THE EFFECT OF USING PHYSICAL LINE-UP GAME ON STUDENTS' GRAMMAR ACHIEVEMENT AT THE ELEVENTH GRADE OF SMAN 3 PAMEKASAN

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Abstract: This research applied experimental design with a quantitative approach. It was quasi-experimental research type. The instrument research used test (pre-test and post-test) and documentation. The population of this research was the whole class XI students of SMAN 3 Pamekasan and the sample of this research was XI-MIPA3 as control group and XI-MIPA4 as experimental group. The control group was 30 students and either the experimental group. So, the sample of this research was 60 students. the The data collected were analyzed by using t-test formula to find whether any effect of using physical line-up game on students' grammar achievement at the eleventh grade of SMAN 3 Pamekasan. The result of this study showed that t-value (t_o) is higher than t-table (t_t) either 5% or 1% where (5% = 1,67 < 3,33) or (1% = 2,39 < 3,33). But in this case, the researcher used significant on 5% (5% = 1,67 < 3,33). Thus, it can be concluded that Ha (Alternative Hypothesis) was accepted and the Ho (Null Hypothesis) was rejected. So, the effect was far in achieving the student's ability of grammar comprehension by using physical line-up game.

Abstrak: Penelitian ini menerapkan desain eksperimen dengan pendekatan kuantitatif. Jenis penelitian kuasi-eksperimental. Instrumen penelitian menggunakan tes (pre-test dan post-test) dan dokumentasi. Populasi dalam penelitian ini adalah seluruh siswa kelas XI SMAN 3 Pamekasan dan sampel penelitian ini adalah XI-MIPA3 sebagai kelompok kontrol dan XI-MIPA4 sebagai kelompok. Jumlah siswa pada Kelompok kontrol dan kelompok eksperimen adalah 33 siswa. Jadi, sampel penelitian ini adalah 66 siswa. Data yang terkumpul dianalisis dengan menggunakan rumus t-test untuk mengetahui apakah ada pengaruh penggunaan *physical line-up game* terhadap prestasi grammar siswa pada kelas XI SMAN 3 Pamekasan. Hasil penelitian ini menunjukkan bahwa t-nilai (t_0) lebih tinggi dari t-tabel (t_t) baik 5% atau 1% di mana (5% = 1,67 <3,33) atau (1 % = 2,39 <3,33). Tetapi dalam hal ini, peneliti menggunakan signifikan pada 5% (5% = 1,67 <3,33). Dengan demikian, dapat disimpulkan bahwa Ha (Hipotesis Alternatif) diterima dan Ho (Null Hypothesis) ditolak. Jadi, efeknya jauh dalam mencapai kemampuan pemahaman gramatika siswa dengan menggunakan *physical line-up game*.

INTRODUCTION

Being a teacher is not easy especially for new English teachers because they must have good strategies to make their students enjoy to learn and easy to understand an English lesson. It also needs more creativity in the teaching activities. As we know that English is not as mother tongue in Indonesia. But, English

How to cited:

Rosidi, N. L., & Ummah, S. S. (2018). The Effect Of Using Physical Line-Up Game On Students' Grammar Achievement At The Eleventh Grade Of SMAN 3 Pamekasan. *Wacana Didaktika*, *6*(01), 15-26. https://doi.org/10.31102/wacanadidaktika.6.01.15-26

becomes as a foreign language. So, it will become difficult and boring to be learned. The English teacher must be able to build the students to interest in learning English especially in the teaching grammar which become difficult part for students because it consists of rules. It means that how we arrange the language correctly. In fact, it is not all people can use the correct grammar when produce language including learners. They still do not understand enough about grammar even to make simple sentences. They cannot make correct sentence grammatically.

The grammar of a language is the way in which words can change their forms and can be combined into sentence in that language. It is so important in order to language produced or conveyed can be understood by partner of speakers moreover in educational world. In this case, grammar is so important because we must make good language in speaking or writing especially for students when make or do assignments moreover in writing assignments such as paper, article, journal etc.

Using correct language is not as simple as our imagination because there is a set of the regulations have to be followed which is called by Grammar. Grammar is the set of elements and rules that made up language (Jannedy, 1994). Thus, it has been clear that grammar has an important rule to make language correctly and has meaning clearly. Unfortunately, it is not all of students comprehend about grammar. There are some problems on student's grammar acquisition. Most of them feel difficult to memorize the patterns of grammar. Sometime they may also know the rule of grammar perfectly, but they do not know how to apply it in producing sentence or using language. If they do not comprehend enough even do not understand absolutely about grammar, it will complicate to produce a good language moreover on writing. Automatically, it will be there many errors in language produced then it will be a problem that obstructs their development in English acquisition. The researcher wants to know the effect of Physical Line-up Game in the teaching English grammar for the eleventh grade of SMAN 3

Pamekasan. By implementing this game, the researcher assumed that it brought some impact for the students especially for the students' grammar achievement in the classroom because Physical Line-up Game is one os the games that is appropriate to be implemented by the English teacher in teaching grammar. In this games, the students are divided into some groups and every group is given some blank papers which will be consisted words for each paper in order to make correct sentence for instance: *I LOVE YOU TOO*. After they finished answering, they make a line and show their papers consisting words so that become a sentence then they explain it to other groups. Physical Line-up Game is used to help the English teacher in teaching grammar in order to make the class to be more active and cooperative. It will also help the students to be easier in comprehending the grammar explained. So, it can help their grammar competence in making good sentence. Physical Line-up Game is a game to answer or write words to each paper based on the question given for each groups into correct sentence grammatically and quickly.

Based on the statement above, so the researcher wants to formulate the research problems. Selecting and formulating a problem is one of the most important aspects of doing research in any field (Ary, Cheser., & Jacob, 2010). So, research problem is the first step which has to be formulated by researcher to conduct research which becomes a guide to doing investigation. It is consisted of questions which will be raised in the research in order to obtain the answer of question. The research problems Is "*is there any effect of using physical line-up game on student's grammar achievement at the eleventh grade of SMAN 3 Pamekasan?*".

METHOD

Research designs are the specific procedures involved in the research process such as data collection, data analysis, and report writing. Thus, research design is the way to design the research to obtain valid data based on variables researched. This research applied experimental design with a quantitative approach. It was also designed as quasi-experimental research.

As statement of Charles, C.M. that said when the researcher can only assign randomly different treatments to two classes, the researcher uses quasi experimental research (Latief & Mohammad, 2013). Because the experimental research requires experimental and control group, so it will use the two classes which are divided into control group and experimental group (Arikunto, 2010). The first group is as experimental group that receives a treatment in teaching grammar by using physical line-up game, and the second group as control group that does not receive a treatment.

The purse of this design is to know the students' grammar achievement before and after they are given treatment. Thus, there are kinds of variables in this research namely independent variable (variable X) which is Physical Line-up Game and dependent variable (variable Y) which is Students' Grammar Achievement.

Tabel 1. Alur Penelitian

Group	Pre-test	Treatment	Post-test
Experimental	X_1	X	X_2
Control	X_1	Y	X_2

Where:
X_1: The Pre-test given before treatment.
X_2: The Post-test given after treatment.

X: The treatment of Physical Line-up Game.
Y: It is not taught by treatment.

The population of this research is the whole number of the eleventh grade students of SMAN 3 Pamekasan where it consists of seven classes. The total population was 560 students. While the sample in this research was taken from two classes namely XI-MIPA3 which has 30 students as control group and XI-MIPA4 as experimental group which has 30. So, the sample was 60 students. The researcher took all number of populations. Then researcher used random sampling that researcher is directly drawn randomly from the population. Moreover, in conducting this research, researcher used two kinds of research instruments to collect all of data. Those were test (pre-test and post-test) and documentation. An instrument is a tool for measuring, observing, or documenting quantitative data (John, 2012). It is all things needed by researcher to get all of data during the research conducted.

Finally, the researcher analyzed the data by using statistical analysis that suitable with quantitative data characteristics, namely numerical

form. The researcher will analyze the data by using independent-sample t-test (Sugiono, 2009). The formula is:

$$t_0 = \frac{M_x - M_y}{SE_{Mx - My}} \dots\dots\dots\dots (1)$$

Explanation:

Mx : Meant of experimental group
My : Meant of control group
N : The number of subject
$SE_{Mx - My}$: Standard error of mean experimental and control group.

Then to interpret the result of the statistical analysis above, the researcher will take an interpretation using t_t (critic value table) as the appointment:

➢ If t_o (the obtain t) $\leq t_t$ (t table), H_o is accepted and the contrary H_a is rejected

➢ If t_o (the obtain t) $\geq t_t$ (t table), H_a is accepted and the contrary H_o is rejected.

FINDING and DISCUSSION

This research will present the findings and discussion about the data that has been analyzed by using statistical procedure. The contents of this chapter are research findings, data analysis, hypothesis testing and discussion. In this part, the researcher presents some data based on the research instruments. They are test as

primary instrument and documentation as secondary instrument.

In chapter three, the researcher has stated that test is the main instrument in this research. It means that the data which are the data is obtained from the test instrument that will be analysed by using statistical method. This researcher presented two kinds of test namely pre-test and post-test. In both pre-test and post-test, the researcher used tests namely multiple choice. In multiple choices, the researcher used 20 item tests that consist of four alternative items. In every question of multiple choice test, the researcher gave 5 score for every right answer and 0 score for every wrong answer. So, the students got 100 score for multiple choice tests if all of the students' answers are right. So, the total score is 100.

The result of pre-test and post-test on Experimental Group

The pre-test was given to measure the students' ability on grammar skill before giving the treatment based on sample of the researcher had selected. After pre-test given, the researcher applied the treatment. Then the researcher gave a post-test to know the achievement

between the students' post test score with the pre-test score.

The researcher gave a pre-test on experimental group on Friday, 04th August 2017 at 9:35 a.m. While the post-test had been given on Friday, 11 August 2017 at 9:40 a.m. The pre-test and post-test result can be presented on the table as below:

Table 2
The Test Result of Experimental Class

No	Pre-Test Score	Post-Test Score	Gained Score	X^2
1	40	75	35	1225
2	55	80	25	625
3	45	75	30	900
4	75	85	10	100
5	25	75	50	2500
6	55	80	25	625
7	40	75	35	1225
8	25	80	55	3025
9	40	80	40	1600
10	35	80	45	2025
11	40	75	35	1225
12	55	75	20	400
13	75	95	20	400
14	20	75	55	3025
15	65	90	25	625
16	20	70	50	2500
17	45	85	40	1600
18	20	75	55	3025
19	20	75	55	3025
20	70	75	5	25
21	55	75	20	400
22	40	75	35	1225
23	75	90	15	225
24	45	90	45	2025
25	35	80	45	2025
26	60	80	20	400
27	75	90	15	225
28	30	85	55	3025
29	40	75	35	1225
30	15	70	55	3025
	1335	2385	1050	43500
	M = 44.5	M = 79.5		

Based on the table 2, the total pre-test group score of experimental group is 1.335. While, the total post-test group score of experimental group is 2.385. The table of the students' score in the experimental class showed that the mean score of pre-test in the experimental class is 44,5. While the mean of post-test is 79,5. In addition, the total gained score in this class is 1.050. It can be concluded that there is significant different score in pre-test and post-test.

The result of pre-test and post-test on Control Group

The pre-test was given to measure the students' ability on grammar skill. After that, the researcher can determine which one can be experimental group that it got a treatment and control group did not get a treatment. In this study, the researcher decided that XI MIPA3 that become control group because they had higher pre-test score than another class. It can be seen on the table 3. In this control class, the researcher did not apply a treatment, but she used traditional method in the next teaching learning process. Then the researcher gave a post-test to know the

achievement between the students' post test score with the pre-test score. The researcher gave a pre-test to experimental group on Friday, 04 August 2017 at 8:05 a.m. While the post-test had been given on Friday, 11 August 2017 at 8:10 a.m. The pre-test and post-test result can be presented on the table:

Table 3
The Test Result of Control Class

No	Pre-Test Score	Post-Test Score	Gained Score (Y)	Y^2
1	65	65	0	0
2	75	75	0	0
3	30	50	20	400
4	65	65	0	0
5	45	60	15	225
6	55	65	10	100
7	70	75	5	25
8	45	55	10	100
9	40	65	25	625
10	80	85	5	25
11	65	75	10	100
12	60	65	5	25
13	35	45	10	100
14	70	75	5	25
15	35	60	25	625
16	60	75	15	225
17	40	65	25	625
18	65	80	15	225
19	45	65	20	400
20	15	30	15	225
21	45	65	20	400
22	70	75	5	25
23	55	65	10	100
24	70	75	5	25
25	65	70	5	25
26	80	80	0	0
27	55	55	0	0
28	50	60	10	100
29	70	80	10	100
30	55	60	5	25
	1675	1975	305	4875
	M = 55.83	M = 65.83		

Based on the table 3, the total pre-test group score of control group is 1.675. While, the total post-test group score of control group is. The table of students score in controlled class showed that the mean score of pre-test in controlled class is 55,83 and the mean score of post-test is 65,83. Total gained score is 305.

Table 4
The Mean of Experimental and Control Group in Pre-Test achievement

Group	Number of Students (N)	Score	Mean
Experimental	30	1.335	44,5
Control	30	1.675	55,83

Table 5
The Mean of Experimental and Control Group in Post-Test achievement

Group	Number of Students (N)	Score	Mean
Experimental	30	2.385	79,5
Control	30	1.975	65,83

From the table above, the mean comparison of pre-test score between experimental group and control group is 44,5 and 55,83. From this comparison, we can know that the pre-test score of experimental group is lower than control group. In the contrary, the mean comparison of post-test score between experimental group and control group is 79.5and 65.8. It can be seen that the

experimental group has higher than control group. So, the researcher can conclude that the experimental class that use physical line-up game in learning grammar skill got the higher score than the control class that did not use physical line-up game.

The result of Documentation Data

a. Students' name list for experimental group of XI MIPA4 grade of SMAN 3 Pamekasan that was given physical line-up game.

b. Students' name list for control group of XI MIPA4 grade of SMAN 3 Pamekasan as that was not given physical line-up game.

c. The list of pre-test scores from experimental group.

d. The list of post-test scores from control group.

e. The pre-test form sheet.

f. The post-test form sheet.

g. Lesson plan.

h. Reliability of pre-test and post-test.

i. Documentation of photos.

1. Data Analysis of Test Findings

In analyzing the data, the researcher used the statistic calculation of t-test formula with degree of significant 5% and 1% to calculate the data from the pre-test and post-test. After we know the result of pre-test and post-test, the next step is analyzing the data that has been gotten in the field. But before it, it is better to know the comparison gained score of both group. The result of gained score is gotten by reducing the result of post-test score with the result of pre-test score.

Before using the t-test formula, the researcher has to know the calculation of mean and standard deviation, standard error, and standard error of difference of mean of variable X and Y. As following steps:

Tabel 6. Mean, standard deviation, standard error, and standard error of difference of mean of variable X and Y

Formula	Nilai
M_x	35
M_y	10.16
SD_x	38.08
SD_y	12.75
SE_{Mx}	7.07
SE_{My}	2.37
SE_{Mx-My}	7.46
t_0	3.33

From the calculation the score value of $t_o = 3,33$ with the significant is 5%. So, it must be tested by using the hypothesis testing to know whether the alternative hypothesis is accepted or not.

In this part, the researcher described the interpretation of the researcher finding and summarize the hypothesis by comparing the mean value of each group and also the result of t-test value and t-table. In this research, the researcher also uses alternative hypothesis (Ha). It means that "there is the effect of using physical line-up game on students' grammar achievement at the eleventh grade of SMAN 3 Pamekasan." After calculating the data, the writer tested her hypothesis based on the statistical hypothesis.

1. If $t_o > t_t$: The null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. Hence, there is the effect of using physical line-up game on students' grammar achievement at the eleventh grade of SMAN 3 Pamekasan.

2. If $t_o < t_t$: The null hypothesis (Ho) is accepted and the alternative hypothesis (Ha) is rejected. Hence, there is not the effect of using physical line-up game on students' grammar achievement at the eleventh grade of SMAN 3 Pamekasan.

Table 7
The Mean of Experimental and Control Group in Achievement Comparison

Group	Experimental Group	Control Group	Differences
Pre-test	44,5	55,83	11,33
Post-test	79,5	65,83	13,67

Based on the table above the mean value comparison exactly in post-test result, it can be concluded that after giving treatment, students' mean value of experimental group is higher than control group namely (79,5 > 65,83) with the differences are 13,67. In other word, the students who were taught by using physical line-up game have significant score achievement in grammar skill than the students who were not taught by using physical line-up game.

To prove that the alternative hypothesis (Ha) is accepted and null hypothesis (Ho) is rejected, the researcher has to consult the value of the obtained (t_0) to the t-table (t_t). If the value of (t_0) is higher or at least same with the (t_t), so the alternative hypothesis (Ha) is accepted. The value of it can be seen in following table:

Table 8
The Coefficient Value of t-test Comparison

Degree of Freedom	Significant Level	t-table	t-test
60	5%	1.67	3.33
	1%	2.39	3.33

From the result presented on the table above, t-value (t_o) is higher than t-table (t_t) either 5% or 1% where (5% = 1,67 < 3,33) or (1% = 2,39 < 3,33). So, based on the result above, it can be concluded that Ha (Alternative Hypothesis) is accepted and the Ho (Null Hypothesis) is rejected.

In this section, the researcher describes the interpretation of the research findings and summarizes the hypotheses. In this research, there are two research problems. The first is whether any effect of using physical line-up game on student's grammar achievement at the eleventh grade of SMAN 3 Pamekasan. The second is about the significant effect of using physical line-up game on students' grammar achievement at the eleventh grade of SMAN 3 Pamekasan. Regarding to answers this research problem, the researcher has done some test such as pre-test and post-test to measure effect and significant of using physical line-up game on students' grammar achievement at the eleventh grade of SMAN 3 Pamekasan.

This research used two tests, namely pre-test and post-test. Before giving the test to the students, the researcher must know the validity and reliability of the test. In this research, researcher used content validity to know the validity of the test. The researcher sowed the tests the English teacher to know if test were valid. In testing reliability, the researcher used K – R. 21 (Kuder-Richarson) formula to test the reliability of the test.

From the K – R. 21 (Kuder-Richarson), the result sowed that both of test were reliable. It was showed by the result of r_{11} is higher than r_{table}. The result of reliability of pre-test showed that r_{11} (0,444) is higher than r_{table} (0,994) in significant level 5%. It showed that pre-test was reliable. Than the researcher consult the result of reliability of post-test. The researcher found that r_{11} (0,444) is higher than r_{table} (1,038) n significant level 5%. It showed that pre-test was reliable.

From the data above, the researcher analyzes the data by using t-test. Based on the result of analysis the data found the value of t-test is higher than t-table either in 5% or 1 % (5% = 1,67 < 3,33) or (1% = 2,39 < 3,33). But in this case, researcher used significant on 5% (5% = 1,67 < 3,33).

It means that Ha (alternative hypothesis) is accepted and Ho (null hypothesis is rejected. So it can be concluded that the students that used physical line-up game have better achievement on students' grammar skill than students who did not taught by using physical line-up game.

We know that in teaching English especially in grammar skill, to needs many approach to make students easy to understand and interested to learn. From this research, we can know that by using physical line-up game is useful strategy which can be applied by teacher to encourage effectiveness in teaching learning process especially in teaching grammar. This Physical Line-up Game can help the English teacher in teaching grammar in order to make the class to be more active and cooperative. It will also help the students to be easier in comprehending the grammar explained so it improves their grammar competence in making good sentence. In addition, this physical line-up game can help to build social and communication skill as well as contributing to a positive class room. The researcher has proven that physical line-up game was given effect to students' grammar skill better than before at the eleventh grade of SMAN 3 Pamekasan.

CONCLUSION

This research was conducted by using quasi-experimental design which is aimed to find out whether physical line-up game gives effect on students' grammar achievement at the eleventh grade of SMAN 3 Pamekasan and how the significant effect of using physical line-up game on students' grammar achievement at the eleventh grade of SMAN 3 Pamekasan. Based on the statistical calculation at the previous chapter, there is a significant difference between teaching English grammar by using physical line-up game and without using physical line-up game. Based on the result of the research on the chapter IV, the researcher concluded that:

1. The students taught by physical line-up game have higher achievement than those who do not taught by physical line- game on grammar comprehension achievement the eleventh grade of SMAN 3, and there is effect of

using physical line-up game on student's grammar achievement at the eleventh grade of SMAN 3 Pamekasan. It means that Ha (alternative hypothesis) is accepted and Ho (null hypothesis is rejected).

2. Theoretical statement above is supported by the result of research. The result showed t_{value} was higher than t_{table} (5% = 1,67 < 3,33). It means that the effect is far in achieving the student's ability of grammar comprehension by using physical line-up game. So that the student's can understand grammar easily and quickly. Based that, the students can more interest to follow teaching grammar so the students can enjoy and the students do not fell bored when learn grammar material. The students are also more confident to be active in the classroom. So the students can comprehend and understand the grammar skill easily.

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