Nusantara Hasana Journal
Volume 4 No. 12 (Mei 2025), Page: 428-437
E-ISSN : 2798-1428

THE EFFECT OF USING REAL OBJECTS IN DEVELOPING STUDENTS' SPEAKING ABILITY: AN EXPERIMENTAL STUDY AT THE FIRST YEAR STUDENTS OF D4 TEKNOLOGI REKAYASA PERANGKAT LUNAK POLITEKNIK MEDICA FARMA HUSADA MATARAM IN ACADEMIC YEAR 2024/2025

Yan Reiza Permana

Politeknik Medica Farma Husada Mataram

Email: yankuzza51@gmail.com

Abstract
This research aims to find out the effect of using real objects to develop students' speaking skill. This research uses experimental method. The research is conducted at the second year students of D4 Teknologi Rekayasa Perangkat Lunak Politeknik Medica Farma Husada Mataram in Academic Year 2024/2025. *The research takes randomly for the samples consist of four classes with 64 students to identify the data the research uses experimental and control class. The sample each class consist of 32 students. The techniques of data collection uses pre-test and post-test. The data is obtained from t-test formula. The result of research shows that value of t- test is 4.8 it is higher than t-table with significant level is.05(1.999) and .01(2.6575)and df is 62. The mean score of the experimental group is 32.7 and the mean score of the control group is 15.4 it means that the score of the experimental group is higher than the control grouped. The alternative hypothesis is accepted and null hypothesis is rejected. Thus real objects can develop students'' speaking skill.*
Keywords: *Real Object, Speaking Ability, Experimental Study, Teknologi Rekayasa Perangkat Lunak*

INTRODUCTION

Since in early 1970, language has not only been viewed from its structural function but also, its communicative function as well. It is theory of communicative competence proposed by Hymes at al (Hymes 1972). Later, instruction activities are more oriented on the students' abilities to communicate in the target language at real situation. In the other position, English as an international language is almost spoken all over the world. In Indonesia, English is also learnt as the most important foreign language. This problem has been introduced to the students in D4 Teknologi Rekayasa Perangkat Lunak Politeknik Medica Farma Husada Mataram. English teacher must teach the students four language skill: listening, speaking, reading, and writing interestedly.

One important thing to know is the primary goal of teaching English is to make students communicate in English as the target language (Leman, 1985: 123). In relation to the above statement, the students are expected be able to communicate with native speaker of English or people who can use English as their language in the school the students are expected to use English lovely either in speaking or in writing with certain number of word in the national field. In learning a new language, the beginners' interest usually arises continuously. However the interest soon will fade. Often many students who learn English enthusiastically are reflected by the teachers who follow the text books that are

Nusantara Hasana Journal
Volume 4 No. 12 (Mei 2025), Page: 428-437
E-ISSN : 2798-1428

often not suitable for both curriculum and presentation method or using teaching aid imperfectly.

It means that teacher work hard in planning the teaching and learning process and applies them to help the students understand the materials easy are presenting. The teacher should take the best approach, method and teaching techniques before presenting material in the class room. So, creating a learning situation enable the students learn actively for some reasons, Firstly, media like the real objects and picture are able to focus the attention and interest of all students upon the item and provide a measure of common understanding. Secondly, media can help the student connect the abstract things to the concrete. Concepts are more clarified; word phrase and verbal symbol become more real and have meaning. Motivation and retention of learning are more ready to be achieved enthusiasm and interest can be effectively arisen so learning process becomes more meaningful. Interaction between teacher and student will be increasing more to be able to obtain an optimal result.

So, media can be used to relate facts, ideas, and understanding to word kind of form and structure and increase the flexibility of teaching (Nilson, 1982: 82). Dale in Ali (1984: 70) states that the concept about the media based on classification are drawn in experience form that is called experience come from (Dale; 1984). According to him, the experiences that the highest value is experience reached through direct contact which actual situation of "Real objects" De Cecco and Crowford (1977: 09) state the material used for verbal learning process involved the ability to remember and re-express what they are learning freely and fast. The ability couple word and combine word or sentences inter relative each other. De Cecco and Crowford (1977) state that learning process is done effectively, the materials are learned and hoped to be understood by students.

Purpose of the study This particular study is aimed at: To find out whether there are some effects of using real object in developing student's speaking ability.

Hypothesis of the study *Alternate hypothesis* (Ha) is the real objects effective in developing students' speaking ability. And Null *Hypothesis* (Ho) is the real object is not effective in developing students' speaking ability.

METHOD

The method used by the writer in this research was descriptive method. It was method of research where the writer tries to describe a phenomenon on condition which was completely the same as what it was really like or without any manipulation on the subjects (variables). This method was expected to be to able investigating the students' speaking ability in using real objects.

The populations of this study were all of the first year students of D4 Teknologi Rekayasa Perangkat Lunak Politeknik Medica Farma Husada Mataram in Academic Year 2024/2025. There were four classifications of the students in the academic year of D4 Teknologi Rekayasa Perangkat Lunak Politeknik Medica Farma Husada Mataram, they were Semester 1, Semester 3, Semester 5, Semester 7. The total amount of this study can be seen from the table below.

No	Classifications	The amount of students

Nusantara Hasana Journal
Volume 4 No. 12 (Mei 2025), Page: 428-437
E-ISSN : 2798-1428

1	Semester 1	39
2	Semester 3	39
3	Semester 5	40
4	Semester 7	40
Total		158

The samples of this study were chosen randomly by using lottery. It is representative to select a sampling which consist of 20-25 % from the number of population if the population more than one hundred (Arikunto, 1991: 107) thus. The total number of sample is 64 (sixty four) students which were taken from 158 (a hundred and fifty eight) amount of population or less than 25 %. And then the writer classified to be an experimental group and control group. Each group consists of thirty two (32) students.

The data are the items obtained from the students after doing the test (instruments) given to them. The test consist of three types as follows: Pre-test, in the beginning, those two groups are given the same pre-test in other to know their basic knowledge of speaking. And from this test, pre-test scores are obtained. Treatment, those two group are treated differently, the experimental group was treated by using real objects such as plant and animals and the experimental group was using non-real objects. Post-test, those two groups were given the same post-test to know their development after treatment, both groups are asked to describe he real objects completely.

The assessment of both groups by using scoring speaking scheme that consist of accuracy of pronunciation as follows:

Rating	Criteria
6	Excellent : On par with an educated native speaker, completely at case of English in all topics discussed.
5	Very good : Although he can't mistake for a native speaker, he expresses himself quit clearly. He experiences little difficulty un understanding English, and there is no strain at all in Communicating with him
4	Satisfactory : Verbal communication causing little difficulty for native speaker. He makes a limited of errors of grammar lexis and pronunciation but he is still at easy in communicating on every day. Subjects, he may to correct himself and re-pattern his utterance on occasions but there is little difficulty in understanding him.
3	Fairly satisfactory : Although verbal communication usually fairly satisfactory, the native speaker may occasionally experience some difficulty in communicating with him. Repetition, re-phrasing, and re-pattering is necessary; ordinary native speaker might find difficulty to communicate.

Nusantara Hasana Journal
Volume 4 No. 12 (Mei 2025), Page: 428-437
E-ISSN : 2798-1428

2	Much difficult : Experienced by native speaker unaccustomed to foreign English. His own understanding is severely limited, but communication on everyday topics is possible. Large number of errors of phonology, grammar and lexicon
1	Extreme difficulty : In communication on any subject failure to understand adequately and make himself understood (Heaton:1974:95)

Data Analysis Procedure in this experimental research, the writer collect the data and begins to find out raw scores of the experimental group and control group obtained from the test that stated by Heaton (1974;94). Next, the writer analyzes and interprets all of the data obtained through the entire instrument. The first steps done are finding out the raw score of both groups. The second steps done are finding out the main score of both groups. The writers use the following formula:

fs= $\frac{n}{P}$ x 10 : the formula to find out the raw score after changed into final score.

In which:

fs : The students individual obtained final score
p : the possible maximum raw score based on scoring system
10 : the maximum higher final score
N : the student individual obtained raw score

Mx = $\frac{\sum y}{N}$: The formula to find out the mean score of the experimental group.

Mx = $\frac{\sum x}{N}$: The formula to find out the mean score of the control group.

In which:

M : Mean
X : Experimental group
Y : The control group
Σ : Sum of
N : Number of object

The main score obtained from the formula above are interpreted and analyzed. The last step is the writer finds out the square deviation of the both group by using the formula below.

$\sum X^2 = \sum Y^2 - \frac{(>x)}{N}$ The square deviation of experimental group.

$\sum X^2 = \sum Y^2 - \frac{(\Sigma y)^2}{N}$ The square deviation of the control group.

When the mean score of the both group have been identified, the writer then computed the correlation coefficient of the two mean scores whether they are

Nusantara Hasana Journal
Volume 4 No. 12 (Mei 2025), Page: 428-437
E-ISSN : 2798-1428

categorized as significant or not, in this case, the t – test formula is applied.

$$t = \frac{Mx - My}{\sqrt{\left[\frac{\sum x^2 + \sum y^2}{Nx + Ny - 2}\right]\left[\frac{1}{Nx} + \frac{1}{Ny}\right]}}$$

In which,

Mx = the mean score of experimental group
My = the mean score of control group
X/Y = the deviation of x_1 / y_1 and x_2 / y_2
$\sum$ = the sum of ….
$\sqrt{}$ = the root of ….
Nx = the number of sample of experimental group
Ny = the number of sample of control group
(Arikunto 2006 : 312)

RESULTS AND DISCUSSION

The results section concerns with the statistical analysis of the data obtained from the pre-test and post-test of the both group, experimental and the control group. Later on, the data analysis will determine whether the use of Real objects for developing students' speaking ability is effective or not. It took four weeks to gather all of the data in this study. In this case, the writer gave a pre-test to the both group in the first week and treatments in the half first week to the third week. Finally, both groups are given the post-test to know their progress.

To answer the question of this research, the score of the pre-test and post-test of the both group are computed and analyzed. And here is the formula to compute the final score of the responds' raw scores: final score: Correct answer X 100. And the results of the computation are tabulated as follow:

Table 1 Table of students' final score on pre-test and post-test of the control group and experimental group.

Control Group			**Experimental Group**		
Subject	Pre-test	Post-test	Subject	Pre-Test	Pos-test
1	60	88	1	36	60
2	52	64	2	44	64
3	56	60	3	24	60
4	40	52	4	44	76
5	52	56	5	60	92
6	32	52	6	20	64
7	52	60	7	32	56
8	56	68	8	36	72
9	48	48	9	60	84
10	48	60	10	32	72
11	44	52	11	28	64
12	52	60	12	80	96
13	36	52	13	36	84
14	44	64	14	32	68
15	48	60	15	36	72
16	68	88	16	56	96
17	36	64	17	24	68

Nusantara Hasana Journal
Volume 4 No. 12 (Mei 2025), Page: 428-437
E-ISSN : 2798-1428

18	32	44	18	40	68
19	28	36	19	20	44
20	40	60	20	24	84
21	44	56	21	72	96
22	52	60	22	20	60
23	40	64	23	28	44
24	28	44	24	44	60
25	32	52	25	44	92
26	56	64	26	80	96
27	32	56	27	20	36
28	36	60	28	24	76
29	36	52	29	32	84
30	48	52	30	32	60
31	40	64	31	32	76
32	64	70	32	60	92
Sum	**∑ 1516**	**∑ 1882**		**∑1252**	**∑ 2318**
Mean	**47.3**	**58.8**		**39.1**	**72.4**

The table above illustrates that the average score of the control group in the pre-test was 47.3, which increased to 58.8 in the post-test. This indicates a gain of 11.5 points. In contrast, the experimental group's average score in the pre-test was 39.1 and rose significantly to 72.4 in the post-test, resulting in a gain of 33.3 points.

From these results, it can be inferred that the experimental group, which received instruction through the use of real objects, experienced a notable improvement in performance. However, this data alone is insufficient to conclusively determine the effectiveness of using real objects in enhancing students' speaking skills. Therefore, further data analysis is necessary.

Table2 The computation of deviation of the experimental group.

Subject	Pre-Test (X I)	Post- Test (X 2)	Deviation score of pre- test and post-test (dx)	Square deviation score ($\sum dx^2$)
1	36	60	24	576
2	44	64	20	400
3	24	60	36	1296
4	44	64	20	400
5	20	72	52	2704
6	32	72	40	1600
7	16	60	44	1936
8	36	72	36	1296
9	60	84	24	576
10	32	72	4O	16 00
11	28	64	36	1296
12	8O	96	16	256
13	36	84	48	2304
14	32	68	36	1296
15	36	72	36	1296
16	56	96	40	1600
17	24	68	44	1936

Nusantara Hasana Journal
Volume 4 No. 12 (Mei 2025), Page: 428-437
E-ISSN : 2798-1428

18	40	68	28	784
19	20	44	24	576
20	24	84	60	3600
21	72	96	24	576
22	20	60	40	1600
23	28	44	16	256
24	44	60	16	256
25	44	92	48	2304
26	80	96	16	256
27	20	36	12	144
28	24	76	52	2704
29	32	84	52	2704
30	32	60	28	784
31	32	76	44	1936
32	60	92	32	1024
Sum	**∑1208**	**∑2296**	**∑1048**	**∑41874**
Min.	**16**	**38**		
Max.	**80**	**96**		

Table3 The computation of deviation score of the pre-test and post-test of the control group.

Subject	Pre-test (Y I)	Post-Test (Y 2)	Deviation score of pre-test and post- test (dy)	Square deviation (∑ dy^2)
1	60	88	28	784
2	52	64	12	144
3	56	60	4	16
4	40	52	12	144
5	52	56	4	16
6	32	52	20	400
7	52	60	8	64
8	56	68	12	144
9	44	48	4	16
10	48	60	12	144
11	44	52	8	64
12	52	60	8	64
13	36	52	16	256
14	44	64	20	400
15	48	60	12	144
16	68	88	60	3600
17	36	64	28	784
18	32	44	12	144
19	28	36	8	64
20	40	60	20	400
21	44	56	12	144
22	52	60	8	64
23	40	64	24	576

Nusantara Hasana Journal
Volume 4 No. 12 (Mei 2025), Page: 428-437
E-ISSN : 2798-1428

24	28	44	16	256
25	32	52	20	400
26	56	64	8	64
27	32	56	24	576
28	36	60	24	576
29	36	52	16	256
30	48	52	4	16
31	40	64	24	576
32	64	70	6	36
Sum	**∑1428**	**∑1937**	**∑494**	**∑11332**
Min.	**28**	**36**		
Max.	**68**	**88**		

The computation and analyzing mean deviation score of the control group and experimental group

The mean deviation score of Experimental group it was identified that $\sum X$ =1048, N =32. Thus, the mean score of Experimental group can be computed as:

Mx= $\frac{\sum dx}{N}$

= $\frac{1048}{32}$

= 32,7

To compute the square means deviation score of experimental group it apply the formula $\Sigma X^2=\Sigma dx^2-(\frac{\Sigma dx}{N})$. In which it has been found that Σdx^2=41872, Σdx=1048, and N=32

$\Sigma X^2=41872-\frac{(1048)^2}{32}$ =41872-34322 =7550

The mean deviation score of control group, the writer applies the formula below:

My= $\frac{\sum dy}{N}$ It also has been identified that Σ*dy*=494, and N=32.

My= $\frac{494}{32}$ = 15.4

The square mean deviation of the score of the control group can be computed by applying the formula that $\Sigma y^2=\Sigma dy^2-\frac{(dy)^2}{N}$ it has been identified that Σdy^2=11332, Σdy=494, dan N=32

$\Sigma y^2=11332-\frac{(582)^2}{40}$ = 11332-8468,1 = 3705.9

Identification of the significant of the deviation of the two means score

In order to obtain the information about the significant of the deviation of the mean score, the writer finds out the test value to be compared with the table value.

Mx = 32,7

My = 15,4

Σ x2 = 7750

Σ y2 = 3705.9

Nusantara Hasana Journal
Volume 4 No. 12 (Mei 2025), Page: 428-437
E-ISSN : 2798-1428

$$t = \frac{Mx - My}{\sqrt{\left[\frac{\sum x^2 + \sum y^2}{Nx + Ny - 2}\right]\left[\frac{1}{Nx} + \frac{1}{Ny}\right]}}$$

$$t = \frac{32{,}7 - 15.4}{\sqrt{\left[\frac{7550 + 3705.9}{32 + 32 - 2}\right]\left[\frac{1}{32} + \frac{1}{32}\right]}}$$

$$t = \frac{17.3}{\sqrt{\left[\frac{11252.9}{62}\right]\left[\frac{2}{32}\right]}}$$

$$t = \frac{17.3}{\sqrt{\left[\frac{11252.9}{62}\right][0{,}06]}}$$

$$t = \frac{17.3}{\sqrt{[181.5][0{,}06]}}$$

$$t = \frac{17.3}{\sqrt{13.4}}$$

$$t = \frac{17.3}{3.6}$$

t= 4, 8

Discussion

Following the statistical analysis, it was found that the mean difference between the pre-test and post-test scores in the experimental group was 32.7, whereas the control group showed a mean difference of 15.4. This result suggests that the improvement in the experimental group's scores was greater than that of the control group.

Subsequently, the researcher performed a statistical calculation to determine the t-test value, which was found to be 4.8. To assess the significance of using real objects in enhancing students' speaking skills, the obtained t-test value was compared with the critical values from the t-distribution table.

The degree of freedom (df) was calculated using the formula Nx = Ny – 2, resulting in a df of 62. The comparison was then made at two confidence levels: 0.05 (95%) and 0.01 (99%).

T –test	**t-table**		
	Df	.01	.05
4.8	62	2.575	1.9999

This indicates that the difference in mean scores is statistically significant at both the 0.05 (95%) and 0.01 (99%) confidence levels. These findings demonstrate that the use of real objects is highly beneficial and effective in enhancing students' speaking abilities, as it supports their improvement in speaking performance.

Based on the statistical analysis, the obtained t-test value exceeds the

Nusantara Hasana Journal
Volume 4 No. 12 (Mei 2025), Page: 428-437
E-ISSN : 2798-1428

critical value from the t-table. This result leads to the rejection of the null hypothesis (Ho), which posits that "the use of real objects is not effective in developing students' speaking ability." Conversely, the alternative hypothesis (Ha), stating that "the use of real objects is effective in developing students' speaking ability," is accepted.

CONCLUSION

After conducting the research and analyzing the data, the researcher arrived at several conclusions. First, the experimental group showed a greater improvement in speaking ability, with a mean score increase of 32.7, compared to 15.4 in the control group. Second, the t-test result was 4.8, which is higher than the t-table values at both the 0.05 level (1.999) and the 0.01 level (2.657).
This means that the difference between the two groups is statistically significant. Therefore, the null hypothesis (Ho), which states that real objects are not effective in developing students' speaking ability, is rejected. Conversely, the alternative hypothesis (Ha), which states that real objects are effective in improving students' speaking ability, is accepted.

REFERENCES

Ali, Muhammad, 1998. *konsep dan Penerapan CBSA dalam Pengajaran,* PT. Sarana Pancaka, Bandung.

Arikunto, Suharsimi, 1989. *Prosedur Penelitian Pendekatan Praktis,* PT. Bina Aksara, Jakarta.

A, s hornby, 1986. *Oxford Anvace learners Dictionary Of Current English.* London, Oxford University press.

Finaccharo, mery, 1874. *English As second Language From theory to Practice*, regent publishing, inc. USA

Hamzah Amir, s. 1988. *Media Audia Visual untuk pengajaran penerangan dan penyuluhan,* PT. Gramedia, Jakarta.

Hamer Jeremy, 1987. *The practice of English Language Teaching.* Logman Handbooks For language teacher, Logman, London.

Hadi, Sutrisno, 1980, *statistic*, yayasan penerbit psikologi, UGM Yogyakarta.

Hasan faud, prof. DR. 1993, *Kurikulum Pendidikan Dasar 1994*, Departemen Pendidikan dan Kebudayaan.

Richard jack, C and Redges, S, Theodore, 1986. *Approaches and methods Language teaching, Cambridge university press*, Cambridge university press, Cambridge.

Sugiyono, 2006, *Statistika Untuk Penelitian,* CV Alfabeta Bandung. Sujana Nana, 1989. *CBSA Dalam proses Belajar Mengajar*. PT Sinar Baru Bandung

William, 1983. *Communicative Language teac*hing, Cambridge University press Cambridge.

Walter R, Brog and Meredith D. Gell, 1983. *Education Research An Introduction*, Logman Inc. New York.

J, R heaton, 1975. *Writing English Language Tes*t, Logman handbook for Language Teacher, Bon Wah press, Pte Ltd.