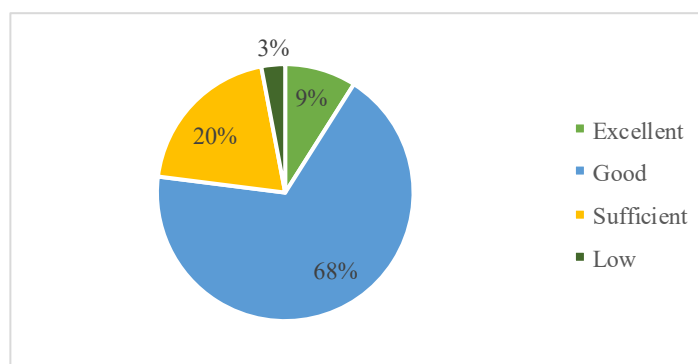
Chart 1. The Students' Reading Comprehension Before Using Blogger

Based on the chart above, there were 3 students (9%) get excellent criteria, 24 students (68%) get good criteria, 7 students (20%) get sufficient criteria, and 1 student (3%) gets low criteria. Even though there were many students in good criteria, the results of the students did not reach the standard of learning namely 75 with the highest score was 90 and the lowest score was 40. Based on the scores of the students' score in test results by using blogger in online class, the following results were obtained.
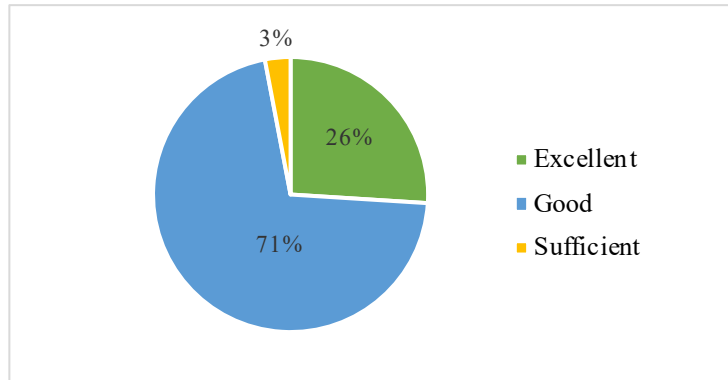
Chart 2. The Students' Reading Comprehension Achievement After Using Blogger

Based on the chart above there were nine students (26%) get excellent criteria, twenty-five students (71%) get good criteria, and one student (3%) get sufficient criteria. So, there were improvements in student achievement with the highest score was 90 and the lowest score was 60. The result of the students' analysis was improvement can be seen in this table:

Table 3: The Analysis of Students' Improvement Results

Condition	Total Student Achievement				Average Scores
	Excellent	Good	Sufficient	Low	
Before using Blogger	3	24	7	1	69.00
Using Blogger	9	25	1	0	77.29

From the table above, the reading comprehension before and after using Blogger in online Classes achieved in excellent criteria from 3 to 9, in the good criteria was 24 to 25, in the sufficient criteria was less from 8 to 1 and there was no student in low and poor criteria. After the data was obtained, the data obtained were tested for normality using the SKewness-Kurtosis test with the results of the pre-test skewness 1.65, post-test 0.47 and Kurtosis pre-test 0.68, post-test 0.60. The result was under 2 which means the data was normally distributed. Then, the homogeneity test used Levene Statistic with a significance result of 0.128 which was greater than the standard significant (5%) used so that the data had homogeneity. The conclusion of the paired t-test by using SPSS 18 for windows. The results of data are shown in table 4.

Table 4: Paired Sample Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PreTest	69.00	35	11.233	1.899
	PostTest	77.29	35	7.509	1.269

Source: Data processed by the researcher

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The table above showed, the researchers gave two tests for the 35 samples which the average post-test value was 77.29 and the pretest value was 69.00. It means the average post-test value after used the treatment was better than pre-test before used the treatment. The magnitude of this influence can be seen based on the data of Paired Samples Correlations with the correlation value between the two variables: The result of 0.891 means that the relationship is strong and positive.

Table 5: Paired Sample Test

			95% Confidence Interval of the Difference				
Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
-8.286	5.681	.960	-10.237	-6.334	-8.629	34	.000

Source: Data processed by the researchers

Based on table 5, the mean was -8,286. A negative value means it happened tendency to increase learning outcomes after treatment standard deviation was 5.681, standard error mean was 0,960, t test was -8,629 and significant value (2 tailed) was 0.000 with the df of 34. To know the significant differences reading comprehension of students achieved both of before and after using Blogger in online class, it must return to the hypothesis. There are two kinds of hypothesis:

1) Ha (Alternative Hypothesis)

If the value is significant (2-tailed) < the significance standard (0.05), then there are significant differences in students' reading comprehension achievement before and after using Blogger in online class in teaching and learning process for Non-English Department Students in the academic year of 2022/2023.

2) Ho (Null Hypothesis)

If the value is significant (2-tailed) > the significance standard (0.05), then there are no significant differences in students' reading comprehension before and after using Blogger in online class in teaching and learning process for Non-English Department Students in the academic year of 2022/2023

Based on the results of paired sample t-test above, it can be seen that the Null hypothesis (Ho) is rejected and Alternative hypothesis (Ha) is accepted. It means that there are significant differences of students' achievements reading comprehension. To measure how much the student understand about the material through the improvement of the students' reading comprehension of report text result by giving pre-test and post-test is marked by gain. The gain then used to determine the effectiveness with the ideal score was 100.

Table 6. N-Gain Result

No.	Gain Score	Category	Total Students	Percentage (%)
1.	$g \geq 0.7$	High	0	0
2.	$0.3 < g \leq 0.7$	Medium	21	60%
3.	$g \leq 0.3$	Low	14	40%

Table 6 showed there were 0 students with the score of gain was in the high category, there were 21 students in the medium category with the percentage of 60%, and there were 14 student scores in the low category with the percentage 40%. So, Learning reading comprehension by using Blogger improved the students achievement, and motivation. It is because the lecturer provides the reading comprehension material by using video learning first, after that, the students get assignment related to the video.

CONCLUSION

The results of the study show the students' skill reading comprehension before using Blogger showed that 3 students (9%) were excellent, 24 students (68%) were good, 7 students (20%) were sufficient and 1 (3%) student was low. The highest score from the pre-test was 90 and the lowest was 40 with an average of 66.00 from 35 students. The students' reading comprehension achievement after using Blogger showed that 9 students (26%) were excellent criteria, 25 students (71%) were good and 1 student (3%) was sufficient. The highest score from the post-test was 90 and the lowest score was 60 with the average of 77.29 from 35 students of X-5. Based on the data analysis, N-gain result showed an improvement in the students' achievement from 35 students, 21 (60%) students had improvements in the medium category and 14 (40%) students had improvements in the low category. The T-test result showed that the significant value (2 tailed) was 0.000 compared with the significant standard namely 5% (0,05), so that Ho rejected and Ha accepted with the hypothesis statement as follow: If the value of significant (2-tailed) < the significance standard (0.05), then there are significant differences in students' reading comprehension achievement before and after using Blogger.

The researcher would like to offer some suggestions for others English Lecturer. English is a subject that must be mastered by each student in the society of the 5.0 era which technology grows rapidly. The teachers must be able to adapt to the development of technology and take the advantages to provide varied method and strategy. Besides, the teachers must be always updated the knowledge to give the innovation in education especially in teaching and learning process more interesting so that the students have motivation and more active. For students, students should know that learning English especially in reading comprehension is not always bored, make feel asleep and pressured. Through this research the researchers hopes that the students will be motivated to develop and learn reading comprehension better and easily. For further researchers, the researcher hopes that this research can be a reference and motivation in the future and create specific skill material by using Blogger.

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