The effect of Mentimeter on students’ Writing achievement in online learning

1Ima Chusnul Chotimah, 2Dian Anik Cahyani
1Pendidikan Bahasa Inggris, STKIP PGRI Jombang, Jalan Pattimura III/20 Jombang 61418, Jombang, Indonesia
2Pendidikan Bahasa Inggris, STKIP PGRI Jombang, Jalan Pattimura III/20 Jombang 61418, Jombang, Indonesia
Corresponding author: imachus.stkipjb@gmail.com

ABSTRACT
This study examines the use of Mentimeter on students’ writing descriptive text in online learning at Hasyim Asy’ari University Tebuireng Jombang. This study used a quantitative approach with a quasi-experimental design. The subjects in this study were Management class students which consists of twenty-two students as the experimental class and Elementary School Teacher Program class students which consist of seventeen students as the control class in English for Specific Purposes course. The research instrument is an essay test, which will be given before (Pre Test) the treatment to determine students’ prior knowledge and after (Post Test) treatment to determine the effect of using Mentimeter. After analyzing the data using Mann-Whitney U Test, the results showed that there was a significant difference in the mean rank of 23.59 on the use of Mentimeter and 13.35 on the use of power point. The statistical test obtained Asymp.Sig. (2-tailed) of 0.022, it is lower than the 0.05 level of significance. It means that the use of Mentimeter can influence students’ writing ability in online learning.

1. Introduction
In Indonesia, online learning is still ongoing. Several ways used by the teachers in doing learning process are full online learning, blended learning, and hybrid learning. Those were done by them during the pandemic. Those activities were also done by companies, offices, and the world of education. One of the adaptations is done by the teacher is online learning media. This is a new challenge for the world of education, how to transfer knowledge to the students in a long distance. Learning media plays a full role the continuity of learning. The teacher must select the learning media based on the character and need of the students. The media used is not only suitable and comfortable for teachers, but also suitable and comfortable for students.
Media is a communication tool that used to carry messages from the sender of the message to the recipient of the message. Learning media is a tool used by teachers to transfer knowledge or messages to be delivered to students. According to Kozma (1991) the media is not only contributing to the process and learning achievement, but also can generate motivation and passion for learning. Therefore, media and learning have significant relationship in creating effective and efficient learning conditions. Thus, Kozma said the better the media is designed for the students’ need, the more effective and efficient the learning process will be, the better the student’s achievement will be. On the contrary, the lower the attention to designing media based on objectives, materials, and learning methods, the more ineffective and efficient the learning is carried out and ultimately causes student learning outcomes to decline. According to C. L. (n.d.) that media can facilitate learning and improve understanding of learning materials. It can be said that media can attract attention, increase interest in learning, develop a learning climate, and create acceptance of ideas. This explanation is in line with this research, how media can affect learning outcomes, a good media design and a good using bring a good learning outcomes.

One of the factors that must be provided in online learning is student activity. According to Hamalik (2011) learning activity can be observed from various aspects: 1) students are active in the process of solving problems, (2) in doing assignments, students ask questions when they have a problem, (3) participate in doing assignments that have been given by the teacher, (4) conduct group discussions according to the teacher’s direction, and (5) good cooperate with group friends. On the other hand, the factors that influence student activity based on Sudiana (2010) are transfer and use, attention, and solving a problem.

From the explanation above, one of the things needed by teachers is how to choose interactive media that used in online learning in order to facilitate student activity both in question and answer and discussion, it was expected that activity can influence learning outcomes for the better. One of the online learning media used is a Mentimeter. According to C (n.d.) a Mentimeter is a website-based application that can be used to carry out learning activities or seminars. The benefits of this media are that it can give influence to students’ interest in learning, as a medium used in data collection and as a medium for expressing opinions. According to Lusiani (2021) Mentimeter is a web-based application that can be downloaded easily from a cellphone or laptop. The Mentimeter application can be used as a learning medium because it is an interactive presentation application, where students can quickly respond to material from the teacher by sending responses from their cellphone or laptop. Mentimeter is a web-based system that can be used in learning. The Student Response System (SRS) can provide direct feedback on the content being taught, inform learning to students, practice directly and make students more active Trees and Jackson (2007)

A research conducted by Mayhew et al. (2020) discusses the impact of audience response with the use of platform Mentimeter, the results showed that there were 191 students (96%) liked the Mentimeter and 171 students (82%) felt very satisfied when Mentimeter was used in teaching, and 94% felt that Mentimeter should be used more. Besides, Mentimeter increases student enjoyment. Of those that responded, 95% said that their learning experiences were enjoy and 62% said that their lectures or seminars felt ‘less formal and fun’
This statement is in line with the research conducted by Andrini and Pratama (2021) on the Implementation of Interactive Quiz with Mentimeter Software in Improving Learning Outcomes. The results showed that there were significant differences in student learning outcomes between before and after treatment. The average learning outcome based on the posttest score of 78.00 is greater than the pretest score of 68.00. The use of Mentimeter as an interactive quiz makes students more motivated in the learning process. The students show a positive competition in doing the quiz. The implications of this research are expected to improve the learning process to be more enjoyable.

Mentimeter can be used as a media in teaching writing. Another previous study supported is a research conducted by Syaputra et al. (2021) entitled Web-Based Mentimeter Learning Media in Learning German Writing Skills. The results of the study said that Mentimeter was effectively used as a media for learning to write German language where the significance level reached 0.05.

From the discussion above, the researchers sum up that the use of mentimeter is very important in teaching. Online teaching can be more enjoyable and fun. Mentimeter provides many features that can develop writing skills. The students’ compositions can be directly seen and commented by the teacher and the students. This condition makes the teaching more alive, the students can study from their friends’ comments. From the background above, the researchers need to conduct a study about the use of Mentimeter in teaching writing descriptive text for the students of Hasyim As’ari University Tebuireng Jombang which has full online system in learning process.

2. Method

This study used a quantitative experimental approach that aims to examine the effect of using a mentimeter on students writing achievement in online learning at Hasyim As’ari University Tebuireng Jombang. The research design was a quasi-experimental where the researcher took two classes, they are Management class as experimental class and Elementary School Teacher Program class as control class in English for Specific Purpose course on descriptive text topic which focuses on Writing skills. There were two variables in this study, they are: independent variable (the use of Mentimeter) and dependent variable (students’ Writing achievement).

The subjects of the research were students from management class which consist of 22 students as the experimental class and Elementary School Teacher Program class which consist of 17 students as the control class in the English for Specific Purpose course on descriptive text topic which focuses on writing skills. The researchers used purposive sampling technique, where directly selected the subject based on the class needed in the study. To make it clear, Table 1 shows the subjects used in this research.

<table>
<thead>
<tr>
<th>Subjects</th>
<th>The Number of the Students</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Class</td>
<td>22 students</td>
<td>Experimental Class</td>
</tr>
<tr>
<td>Elementary School Teacher Program</td>
<td>17 students</td>
<td>Control Class</td>
</tr>
</tbody>
</table>
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The research instrument is an essay test. There were two kinds of the test, they are: Pre-test and Post-test. Pre-test consists of one question about describing a picture given by the lecture. The students are asked to describe selected picture. It was conducted to determine the students’ prior knowledge. Post-test consists of one question about describing picture. The picture is different with the pre-test. Post-test was conducted to determine the effect of using a Mentimeter media on students’ writing achievement descriptive text in online learning.

Data collection conducted in four stages, namely: 1) doing pre-test for experimental class and control class, 2) doing treatment for experimental class using Mentimeter in online learning on descriptive text with writing skills and in control class the material is delivered using power point, 3) doing post-test for experimental class and control class, 4) analyzing the data using SPSS. In analyzing the data, the researchers conducted a test to determine the students’ prior knowledge through pretest scores, then continued with the assumption of normality and homogeneity of the data, then tested the hypothesis using the Mann-Whitney U Test.

3. Results and discussion

The researchers carried out the treatment in four days for both experimental and control class. The activities are the implementation of the pre-test, the implementation of the treatment, and the implementation of the post-test. In collecting the data, a number of respondents in experimental class did not change, there were 22 students and in the control class there was a reduction, in the beginning of the class the number of the students were 21 students, but only 17 students attended the class and had completed the activities. Thus, the researchers only used 17 students in analyzing the data. The following is an explanation of each activity.

3.1. The result of pre-test

The pretest was done to determine the students’ prior knowledge. The results of pretest were the students’ Writing descriptive text. Those were corrected by using scoring rubric. It was done by the lecture. It aims to find out whether the prior knowledge of the students is homogeneous. The results of the pre-test analized using SPSS are presented in Table 2.

<table>
<thead>
<tr>
<th>Teaching_Media</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre_English_Writing</td>
<td>22</td>
<td>66.1364</td>
<td>4.80124</td>
<td>1.02363</td>
</tr>
<tr>
<td>PowerPoint</td>
<td>17</td>
<td>67.2059</td>
<td>5.65149</td>
<td>1.37069</td>
</tr>
</tbody>
</table>

It could be seen that the mean score of the pretest is not much different. The students’ score in the experimental class showed 66.1364 and students’ score in the control class showed 67.2059. It means that the prior knowledge of students is homogeneous.

After that, the researcher tested the assumption of normality of the data. The calculation results are presented in Table 3. The table above shows the normality test of the data using Shapiro-
Wilk. It was found that the sig. value of mentimeter media is 0.139, it is higher than the significant level 0.05, it means the data is normal. The sig. value of power point media is 0.003, it is lower than sig. level 0.05, it means the data is not normal.

Table 3. The result of normality data

<table>
<thead>
<tr>
<th>Teaching Media</th>
<th>Kolmogorov-Smirnov Statistic</th>
<th>df</th>
<th>Sig.</th>
<th>Shapiro-Wilk Statistic</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post_English_Writing Mentimeter</td>
<td>.147</td>
<td>22</td>
<td>200</td>
<td>.933</td>
<td>22</td>
<td>139</td>
</tr>
<tr>
<td>Post_English_Writing Powerpoint</td>
<td>.243</td>
<td>17</td>
<td>009</td>
<td>.817</td>
<td>17</td>
<td>003</td>
</tr>
</tbody>
</table>

* This is a lower bound of the true significance.

a. Lilliefors Significance Correction

And then, the researchers tested the assumption of homogeneous data. The calculation results are depicted in Table 4. The table shows the homogeneous variance of the test. It was found that the result of based on mean is 0.01. It is lower than the significant level 0.05. It means the data is not homogeneous.

Table 4. The result of homogeneous data

<table>
<thead>
<tr>
<th>Test of Homogeneity of Variance</th>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Based on Mean</td>
<td>11.956</td>
<td>1</td>
<td>37</td>
<td>.001</td>
</tr>
<tr>
<td>Based on Median</td>
<td>9.460</td>
<td>1</td>
<td>37</td>
<td>.004</td>
</tr>
<tr>
<td>Based on Median and with adjusted df</td>
<td>9.460</td>
<td>1</td>
<td>27.233</td>
<td>.005</td>
</tr>
<tr>
<td>Based on trimmed mean</td>
<td>10.990</td>
<td>1</td>
<td>37</td>
<td>.002</td>
</tr>
</tbody>
</table>

3.2. The result of the treatment

The treatment was done in two days for both experimental class and control class. In the first day, the researchers focused on writing the best word to describe a picture. In the second day, the researchers focused on writing to describe the picture. The activities done in experimental class and control class were same, the tool used to conduct the teaching process is zoom cloud meeting. The media used in experimental class is Mentimeter and the media used in control class is power point. For more details, the activities done to both experimental class and control class were explained in the following.

Teaching process in experimental class

The implementation of learning in the experimental class done in two days by using zoom cloud meetings and Mentimeter as learning media. On the first day, the use of a Mentimeter focused on students’ ability to write vocabulary based on description images. All students asked to write down the vocabulary related the image. It aims to train and enrich students’ vocabulary.
On the second day, the use of the Mentimeter focused on making sentences based on description images. Each student sent some sentences through Mentimeter and discussed together. Students may give comments and feedback related to grammar and meaning. Students can also explain the meaning of the sentences. Figure 1 is the documentation on the first day, while Figure 2 is the use of Mentimeter on the second day.

![Figure 1. The use of Mentimeter on the first day](image1)

![Figure 2. The use of Mentimeter on the second day](image2)


**Teaching process in control class**

The learning process of the control class done in two days by using zoom cloud meetings and power points as media. On the first day, students were shown a descriptive picture and asked to identify vocabulary related to the picture orally. On the second day, the teaching process focused on making some sentences based on the vocabulary delivered by the students orally.

**The result of post-test**

Posttest was given after doing the treatment. The researchers compared the post-test scores from the experimental class and the control class. To do so, the researchers used the *Mann-Whitney U Test* to obtain the final results. Table 5 is the result of the calculation using SPSS.

**Table 5. The mean rank of post-test**

<table>
<thead>
<tr>
<th>Teaching_Media</th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post_English_Writing</td>
<td>22</td>
<td>23.59</td>
<td>519.00</td>
</tr>
<tr>
<td>Mentimeter</td>
<td>22</td>
<td>23.59</td>
<td>519.00</td>
</tr>
<tr>
<td>PowerPoint</td>
<td>17</td>
<td>15.35</td>
<td>261.00</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

From the Table 5, it found that there was a significant difference in the mean rank between the two classes. Where in the experimental class the mean rank of 23.59 is higher than the mean rank of the control class of 15.35. This calculation also supported by the result of hypothesis test by using Mann-Whitney U test as presented in Table 6.

**Table 6. Test statistics by using Mann-Whitney U test**

<table>
<thead>
<tr>
<th>Test Statisticsa</th>
<th>Post_English_Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>108.000</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>261.000</td>
</tr>
<tr>
<td>Z</td>
<td>-2.289</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.022</td>
</tr>
<tr>
<td>Exact Sig. [2*(1-tailed Sig.)</td>
<td>.025b</td>
</tr>
</tbody>
</table>

a. Grouping Variable: Teaching_Media
b. Not corrected for ties.

From the data, the score of Asymp.Sig. (2-tailed) is 0.022. It is lower than the significant level 0.05. It means that there is significant different in the use of Mentimeter in teaching Writing descriptive text.

It is in line with research conducted by Andrini and Pratama (2021) in which there is differences in student learning achievement before and after treatment. It was also stated that students were more motivated in learning activities so that learning activities became more enjoyable. Another study conducted by Syaputra et al. (2021) found that the use of a Mentimeter proved to be effective in
learning in writing skill of German language. It is the same as this study that using Mentimeter in learning to Write descriptive texts is proven to have a significant difference compared to using power point.

4. Conclusion

The results of this study prove that the use of Mentimeter can influence the students’ Writing achievement. Mentimeter can be used in online learning activities on Writing skills as the media. The researchers suggest for further researchers can dig deeper into other uses of Mentimeter and find other suitable media used in online learning. Those can be a reference for English teachers in learning activities.

5. Acknowledgement

The researcher would like to thank STKIP PGRI Jombang for providing research grants so that this research can run well. The researcher also thank P3M STKIP PGRI Jombang for bridging and accompanying this research activity from beginning to end.

6. References


