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Games and Simulation on Students' Speaking Skill

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ABSTRACT

The objective of the research is to see the effectiveness of Games and Simulation in speaking skill on the seventh grade students at SMP Teknologi Pilar Bangsa. The technique applied in this research was quas-experimental research. In this research, there were two classes taught by using different techniques. The experimental class was taught by using Games and Simulation technique while the controlled class was taught by using conventional technique. Futhermore, this research was conducted through the following procedures: giving pre-test, applying treatments, and giving posttest. The sample of this research were 30 students of class 7.1 and 31 students of class 7.3. Normality test was tested by using chi-square. From the calculation of normality showed that the data are normally distributed population. The homogeneity test result of students learning reading comprehension has homogeneous variance. Furthermore, the t-test showed that t-count of experimental class is 3.25, was higher than t-table. The t-test of control class is 3.25, was higher than t-table. It means that finding of this study shows that there is a significance difference in the result between students in class 7 as control class that were taught without games and simulation technique and students in class as experimental class that were taught speaking skill using games and simulation technique.

INTRODUCTION

English is an international language that use in global or whole the country and besides, Patel and Jain (2008:6) state that English is the concept of the English language as a global means of communication in numerous dialects, and also the movement towards an international standard for the language. The area of English has always become a special interest. It's because of the importance of English in any scope of our lives. In the international relationship, English speaking ability is very important to be able to participate in the wider world of work. The speaking skill is measured in terms of the ability to carry out a conversation in the language. This reality makes teachers and parents think that speaking skill should be mastered by their student and children.

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According to Wachidah (2013) in (Nur & Madkur), The 2013 English Curriculum seems to be the reactions or correction of the previous curriculum and the reality that has happened. The reality shows that most high-school learners can hardly use English in the real world even for simple purposes. It is also far below the nationally set standards of English Competence. Based on the definition the students should hardly use English in the real world even for simple purpose.

There are four important skills that students have to master in English. They are speaking, reading, listening and writing. Furthermore, the students have to master English components such as vocabulary, grammar, spelling and pronunciation. In current curriculum, the English literacy level of junior high school is the ability to use English for communication in daily life. It means that the objective of English teaching is the ability to speak English fluently according to Richards and Renandya (2002:208) "The functions of spoken language are interactional and transactional"

Thus, the researchers recognize that the fluency in speaking becomes the problem in learning English. Here, the using of appropriate techniques in teaching and learning English is one of the ways to solve the problem. It is needed in order to make the students be motivated in speaking English in the classroom and out of classroom. There are many techniques to make English teaching especially speaking is fun, interesting and active. One of the techniques they are gaming and simulation. Simulation is a technique for learning that can be applied to many different disciplines and types of learners. According to Ayudhya (2015:23), "Simulation is a technique for learning that can be applied to many different disciplines and types of learners"

Based on background and focus of the study, the researchers formulate the problem on whether there is any significant effect of games and simulation on the seventh grade students' speaking skill.

METHOD

The researchers used quasi-experimental design and focused on nonequivalent control group design. The experiment study is involved into two groups there are experimental group and control group. To see the influence of this technique to the student's speaking skill, the researcher compared the student's post-test score in control class and experimental class to see whether there are students obtained score before and after treatment. The results of pre-test and post-test of both groups are compare in order to know that the treatment in experimental group gives more significance effect to the student's speaking skill than the control group. The research design can be seen in the following table. Research design can be seen in the following table.

Table 1. Nonequivalent Control Group Design

Group	Pretest	Treatment	Posttest
Experimental	Y_e	X	Y''_e
Control	Y_k		Y''_k

(Riadi, 2014:14)

Description:
X : Teaching learning using group work technique
Y_e : Pretest gives in experimental class
Y_k : Posttest gives in experimental class
Y''_e : Pretest gives in control class
Y''_k : posttest gives in control class

RESULTS AND DISCUSSION

Table 2. Students Score of Experimental Class

No	Participants	Pre Test	Post Test
1	Students 001	55	80
2	Students 002	60	80
3	Students 003	40	75
4	Students 004	60	70
5	Students 005	60	70
6	Students 006	55	70
7	Students 007	50	60
8	Students 008	50	70
9	Students 009	65	80
10	Students 010	60	85
11	Students 011	40	80
12	Students 012	50	85
13	Students 013	50	75
14	Students 014	55	85
15	Students 015	55	80
16	Students 016	45	75
17	Students 017	45	40
18	Students 018	45	55
19	Students 019	65	60
20	Students 020	55	85
21	Students 021	50	65
22	Students 022	50	70
23	Students 023	55	55
24	Students 024	55	60
25	Students 025	55	60
26	Students 026	55	45
27	Students 027	50	60
28	Students 028	45	60
29	Students 029	45	60
30	Students 030	50	60
Total		1570	2055
Max Score		65	85
Min Score		40	40

Based on the difference between the score of pretest, it is know that the maximum score is 65, the minimum score is 40, the average score (mean) is 54,33, median is 54,5, mode is 57, variant is 41.22 and standard deviation is 6.42.

Table 3. Analysis of Data Centralization

No	Analysis	Symbol	Result
1	Mean	$\bar{X}$	54.33
2	Median	*Me*	54.5
3	Mode	*Mo*	57

Table 4. Analysis of Data Distribution

No	Analysis	Symbol	Result
1	Deviation Standard	S	6.42
2	Variance	S^2	41.22

Based on the score of posttest, it is known that the maximum score is 85, the minimum score is 40, the average score is 51.2, median is 63.5, mode is 49.5, standard deviation is 11.66, and variant is 135.89.

Table 5. Analysis of Data Centralization

No	Analysis	Symbol	Result
1	Mean	$\bar{X}$	51.2
2	Median	*Me*	63.5
3	Mode	*Mo*	49.5

Table 6. Analysis of Data Distribution

No	Analysis	Symbol	Result
1	Deviation Standard	S	13.09
2	Variance	S^2	171.27

Table 7. Students Score of Controlled Class

No	**Participants**	**Pre-test**	**Post-test**
1	Students 001	20	45
2	Students 002	40	65
3	Students 003	40	60
4	Students 004	70	65
5	Students 005	70	70
6	Students 006	70	70
7	Students 007	70	60
8	Students 008	55	70
9	Students 009	70	50
10	Students 010	50	55
11	Students 011	50	55
12	Students 012	30	70
13	Students 013	40	60
14	Students 014	55	55
15	Students 015	30	45
16	Students 016	30	60
17	Students 017	60	45
18	Students 018	60	50
19	Students 019	60	65

20	Students 020	60	70
21	Students 021	60	50
22	Students 022	60	45
23	Students 023	70	45
24	Students 024	55	50
25	Students 025	70	45
26	Students 026	70	45
27	Students 027	60	45
28	Students 028	70	70
29	Students 029	70	70
30	Students 030	70	45
31	Students 031	60	50
Total		1745	1745
Max Score		70	45
Min Score		20	70

Based on the calculation of pretest score in controlled class, the highest score is 70 and lowest score is 20. The range of data is 50, from the data (n) is 31. The number of class used is 6 and interval class used is 9. From the calculation above the central tendency data can be seen in the table below:

Table 8. Descriptive Statistics of Pretest Score in Controlled Class

n	Mean	Median	Mode	Deviation Standard (S)	variance
31	56.8	59.65	66.25	13.09	171.27

Based on the table above, it can be seen that Mean is 56.8, Median is 59.65, Mode is 66.25, Deviation standard (S) is 13.09 and Variance is 171.27

Table 9. Analysis of Data Centralization

No	Analysis	Symbol	Result
1	Mean	$\bar{X}$	56.23
2	Median	*Me*	61.82
3	Mode	*Mo*	66.25

Table 10. Analysis of Data Distribution

No	Analysis	Symbol	Result
1	Deviation Standard	S	13.09
2	Variance	S^2	171.27

Based on the score of posttest, it is known that the maximum score is 70, the minimum score is 45, the average score is 60.23, median is 58.67, mode is 56.72, standard deviation is 8.19, and variant is 67.

Table 11. Analysis of Data Centralization

No	Analysis	Symbol	Result
1	Mean	$\bar{X}$	51.2
2	Median	*Me*	63.5
3	Mode	*Mo*	49.5

Table 12. Analysis of Data Distribution

No	Analysis	Symbol	Result
1	Deviation Standard	S	13.09
2	Variance	S^2	171.27

The result from experimental class and control class as the following:

Table 13. Normality Test of Pretest in Experimental Class

Data	X^2_{count}	X^2_{table}
Experiment	10.35	11.07

Based on the table above that X²count is 10.35 and X²table is 11.07. X²count was smaller than X²table so H0 is accepted and based on the criteria of the data was normally distributed.

Table 14. Normality Test of Posttest in Experimental Class

Data	X^2_{count}	X^2_{table}
Experiment	7.75	11.07

Based on the table above that X^2_{count} is 7.75 and X^2_{table} is 11.07. X^2_{count} was smaller than X^2_{table} so H_0 is accepted and based on the criteria of the data was normally distributed.

Table 15. Normality Testing of Pretest in Controlled Class

Data	X^2_{count}	X^2_{table}
Control	7.28	11.07

Based on the table above that X²count is 7.28 and X²table is 11.07. X²count was smaller than X²table so H0 is accepted and based on the criteria of the data was normally distributed.

Table 16. Normality Test of Posttest in Controlled Class

Data	X^2_{count}	X^2_{table}
Control	7.67	11.07

Based on the table above that X^2_{count} is 7.67 and X^2_{table} is 11.07. X^2_{count} was smaller than X^2_{table} so H_0 is accepted and based on the criteria of the data was normally distributed.

Table 17. The Result of Normality Test

Data		X^2_{count}	X^2_{table}	Result
Pre-test	Experiment	10.35	11.07	Normal
	Control	7.28	11.07	Normal
Post-test	Experiment	7.75	11.07	Normal
	Control	7.67	11.07	Normal

Based on table 17 above, it can be concluded the data of experimental and controlled class were normally distributed. Homogeneity test are used to find out whether the data was homogeneous or not. Homogeneity test can be performed if the data was normally distributed. The formula used to test the homogeneity test is fisher formula.

Significant level α=0.05, then the test criteria are:
If Fcount < Ftable, so data is homogeneous.
If Fcount > Ftable, so data is not homogeneous.

Table 18. Homogeneity Data of Pretest

Data	N	S^2	F_{count}	F_{table}
Experiment	30	42.64	0.20	1.85
Control	31	214.95		

Based on the table above that F_{count} = 0.20 and F_{table} = 1.85. F_{count} in pretest was smaller than F_{table}. Based on the criteria of homogeneity if If $F_{count} < F_{table}$, so data is homogeneous.

Table 19. Homogeneity Data of Posttest

Data	N	S^2	F_{count}	F_{table}
Experiment	30	145.09	1.48	1.85
Control	31	98.28		

Based on the table above that F_{count} = 1.48 and F_{table} = 1.85. F_{count} in pretest was smaller than F_{table}. Based on the criteria of homogeneity if If $F_{count} < F_{table}$, so data is homogeneous.

Hypothesis Test of Pretest in Experimental and Controlled Class

Table 20. Hypothesis Test of Pretest

Data	n	$\bar{\bar{X}}$	S^2	t_{count}	t_{table}
Pretest	Experiment	52.33	107.22	-1.10	2.00
	Control	56.29	283.01		

Based on the data, it is concluded that t_{count} smaller than t_{table}. Thus, H_0 was accepted and H_1 was rejected. Based on the criteria, if $t_{count} < t_{table}$, so there is no significance difference of students' speaking skill who are taught by used games and simulation technique and who are taught without games and simulation technique.

Hypothesis Test of Posttest in Experimental and Controlled Class

Table 21. Hypothesis Test of Posttest

Data	n	$\bar{\bar{X}}$	S^2	t_{count}	t_{table}
Posttest	Experiment	68.5	261.86	3.25	2.00
	Control	56.29	170.11		

Based on the data, it is concluded that t_{count} was higher than t_{table}. Thus, H_0 was rejected and H_1 was accepted. Based on the criteria, if $t_{count} < t_{table}$, so there is a significance difference of students' speaking skill who are taught by used games and simulation technique and who are taught without games and simulation technique.

Regarding conducting the research, used of games and simulation as a technique in teaching speaking skill on the seventh grade students at SMP Teknologi Pilar Bangsa was effective. It was proved by obtained score of t-test. The t-test showed that t-count of experimental class is 3.25, was higher than t-table. The t-test of control class is 3.25, was higher than t-table. It means H_1 was accepted and H0 was rejected. Since the t-count was higher than the t-table, there was a significance difference in the result between students in class 7 as control class that were taught without games and simulation technique and students in class as experimental class that were taught speaking skill using games and simulation technique. Thus, the research in experimental class with games and simulation technique can improve their speaking and more interesting than control class without games and simulation technique

CONCLUSION

Subsequently conducting the research, the researchers concluded that the games and simulation technique in teaching speaking skill on the seventh grade students at SMP Teknologi Pilar Bangsa was effective. It is concluded that t-count was higher than t-table. Thus, H0 was rejected and H_1 was accepted. Based on the criteria, if t-count < t-table, so there is a significance difference of students' speaking skill who are taught by used games and simulation technique and who are taught without games and simulation technique. It means that games and simulation technique had effect to students' speaking skill.

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