GOOGLE FORM APPLICATION EFFECT ON STUDENTS’ BASIC ENGLISH GRAMMAR MASTERY

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ABSTRACT

This research aimed to analyze the significance effect of Google Forms application toward students’ English grammar achievement and mastery. This application was used as one of the media to assess and evaluate students’ learning achievement. The design of this research was quasi-experimental research. According to the findings, the mean score of the experiment class taught by using Google Forms application was 82.5, while the mean score of the control class taught without using the Google Forms application was 68.2. Based on the mean score of both groups, it can be concluded that students in the experiment class scored higher than students in the control class, results showed that the experimental group could perform better than the control group. It has also been demonstrated that there is a significant effect on the grammar mastery of students who were taught and assessed using the Google Forms application.

Keywords: English grammar, Technology, Google Forms application

INTRODUCTION

The development of technology is clearly apparent in the twenty-first century, as evidenced by humans' frequent use of technology in daily life. Developments in the technological fronts have offered many opportunities for designing and developing user-friendly web-based questionnaires (Vasantha & Harinarayana, 2016). The benefits of technology have an impact on the educational field as well. In the twenty-first century, the education field emphasizes integrating information, communication, and technology elements to create a new learning environment and reach English learning needs (Bleumink, 2016). The presence of technology, including smartphones, places students in a different learning environment, attempting to make English more enjoyable for them.

Traditional education has effectively been transformed into a more sophisticated educational system as a result of technological advancement (Di Vaio et al 2020). The use of
technology appears to be almost obvious in current educational methods, where lecturers have made use of digital systems as the goal in order to accomplish the objective of teaching and learning effectively.

The advancement of technology has made a positive impact on the education system by increasing test scores, grades, and overall learning outcomes, knowledge and opportunities, and motivating students in the learning process. The implementation of technology provides benefits in a variety of ways. Besides that, most students use technology in the learning process in terms of listening to lecturer explanations and working on students' worksheets, demonstrating the positive effects of technology in education. Regarding this statement, the lecturer attempts to use technology as a learning tool. They carried out various assessments and evaluation online.

One of the students' learning media applications is Google Forms. Currently, Google Forms is the most common practice among lecturers for creating online assignments for students because it allows lecturers to create quizzes and surveys. Google Forms can be used to perform a wide range of productivity tasks. There are several reasons for using Google Forms for student assignments, such as providing different types of questions, implementing validation options, tracking student progress, and so forth. This technology allows lecturers to develop a variety of tests.

Google Form is a free application provided by Google to meet user needs in the form of templates, and it has a variety of functions and uses. Previously, it described how the use of Google Forms in giving assignments, including its attractive appearance and ease of use, can increase student motivation and interest in learning. Google Form is a free survey technology application. The application is intended to send questionnaires or surveys quickly and receive data in a very timely and organized manner. This is one of the quickest applications for collecting process data. According to Wiemken et al., (2018) Google Forms is a web-based app used to create forms for data collection purposes. One of the useful features is that the forms will automatically save your data to a Google Sheet (Krishna, 2022). This beneficial effect encourages lecturers to create tests that are customized to their needs. Before delivering grammar tests to students, lecturers may have several options for developing good test items. Constructing a grammar test can be accomplished in a variety of ways. The teacher can design the grammar test on multiple choice questions or even essays, it can be applied via Google Forms. In addition, Adelia et al., (2021) also explain that there are several positive aspects through using Google Forms as an ELT assessment tool. Lecturers could use Google Forms as an unconventional formative assessment tool to create surveys to meet curriculum
objectives, ask various types of questions, use validation options to control data entry, create professional-looking forms using themes, and get quick answers and respond instantly anywhere.

In accordance to the explanation above, English Grammar appears to be a significant challenge for most students, particularly EFL students. According to Holandyah (2021) grammar plays a very important role in the study of language. The purpose of grammar is to educate those who use English to express their thoughts properly both in speaking and writing. However, students frequently make grammatical errors when writing in English (Singh et al., 2017). Students also experience difficulties with implementing their grammar to produce correct sentences with appropriate grammar structure when speaking in English. Students who speak English as their first language are already familiar with proper grammar structure and how to produce words in a good and correct grammar structure. They can recognize the sounds and meanings of English words and string them together to form meaningful sentences (Subasini & Kokilavani, 2013).

According to Borjars (2010), knowledge of grammatical structure is beneficial when learning grammatical structure since this is skill that students use in their daily activities. Students have to comprehend grammar in order to complete the four skills and communicate with others in the classroom and outside of class in another language. Furthermore, Swan (2007) defines grammar as the rules that show how to combine, arrange, and change words to convey specific types of meaning. Meanwhile, since English is not students’ native language and they use it to communicate in everyday life, Indonesian students have difficulty in comprehending the structure of English grammar and creating correct sentences based on grammar rules. Grammar is frequently discussed in the classroom as the source of the learners' awkwardness in producing several words in English, and they sometimes feel under pressure to learn English because of the grammar (Al-Mekhlafi & Nagaratnam, 2011). Besides that, according to Zhang (2009) Grammar is frequently misunderstood in the field of language teaching. The misconception is that grammar is a set of arbitrary rules about static structures in a language.

In response to the situation, many teachers have tried to make grammar teaching a fun, imaginative, and useful activity within the English curriculum, but they still struggle to keep students interested and catch up on the grammar rules. The teacher has already used various methods of teaching, one of which is the use of technology. The use of E-books and online learning demonstrated that technology plays an important role in the learning process. Therefore, in this research, a learning model that uses Google Forms as a learning assessment
is tested to see learning responses and the development of students' comprehension level of grammar learning material with the aim is to attract students' interest in learning and reduce their fear of learning grammar. Besides that, creating online assignments for students enables lecturers to create quizzes and surveys to assess students' grammar proficiency.

According to Nguyen et al. (2018), the three purposes of using Google Forms are to help grading students' work automatically, to see the summary of the students' answers easily and automatically, and to facilitate students giving free responses rather than only multiple choice. Google Forms can be used to assess students' prior knowledge, identify misconceptions, and engage students in discussion to promote learning. Because Google Forms quizzes can be graded automatically and a summary of all answers can be viewed instantly under the "responses" tab, lecturers can easily identify which questions were missed the most and decide which concepts to review with students.

Several researches related to the use of Google Forms in teaching and learning process have been carried out by previous researchers. First research by Iqbal et al (2018), they analyzed Google form for Student Worksheet as Learning Media. This study aimed to describe the creation of student worksheets using Google forms. The problem in this study was how the steps for creating student worksheets through the Google form and the structure of the worksheet were produced. The results of the study illustrate the steps in making student worksheets having the stages of preparation, design, and implementation. Some forms of worksheets were produced, namely narrative models, audio-visuals and links. Second research by Yunita (2019), she analyzed the use of Google Form application as media for students' assessment. This study described the use of the Google Form Application for Students' Assessment in SMP Negeri 1 Muara Teweh. This study belongs to a Qualitative Descriptive Approach. The subject of this study is 40 teachers with various backgrounds of the subject being taught in SMP Negeri 1 Muara Teweh. The data is collected from a questionnaire given to the teachers. Third research by Nadeak & Rika (2022), they analyzed The Use of Google Form Application as Students Worksheet in Reading Descriptive Text at The Seventh Grade of SMP Muhammadiyah 3 Medan. As a result, they explained that Google Form helps students to save more time in doing quiz questions and saves paper so that it can be said that by making this Google Form it can make learning easier and more practical in doing it.

Related to the explanation above, there is still limited research on the effect of Google Forms on students' grammar mastery based on previous research over the use of Google Forms. This research is believed necessary to ensure that the goals of using Google Forms are performance relationship to students’ grammar mastery.
METHOD

This study was quasi-experimental in nature. It is because the purpose of this study was to determine the significance difference between students' grammar mastery who were taught and assessed using the Google Forms quizzes application and students who were taught and assessed using the traditional strategy. Creswell (2012) defines an experimental design as a research design that is used to test an idea (or practice or procedure) to see if it influences an outcome or dependent variable. This study also employed a post-test only control group design. Gay, Geoffrey E, Mills (2009) state that the post-test only control group design is the same as the pre-test and post-test designs, but the pre-test will not be used.

A : O X O Experiment Class/Group
B : O O O Control Class/Group

The sample of this research was taken from first semester students of English Department at Putera Batam University. To get the data, the researcher uses some instruments, pre-test & post-test, and for addition data use observing. Pre-test was conducted to both groups as the first step of the research in the first meeting. This test was aimed to check the students’ initial ability and to check that control group and experimental group have relatively the same ability in grammar. Post-test is conducted in the end of the meeting to groups, experimental group and control group to find out the result of the treatment. It means to measure the significance difference between students’ grammar mastery who were taught and assessed using the Google Forms quizzes application and not.

After gathering data and giving pre-test and post-test, then they were analyzed used some formula as below:

Count students’ score by using the formula by Arikunto (2010):

\[ \text{Score} = \frac{\text{correct answer}}{\text{score maximum}} \times 100 \]

To know mean score of students used the formula by (Sudjana, 2005)Sudjana (2005):

\[ \bar{X} = \frac{\sum X}{N} \]

Where: \( M = \text{mean} \)
\( \sum X = \text{the total score} \)
\( N = \text{number of students} \)
Then classifying students’ grammar achievement that supported by the formula by Arikunto (2010).

\[ P = \frac{F}{N} \times 100\% \]

Which:
- P : Percentage
- F : Frequency
- N : Number of items

**Table 1: Students’ Grammar Achievement Categories**

<table>
<thead>
<tr>
<th>Test Score</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100</td>
<td>Excellent</td>
</tr>
<tr>
<td>80-90</td>
<td>Good</td>
</tr>
<tr>
<td>70-80</td>
<td>Average</td>
</tr>
<tr>
<td>&lt;70</td>
<td>Poor</td>
</tr>
</tbody>
</table>

**Pretest and Posttest Analysis (Hypothesis Testing)**

Before applying for the *t*-test, the researcher found out the normality and homogeneity. To determine normality if the data that is going to be analyzed whether both groups/classes have normal distribution. It this test, the researcher used Chi Square formula by Sudjana (2005).

\[ x^2 = \sum \frac{(O_i - E_i)^2}{E_i} \]

Where:
- \( x^2 \) : Chi Square
- \( O_i \) : Frequency from observation
- \( E_i \) : Expected frequency

Calculation result of \( x^2 > x_{table} \), the data is not normal distribution and the other way if the \( x^2 < x_{table} \), the data distribution list is normal. And to determine the homogeneity of result of test, the researcher used the Homogeneity formula by Sudjana (2005).

\[ F = \frac{S^2}{S_{l^2}} \]

Where:
- \( F \) = homogeneity
- \( S^2 \) = bigger variance
- \( S_{l^2} \) = smaller variance
If $F_{count}>F_{table}$, the data is not homogeneous ($H_a$ is accepted) and the other ways if $F_{count}<F_{table}$, the data is homogeneous ($H_0$ is accepted).

At the last, in order to find out whether there is a significant effect of Google Forms quizzes application toward grammar mastery between experiment and control class of English class at Putera Batam University, it is used statistical parametric data technique. The two means are compared by applying $t_{test}$ formula (Sudjana, 2005).

$$
t = \frac{x_1 - x_2}{S \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}
$$

$$
S = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}
$$

Where:
- $x_1$ = The mean score of the experimental group
- $x_2$ = The mean score of control group
- $n_1$ = The number of experiment group
- $n_2$ = The number of control group
- $s_1^2$ = The standard deviation of experiment group
- $s_2^2$ = The standard deviation of control group

**FINDINGS AND DISCUSSION**

Findings

*The Result of Pre-test*

Pre-test was given in the first meeting of the research or before giving treatment. The result of pretest for experiment and control class. The total number of students of experiment class was 20 students and the mean score was 61.3. Thus, it showed that students’ grammar level of experiment class in pretest belonged *poor* in whole, because it was <70. And the total number of students of control class were 20 students and mean score was 62.1. Thus, it showed that students’ grammar level of control class in pre-test belonged *poor* in whole, because it was <70. The detail could be seen on the table below:
Table 2: Classification of Students’ Grammar Score in Pre-test

<table>
<thead>
<tr>
<th>Level</th>
<th>Test Score</th>
<th>Control Group</th>
<th>Experiment Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
<td>Frequency</td>
</tr>
<tr>
<td>Excellent</td>
<td>90-100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Good</td>
<td>81-90</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Average</td>
<td>70-80</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Poor</td>
<td>&lt;70</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>100%</td>
<td>20</td>
</tr>
</tbody>
</table>

Based on the table and chart above, showed that there were no students either in the control class or in the experiment who belonged to levels excellent and good. Furthermore, 4 students (20%) were at the average level for the control class and 3 students (15%) were at the average level for the experiment class. Lastly, 16 students (80%) were at the poor level for the control class and 17 students (85%) were at a poor level for the experiment class.

a. Normality Test

The normality test was used to know whether the data is normally distributed or not. Test data of this research used the formula of Chi-Square with the hypotheses:

\( H_0 \) : The data of normal distribution
\( H_a \) : The data of un-normal distribution

\( H_0 \) accepted is \( X_{count} < X_{table} \) with \( \alpha=5\% \) and \( df=K-3 \)

Table 3: The Result of Normality of Pre-Test

<table>
<thead>
<tr>
<th>Class</th>
<th>( X_{count} )</th>
<th>( X_{table} )</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>5.93</td>
<td>7.82</td>
<td>Normal</td>
</tr>
<tr>
<td>Control</td>
<td>2.07</td>
<td>7.82</td>
<td></td>
</tr>
</tbody>
</table>
Based on analysis above, it could be seen that $X_{count}$ both class lower than $X_{table}$ ($X_{count} < X_{table}$), so $H_0$ accepted. And the conclusion was the distribution data of experiment and control class in pre-test were normal.

b. **Homogeneity Test**

Homogeneity test was done to know whether sample come from population that had same variance or not. In this study, the homogeneity of the test was measured by comparing the obtained score ($F_{count}$) with $F_{table}$ with hypotheses:

- $H_0$ : $\sigma_1^2 = \sigma_2^2$ (homogeneity variance)
- $H_a$ : $\sigma_1^2 \neq \sigma_2^2$ (non homogeneity variance)

$H_0$ was accepted if $F_{count} < F_{table}$

<table>
<thead>
<tr>
<th>Table 4: The Result of Homogeneity of Pre-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Control</td>
</tr>
<tr>
<td>Experiment</td>
</tr>
</tbody>
</table>

Based on the formula:  

$$F_{count} = \frac{\text{bigger variance}}{\text{smaller variance}}$$

$$F_{count} = \frac{67.06}{58.14} = 1.15$$

Based on computation above, it was obtained that $F_{count} < F_{table}$, so $H_0$ accepted. It could be concluded that data of pre test from experiment and control class have the same variance or homogeneous.

c. **Hypothesis Testing T-test of Pre-test**

Based on previously analysis, it could be concluded that both group (experiment class and control class) were homogeneity and the test was normal. Therefore, to differentiate how the students’ grammar achievement in experiment and control class before giving the treatment which used Google Forms quizzes application after finished grammar learning process, the researcher used t-test to test the hypothesis:

- $H_0$ : There is no differences on students’ grammar achievement between experiment group and control group before giving treatment ($t_{score} < t_{table}$).
- $H_a$ : There is differences on students’ grammar achievement between experiment group and control group before giving treatment ($t_{score} > t_{table}$).
And get the result:

\[ t = \frac{x_1 - x_2}{S \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \]

\[ S = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}} \]

And get the result:

**Table 5: The Result of T-Test of Pre-Test**

<table>
<thead>
<tr>
<th></th>
<th>Experiment Class</th>
<th>Control Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>( n )</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>( \bar{x} )</td>
<td>59</td>
<td>59.67</td>
</tr>
<tr>
<td>( df (n_1+n_2-2) )</td>
<td>58</td>
<td>58</td>
</tr>
<tr>
<td>Standard Deviation (s)</td>
<td>7.6</td>
<td>8.2</td>
</tr>
<tr>
<td>Variance ((s^2))</td>
<td>58.14</td>
<td>67.06</td>
</tr>
<tr>
<td>( S )</td>
<td>7.91</td>
<td></td>
</tr>
<tr>
<td>( t_{score} )</td>
<td>-0.33</td>
<td></td>
</tr>
<tr>
<td>( t_{table} )</td>
<td>2.02</td>
<td></td>
</tr>
<tr>
<td>Result</td>
<td>( t_{score} &lt; t_{table} )</td>
<td>( H_0 ) accepted</td>
</tr>
</tbody>
</table>

Based on the table above, the result of t-test was -0.02, to determine \( t_{table} \), the researcher used level significance \((\alpha)=0.05\), it could be seen on the table above that the degree of freedom \((df)\) was 58. It was obtained \( t_{table}=2.02 \). The data showed that \( t_{score} < t_{table} \). It was -0.33<2.02. Because t-test was lower than \( t_{table} \), it mean that there was no differences between experiment group and control group before giving treatment.

**The Result of Post-test**

Post-test was given in the end meeting or after giving treatment. The result of pre-test for experiment and control class. The total number of students of experiment class were 20 students, and mean score was 82.5. Thus, it showed that students’ grammar level of experiment class in posttest belonged good in whole, because it was on range 80-90. And the total number of students control class were 20 students, and mean score was 68.2. Thus, it showed that students’ Grammar level of control class in posttest belonged Poor in whole, because it was <70. The detail could be seen on the table below:
Table 6: Classification of Students’ Grammar Level in Post-test

| Level   | Test Score | Control Group | | | Experiment Group | | |
|---------|------------|---------------|---|---|---|---|
|         |            | Frequency | Percentage | | Frequency | Percentage | |
| Excellent | 90-100 | 1 | 5% | | 3 | 15% | |
| Good     | 81-90     | 3 | 15% | | 11 | 55% | |
| Average  | 70-80     | 2 | 10% | | 6 | 30% | |
| Poor     | <70        | 14 | 70% | | 0 | 0% | |
| Total    |            | 20 | 100% | | 30 | 100% | |

Figure 2: Graphic of Post-test Result

Based on the table and chart above, 1 student (5%) was in excellent level for the control class and 3 students (15%) was in excellent level for the experiment class. Then, 3 students (15%) were in good level for the control class and 11 students (55%) were in good level for the experiment class. Furthermore, 2 students (10%) were in average level for the control class and 6 students (30%) were in average level for the experiment class. And the last, 14 students (70%) were in poor level for control class and 0 student (0%) were in poor level for the experiment class.

a. Normality Test

The normality test was used to know whether the data is normally distributed or not. Test data of this research used the formula of Chi-Square with the hypotheses:

\( H_0 \) : The data of normal distribution
\( H_a \) : The data of un normal distribution
\( H_0 \) accepted is \( X_{count} < X_{table} \) with \( \alpha=5\% \) and \( df=K-3 \)
Table 7: The Result of Normality of Post-Test

<table>
<thead>
<tr>
<th>Class</th>
<th>$X_{count}$</th>
<th>$X_{table}$</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>4.39</td>
<td>7.82</td>
<td>Normal</td>
</tr>
<tr>
<td>Control</td>
<td>7.49</td>
<td>7.82</td>
<td></td>
</tr>
</tbody>
</table>

Based on analysis above, it could be seen that $X_{count}$ both class lower than $X_{table}$ ($X_{count} < X_{table}$), so $H_0$ accepted. And the conclusion was the distribution data of experiment and control class in post test were normal.

b. Homogeneity Test

Homogeneity test was done to know whether sample come from population that had same variance or not. In this study, the homogeneity of the test was measured by comparing the obtained score ($F_{count}$) with $F_{table}$ with hypotheses:

$H_0 : \sigma^2_1 = \sigma^2_2$ (homogeneity variance)

$H_a : \sigma^2_1 \neq \sigma^2_2$ (non homogeneity variance)

$H_0$ was accepted if $F_{count} < F_{table}$

Table 8: The Result of Homogeneity of Post Test

<table>
<thead>
<tr>
<th>Class</th>
<th>Variance ($S^2$)</th>
<th>n</th>
<th>df</th>
<th>$F_{count}$</th>
<th>$F_{table}$</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>76.18</td>
<td>20</td>
<td>58</td>
<td>1.23</td>
<td>1.90</td>
<td>Homogeneity</td>
</tr>
<tr>
<td>Experiment</td>
<td>61.43</td>
<td>20</td>
<td>58</td>
<td>1.23</td>
<td>1.90</td>
<td></td>
</tr>
</tbody>
</table>

$$F_{count} = \frac{bigger \ variance}{smaller \ variance}$$

$$F_{count} = \frac{76.18}{69.72} = 1.23$$

Based on computation above, it was obtained that $F_{count} < F_{table}$, so $H_0$ accepted. It could be concluded that data of post-test from experiment and control class have the same variance or homogeneous.

c. Hypothesis Testing T-test of Post-test

Based on previously analysis, it could be concluded that both group (experiment class and control class) were homogeneity and the test was normal. However, to differentiate if the students’ grammar achievement in experiment and control class after giving the Google Forms quizzes application were significance or not, t-test was used to test the hypothesis:
H₀ : There is no significant effect of Google Forms quizzes application toward grammar achievement between experiment and control class at first semester students of English Department (t_{score} < t_{table}).

Hₐ : There is significant effect of Google Forms quizzes application toward grammar achievement between experiment and control class at first semester students of English Department (t_{score} > t_{table}).

\[ t = \frac{x_1 - x_2}{S \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}} \]

Where:

\[ S = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}} \]

And get the result:

<table>
<thead>
<tr>
<th>Table 9: The Result of T-Test of Post-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
</tr>
<tr>
<td>---------------</td>
</tr>
<tr>
<td>( \bar{x} )</td>
</tr>
<tr>
<td>( df(n_1+n_2-2) )</td>
</tr>
<tr>
<td>Standard Deviation (s)</td>
</tr>
<tr>
<td>Variance (s²)</td>
</tr>
<tr>
<td>S</td>
</tr>
<tr>
<td>t_{score}</td>
</tr>
<tr>
<td>t_{table}</td>
</tr>
<tr>
<td>Result</td>
</tr>
</tbody>
</table>

Based on the table above, the result of t-test was 4.20, to determine t_{table}, the researcher used level significance (α)=0.05, it could be seen on the table above that the degree of freedom (df) was 58. It was obtained t_{table}=2.02. The data showed that t_{score} > t_{table}. It was 4.20>2.02. Because t-test was higher than t_{table}, it mean that there was a significance effect of using Google Forms quizzes application toward grammar achievement between experiment and control class at first semester students of English Department.

d. Effect Size

Effect size was carried out in order to know how well the treatment worked in post test result. The t_{score} of 4.20 and df was 58 were obtained from hypotheses testing of t-test above.
Table 10: The Scale of Effect Size Value

<table>
<thead>
<tr>
<th>Effect size</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>0.100</td>
</tr>
<tr>
<td>Medium</td>
<td>0.243</td>
</tr>
<tr>
<td>Large</td>
<td>0.371</td>
</tr>
</tbody>
</table>

(Coolidge, 2000)

The calculation of effect size was presented by following formula:

\[ r = \frac{t^2}{t^2 + df} \]

\[ = \frac{4.20^2}{4.20^2 + 58} \]

\[ = \frac{17.64}{17.64 + 58} \]

\[ = \frac{17.64}{75.64} \]

\[ = \sqrt{0.233} = 0.47 \]

After completing the calculation, it was found that \( r \) (effect size) was 0.47 and the obtained value showed large effect size.

Discussion

Related to the finding, before and after the students completed the prescribed learning procedure, a test was administered. The preliminary data analysis were based on the results of the pre-test, which was conducted at the beginning of the learning process in both the control class and the experimental class. It referred to the homogeneity and normality test. It is employed to determine whether two groups reflected the same variant and are normal. Both the experimental class that utilized the Google Forms quizzes application and the control class had additional data analysis from the end of the learning process. It was employed to demonstrate the veracity of the formulated hypothesis.

Based on the result of the data analysis, it is proven that students’ grammar achievement assessed by Google Forms quizzes application in the experiment class is better than conventional in the control class. Which, in the pre-test, the students practiced their grammar
test and obtained the score. Henceforth, in the posttest, after giving the Google Forms quizzes application, the students practiced again their grammar test. In this case, the students’ grammar achievement in the post-test improved more than their grammar achievement in the pre-test. The result was Google Forms quizzes application gave the significance effect with large effect size toward students’ grammar mastery.

It can be said that the implementation of Google Forms quizzes application gives a positive effect because it can improve students’ grammar achievement after giving the treatment. Another reason, based on the student’s activity during the learning process, students seem enjoyable with Google Forms quizzes application because they were able to know their grammar mastery. This reason leads to better attention in learning and simulates their participation in using the Google Forms quizzes application.

The result of this research was also supported by other previous research related to the concepts of technology implementation associated with student learning gains. First by Hamidi et al (2011), provided that education has been using technology to expand and develop various processes of the educational system for more than a century, it is not surprising that the arrival of new technology has enhanced interest in obtaining knowledge through various methods of presenting knowledge. Technology-based education is now available at universities in developed countries. Universities have made significant advances in virtual learning. Online learning and remote training are two new forms of education in the twenty-first century. Individuals and societies placed a heavy responsibility on the shoulders of educational institutions and traditional structures at the beginning of the twenty-first century by evolving learning environments.

Elizabeth Brown et al (2015) also supported and explained that Google Apps for Education (GAFE) is relatively simple to use, and its collaborative features are appreciated. According to the researchers, GAFE is a useful tool for meeting learning objectives in the college composition classroom. Besides that, Nguyen et al., (2018) explained that Google Forms can provide students and instructors with real-time feedback. Quiz settings in Google Forms have options to release grades immediately after each submission and allow students to see their total score and which questions they answered correctly or incorrectly. This immediate feedback allows them to begin questioning their understanding and seeking assistance right away. As a result, lecturers can evaluate how well students understand the material. A formative assessment can be given to students during class immediately after introducing a concept, at the start of the next class as a follow-up activity, or at the end of a
unit. Student responses inform instructors about which concepts should be revisited or how to tailor follow-up lessons to the needs of the students.

Related to the explanation above, Google Form has been successful in implementing student feedback for course improvement. The Google form, on the other hand, may be rendered useless if the instructions are not carefully designed. It is critical for lecturer to protect their students' privacy when sharing spreadsheet results. A Google form can be used as a learning evaluation tool and as an alternative to creating online questions by lecturers.

CONCLUSION AND SUGGESTION

During the implementation of both treatments for both groups, it was observed that students from both groups showed different level of interest and excitement in following the activity. The students in the control class were uninterested, some of them stated that they were bored and tired of answering the quiz questions on paper. They were less interested in the grammar class, particularly the quiz parts. Some of them also expressed fear because they perceived the questions to be difficult. In contrast to the experimental class, where they appeared to be very enthusiastic about answering the quiz. It can be seen when the lecturer instructed them to turn on their phones and prepare for the quiz. They appeared ecstatic and eager to take the quiz. Because of time constraints, some of them felt challenged in answering the quiz. From the first to the last meeting, they consistently expressed enthusiasm for the implementation of Google Forms quiz into the teaching and learning process. Therefore, it can be suggested to use Google Forms during English learning process since there are several advantages of Google Forms as an evaluation tool for university studies. In Google Forms, lecturers could create surveys to fit curricular objectives, ask various types of questions, use validation capabilities to manage data entry, create forms that looked professional using themes, and receive and respond quickly from any location. Lecturers should go through several "preparatory phases" in order to abandon a Google Forms English test.

REFERENCES


