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COLLABORATIVE LEARNING AND PROBLEM-BASED LEARNING IN TEACHING SPEAKING

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Abstract

The purposes of this research is to investigate the achievement and improvement of students' English-speaking ability at the eleventh-grade students of SMK 4 LPPM RI Padalarang. The researcher used quasi-experimental research design in this research. The instruments are tests. The tests were done twice to the experimental class and the control class. They are pre-test and post-test. The data were calculated using Microsoft Office Excel 2019 and IBM SPSS 25. There are 30 students in each class. The total of the population is 60 students. The results of the research showed that from the implementation of Cooperative Script Method at the eleventh-grade students of SMK 4 LPPM RI Padalarang, the students' English-speaking ability are improved significantly. It can be seen from the post-test mean score achievement. It can be concluded that the students' English-speaking ability improvement who learned using Cooperative Script Method are better than students who learned using Problem-Based Learning. The implementation of Cooperative Script Method is effective in teaching speaking.

Keywords: *Speaking Skill, Teaching Speaking, Cooperative Script Method, Problem-Based Learning, Quasi-Experimental*

INTRODUCTION

Speaking is one of four basic skills in language that important to interact with other people to convey information. The learners have to master speaking skill to communicate. Speaking is a speaking activity between people to convey information. According to Bailey and Nunan (2005), speaking is an interactive process of constructing meaning that involves producing, receiving and processing information. In addition, speaking activities also may well form one part of a much longer sequence which includes reading or listening and, after the activity, study work (Harmer, 1998). He (2001) stated that without speaking, it shows that people do not understand what the speakers are saying, by looking confused, and scratching their head in confusion. However, speaking is very important for our daily communication. Speaking skill has several aspects measured such as fluency (speaking easily and quickly), comprehension (understanding the meaning), grammar (sentence structures), vocabulary (collection of words), pronunciation (the way to produce sounds from words), and task (questions on topics). If students already have all the aspects, it can be said that they have good skills in speaking.

Teaching speaking is to teach the learners to produce the English speech. Teaching speaking should be taught in attractive, interactive and communicative ways. Brown (2001) explained that in teaching speaking, micro skills are very important. One implication is the importance of focusing on both the forms of language and the functions of the language. He also mentions that the pieces of language should be given attention for more that make up to the whole.

Collaborative Learning (Cooperative Script Method)

Collaborative Learning has many types of learning method, such as Learning Together, Teams-Games-Tournament (TGT), Group Investigation (GI), Jigsaw Procedure (JP), Think-Paired Share (TPR), Cooperative Learning Structures (CLS), Cooperative Integrated Reading and Composition (CIRC), and Cooperative Script Method. In this research, the learning method used Cooperative Script Method.

In this research, the researcher compares the other innovative learning models with the one of compulsory learning models in Curriculum 2013. The researcher focuses on using Collaborative Learning: Cooperative Script Method and Problem-Based Learning. Cooperative Script Method is one of the Collaborative Learning models conducted by the students learn in pairs and orally describe the material they have learned. On this method, students have to work in pairs to solve the problem and make a report. Cooperative Script Method is method of learning where students work in pairs and changes roles as to speaker or listener in summarize parts of have studied (Slavin, 1982). It is a learning model that can improve students' memory (Slavin, 1994). The method is compared with Problem-Based Learning.

There are seven steps that conducted in Cooperative Script Method based on Shoimin (2014). First, the teacher divides students into pairs. Second, the teacher gives material to each student. Third, the teacher and students determine the first to act as a speaker and a listener. Next, the speaker reads the material obtained, while the listener listened. After that, the students exchange roles and do as above. Then, the students and the teacher make a conclusion together. The last, the teacher close the learning activity.

Problem-Based Learning

Problem-Based Learning is a compulsory learning model in Curriculum 2013 conducted by giving students a problem that they have to be solved by thinking critically and skillfully. Problem-Based Learning is a student-centred method of teaching in which the

students get the duty to solve the real problems related to their materials (Etherington, 2011). In learning strategies with Problem-Based Learning, students are expected to be involved in the research process that requires them to identify problems, collect data, and use the data for problem solving (Panen, 2001).

There are five steps that conducted in Problem-Based Learning based on Huda (2013). First, the teacher explains the purpose of learning and proposes a problem that students have to solve. Second, the teacher helps students in organizing tasks. Third, the teacher guides and motivates students to gather relevant information. Next, the teacher helps students in planning and preparing works such as reports. The last, the teacher helps students reflect or evaluate their investigations in each process.

METHODOLOGY

This research used quantitative method which explains phenomena by collecting numerical data that are analysed using mathematically based method (Aliaga and Gunderson, 2002).This research compares two classes, they are (1) experimental class: where the Cooperative Script Method was applied in teaching speaking and (2) control class: where the Problem-Based Learning was applied in teaching speaking.

This research used quasi-experimental design. Quasi-experimental research design is similar to true experimental research design in every respect except that they do not use random assignment to create the comparisons from which treatment-caused change inferred (Cook and Campbell, 1979). Quasi-experimental design makes comparisons between the means of the scores of the two more groups that occur naturally. Or these are groups into which subjects would not usually be randomly assigned because individuals naturally belong to one group or the others (Kaswan and Suprijadi, 2013).

RESULTS AND DISCUSSIONS

Results

1. Statistical Results
    a. Descriptive Statistic Analysis

        The data of improving students' English-speaking skill using Cooperative Script Method and Problem-Based Learning based on the calculation of pretest and posttest

scores. From the calculated scores, the researcher got total score and mean value of both experiment class and control class.

Table 1 The Students' Scores of Experimental Class

Name	Pre-test	Post-test	Gain	Interpretation
Student 1	67	93	0.79	High
Student 2	63	90	0.73	High
Student 3	67	87	0.61	Middle
Student 4	70	87	0.57	Middle
Student 5	76	97	0.88	High
Student 6	73	93	0.74	High
Student 7	76	93	0.71	High
Student 8	63	80	0.46	Middle
Student 9	67	80	0.39	Middle
Student 10	66	77	0.32	Middle
Student 11	70	83	0.43	Middle
Student 12	70	87	0.57	Middle
Student 13	70	83	0.43	Middle
Student 14	63	76	0.35	Middle
Student 15	66	77	0.32	Middle
Student 16	73	83	0.37	Middle
Student 17	77	93	0.70	High
Student 18	67	80	0.39	Middle
Student 19	73	87	0.52	Middle
Student 20	63	80	0.46	Middle
Student 21	76	87	0.46	Middle
Student 22	67	80	0.39	Middle
Student 23	60	73	0.33	Middle
Student 24	73	83	0.37	Middle
Student 25	70	83	0.43	Middle
Student 26	63	76	0.35	Middle
Student 27	73	83	0.37	Middle
Student 28	60	76	0.40	Middle
Student 29	70	83	0.43	Middle
Student 30	60	73	0.33	Middle
Total	2052	2503	14.60	
Mean	68.40	83.43	0.49	

From the data calculation in Table 4.1, it can be inferred that the total pretest score of experimental class is 2052 while the total posttest score is 2503 and the mean of pretest score is 68.40 while the mean of posttest score is 83.43.

Table 2 The Students' Scores of Control Class

Name	Pre-test	Post-test	Gain	Interpretation
Student 1	63	73	0.27	Low
Student 2	70	80	0.33	Middle
Student 3	66	80	0.41	Middle
Student 4	73	83	0.37	Middle
Student 5	76	86	0.42	Middle
Student 6	70	80	0.33	Middle
Student 7	73	80	0.26	Low
Student 8	76	83	0.29	Low
Student 9	63	76	0.35	Middle
Student 10	50	66	0.32	Middle
Student 11	57	70	0.30	Middle
Student 12	73	83	0.37	Middle
Student 13	70	77	0.23	Low
Student 14	76	83	0.29	Low
Student 15	67	70	0.09	Low
Student 16	76	80	0.17	Low
Student 17	73	83	0.37	Middle
Student 18	67	76	0.27	Low
Student 19	76	83	0.29	Low
Student 20	67	76	0.27	Low
Student 21	70	83	0.43	Middle
Student 22	66	73	0.21	Low
Student 23	56	73	0.39	Middle
Student 24	76	83	0.29	Low
Student 25	60	76	0.40	Middle
Student 26	73	82	0.33	Middle
Student 27	67	77	0.30	Middle
Student 28	66	76	0.29	Low
Student 29	73	80	0.26	Low
Student 30	57	70	0.30	Middle
Total	2046	2341	9.23	
Mean	68.20	78.03	0.31	

From the data calculation Table 4.2, it can be inferred that the total value of pretest score in control class is 2046 while the total posttest score is 2341 and the mean of pretest score is 68.20 while the mean of posttest score is 78.03.

b. Pretest Data Analysis

1) Pretest Data Normality Test

In the pre-test data analysis, the first thing to do was the normality test. The purpose of testing data is to know whether the data are normally distributed or not. Testing data using *Kolmogorov-Smirnov*. In this normality test the following hypothesis is used:

If Sig. ≥ 0.05 it is estimated that pre-test data are normally distributed.

If Sig. < 0.05 it is estimated that pre-test data are not normally distributed.

Based on the results of testing by IBM SPSS 25 the following results are obtained:

Table . Results of Pretest Data Normality Test of Both Classes

Class	Kolmogorov-Smirnov[a]		
	Statistic	df	Sig.
Experimental	.124	30	.200*
Control	.156	30	.060

From the **Table 3**, it was found that the pretest data Sig. values of the experimental class is 0.200 and the control class is 0.060. Because the both classes significance are ≥ 0.05 the conclusion obtained is the both classes have pretest data that are normally distributed.

2) Pretest Data Homogeneity of Variances Test

Because the value of the experiment class and the control class pre-test is normally distributed, the next step is test of homogeneity of variances. In this test the following hypotheses are used:

If Sig. ≥ 0.05 then the variances are the same.

If Sig. < 0.05 then the variances are not the same.

Table 4 Results of Pretest Data Homogeneity of Variances Test

		Levene Statistic	df1	df2	Sig.
Pretest Speaking	**Based on Mean**	2.022	1	58	.160

From the test can be seen in Table 4.4 that pretest data Sig. is 0.160. Because the experimental class and the control class significance is ≥ 0.05 the conclusion obtained is the variances of the both classes are the same.

3) *t-test*

After the homogeneity of variances test, the next step is the parametric test using independent sample t-test. Because the variances of pre-test data of the

experiment class and the control class are the same. In the *t*-test the following hypotheses are used:

If Sig. (2-tailed) ≥ 0.05 then H0 is accepted and Ha is rejected.

If Sig. (2-tailed) < 0.05 then H0 is rejected and Ha is accepted.

Table 5. Results of Pretest Data t-test

		Sig. (2-tailed)
Pretest Speaking	**Equal variances assumed**	.899

Based on the result of t-test in Table 4.5, the pretest data Sig. (2-tailed) is 0.899. Because the Sig. (2-tailed) ≥ 0.05, then accept H_0 and reject H_a. Therefore, the conclusion obtained is there is no difference in the students' initial English-speaking ability.

c. Posttest Data Analysis

1) Posttest Data Normality Test

After the pretest data was analysed. The researcher conducted posttest data normality test for the both classes to know whether the data distribution of posttest data in both classes is normally distributed or not. The purpose of testing data is to know whether the data are normally distributed or not. Testing data using Kolmogorov-Smirnov. In this normality test the following hypotheses are used:

If Sig. ≥ 0.05 it is estimated that pre-test data are normally distributed.

If Sig. < 0.05 it is estimated that pre-test data are not normally distributed.

Table 6 Results of Posttest Data Normality Test

Class	**Kolmogorov-Smirnov[a]**		
	Statistic	**df**	**Sig.**
Experimental	.160	30	.047
Control	.185	30	.010

From the Table 4.6, it was found that the posttest data Sig. of the experimental class is 0.047 while the control class is 0.010. Because the both classes significance are < 0.05 the conclusion obtained is the both classes have posttest data that are not normally distributed.

2) Posttest Data Mann-Whitney U Test

Because the posttest data of both classes are not normally distributed, the next step is to conduct the non-parametric test using Mann-Whitney U. Mann-Whitney test used the following hypotheses according to Sugiyono (2017):

H0 : $\mu 1 \leq \mu 2$, speaking ability improvement using Cooperative Script Method is not better than or equal to Problem-Based Learning significantly.

Ha : $\mu 1 > \mu 2$, speaking ability improvement using Cooperative Script Method is better than the Problem-Based Learning significantly.

The testing criteria as follows:

If Sig. > 0.05 then H0 is accepted and Ha is rejected.

If Sig. ≤ 0.05 then H0 is rejected and Ha is accepted.

Table 7. Results of Posttest Data Mann-Whitney U Test

	Posttest Speaking
Mann-Whitney U	244.500
Wilcoxon W	709.500
Z	-3.078
Asymp. Sig. (2-tailed)	.002
a. Grouping Variable: Class	

From the Table 4.7, it can be seen that the posttest data Asymp. Sig. (2-tailed) is 0.002. Then according to Uyanto (2009) Asymp. Sig. (2-tailed) must be divided in two to get Sig. (1-tailed). Then the Sig. (1-tailed) is $\frac{0.002}{2}$ = 0.001. Because the significance < 0.05 then accept H_a and reject H_0. The conclusion is the achievement of students' English-speaking ability improvement using Cooperative Script Method is better than Problem-Based Learning.

DISCUSSIONS

The results of the research showed that Cooperative Script Method can improve the students' English-speaking skill by comparing the pretest and posttest mean score of the experimental class. The pretest mean score of the experimental class is 68.40 while the posttest mean score is 83.43. The results showed that the improvement between students who learned using Cooperative Script Method were better than the students who learned using Problem-Based Learning. In the control class where the students learned using Problem-Based Learning, there was also an improvement. It can be seen by comparing the pretest mean score and the posttest

mean score. The pretest mean score of the control class is 68.20 while the posttest mean score is 78.03. Although the both classes similarly got better improvement, but the experimental class has the significant improvement. It can be seen from the gain mean score of the both classes. The gain mean score of the experimental class is 0.49 while the gain mean score of the control class is 0.31. Therefore, this research shows that the experimental class that learned using Cooperative Script Method had better improvement than the control class that learned using Problem-Based Learning.

CONCLUSION

Based on the data analysis and discussion that have been described previously, the researcher concluded that the students' English-speaking ability improvement who learned using Cooperative Script Method are better than the students who learned using Problem-Based Learning. As can be seen on the gain mean score of the experimental class in Table 1, that is 0.49 while the gain mean score of the control class in Table 2 is 0.31, which means the gain mean score of the experimental class is significantly higher than the gain mean score of the control class. Based on above conclusion, it can be suggested that teaching and learning activities with the Cooperative Script Method can be used as one of the good learning alternatives to be applied in teaching speaking in the classroom. Because this method makes the students become more active, innovative, and creative. The main purpose of this research was to improve the speaking ability of the students since speaking is one of the language skills reported as the language difficulties that the students face in their life.

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