

The Effectiveness of Scientific Approach in Teaching Procedure Text Using Video to Improve Speaking Skill for Grade 9 Students of SMPN 32 Semarang

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Abstract: *The study was conducted to determine the effectiveness of scientific approach and video media to improve students' speaking skill. The aim was to find out significant differences between the experimental class that received treatment and the control class that did not receive treatment. The research was conducted for 4 days at SMPN 32 Semarang with a population of all ninth grade students. Meanwhile, the samples were from IXF as the experimental class and IXG as the control class. There are 30 students in each class who participated. The research is quantitative research and used quasi-experimental method. Instrument of the study was oral test and collected the data used pre-test and post-test. Technique of data analysis used IMB SPSS version 25. After 4 days of treatment, the average student learning outcomes were very significant. The Mean score of control class is 63.2 and experimental class is 80.9. The average score of the control class is lower than the experimental class, which means that the control class showed a slight improvement after the learning process without using a scientific approach and video media. Meanwhile, the experimental class showed significant improvement after the learning process using a scientific approach and video media. The results have been processed through SPSS and produced significant differences between the control class and the experimental class. So, it can be concluded that a scientific approach and video media are effective to improve students' speaking skill.*

Keyword: Scientific approach, Video, Procedure Text

Abstrak: Penelitian ini dilakukan untuk mengetahui efektivitas pendekatan saintifik dan media video untuk meningkatkan keterampilan berbicara siswa. Tujuannya untuk mengetahui perbedaan yang signifikan antara kelas eksperimen yang mendapat perlakuan dengan kelas kontrol yang tidak mendapat perlakuan. Penelitian dilakukan selama 4 hari di SMPN 32 Semarang dengan populasi seluruh siswa kelas IX. Sedangkan sampelnya adalah IXF sebagai kelas eksperimen dan IXG sebagai kelas kontrol. Ada 30 siswa di setiap kelas yang berpartisipasi. Penelitian ini merupakan penelitian kuantitatif dan menggunakan metode eksperimen semu. Instrumen penelitian ini adalah tes lisan dan pengumpulan data menggunakan pre-test dan post-test. Teknik analisis data menggunakan IMB SPSS versi 25. Setelah dilakukan perlakuan selama 4 hari, rata-rata hasil belajar siswa sangat signifikan. Nilai rata-rata kelas kontrol adalah 63,2 dan kelas eksperimen adalah 80,9. Nilai rata-rata kelas kontrol lebih rendah dibandingkan kelas eksperimen, yang berarti kelas kontrol menunjukkan sedikit peningkatan setelah proses pembelajaran tanpa menggunakan pendekatan saintifik dan media video. Sedangkan kelas eksperimen menunjukkan peningkatan yang signifikan setelah dilakukan proses pembelajaran dengan menggunakan pendekatan saintifik dan media video. Hasilnya telah diolah melalui SPSS dan menghasilkan perbedaan yang signifikan antara kelas kontrol dan kelas eksperimen. Jadi, dapat disimpulkan bahwa pendekatan saintifik dan media video efektif untuk meningkatkan keterampilan berbicara siswa.

Kata Kunci: Pendekatan Saintifik, Video, Teks Prosedur

INTRODUCTION

Language is one of the most important ways to communicate with others. Without language, people struggle to understand the intentions of others and find it challenging to form social connections. In order to communicate with individuals from other countries, the world requires an international language that can serve as a means of communication between different nations. English has been selected as an international language because of its extensive usage in nearly every country (Yusmalinda & Astuti, 2020, p. 76). Since English is an international language, some countries require their generation to learn English, including Indonesia as a developing country. Learning English is not easy for Indonesians, remember that the Indonesian language is a first language and English is a second language. Acquiring a second language is more difficult than mastering our native language and necessitates a great deal of effort (Yasinta Anwar, Arso Setyaji, and Ririn Ambarini.Pdf, 2023,n.d., p. 18).

There are four skills in English, such as reading, listening, writing, and speaking. From the fourth skill in English, it is divided into two parts. Speaking and writing are productive skills while listening and reading are receptive skills (Putera et al., 2022, p. 251). Since speaking is a productive skill and the sub-skill is more complete than the fourth other skill, so speaking is the hardest skill to learn. Speaking related to active products something by oral organs. (477-Research Results-969-1-10-20180227.Pdf, n.d., p. 2) English language learners are able to use more complex sentences in speaking to express opinions and share their thoughts. However, it is difficult to effectively communicate ideas, knowledge, or information through speaking without regular practice.

There are genres of text in English, such as descriptive text, recount text, procedure text, narrative text, news item text, and many else. The procedure text is important for the student to learn. In addition to providing instructions on how to do or how make something for others, procedure text can also be encountered in our everyday lives, such as at school or home, to assist us in completing tasks. It can be presented in the style of a culinary recipe in a publication, on packaging for noodles and other food products, instructional manuals, or electronic device guides, among other formats (Ma'id et al., 2018, p. 3). Procedure text is a series of steps that must be followed in order to complete a task or create something. Commonly, the structure of the procedure text is Goal, Material or ingredients as needed, and the last step how to do it. Procedure text has language features like another text. It uses simple present tense, and sometimes imperative sentences. Uses adverbial sequences such as first, second, then, next, finally, and so on, and uses command, and action verbs such as boil, take, cut, etc. According to procedure text, the suitable media for procedure text is video. The student

can gather information, learn how to do something, and pronounce words correctly by watching videos that provide both audio and visual cues. Learning media is like communication in the learning process between learning materials and the student. The teacher uses media to make the learning materials more easily understood by the students. It can be simpler since media is consistently connected with visual representation. By using media, language teaching is more interesting and attractive (Lestari et al., 2022, p. 313).

Every teacher has their own unique approach that is tailored to the student. The teaching approach is a technique that teachers will use to impart knowledge. In "kurikulum merdeka", the current curriculum in Indonesia, teachers are expected to prioritize students' reasoning, making the student the focal point of the learning process, also known as student-center. It is called the scientific approach. The scientific approach involves a systematic collection of data through observation or experimentation, interpreting and analyzing data, developing hypotheses, and testing then to establish causal relationships (Ma'id et al., 2018, p. 3). Through the implementation of a scientific methodology, students are equipped with the skills to engage in critical, creative, and innovative thinking.

Speaking ability in Indonesia remains low or lacking due to various reasons, such as fear of making mistakes, shyness, doubt, and lack of confidence when speaking English in front of others (Lestari et al., 2022b, p. 313). The lack of motivation and engaging media during English teaching also contributes to this issue, as it can diminish students' motivation to learn the language. To solve the problem the researcher chooses a scientific approach and video from procedure text as a media to improve student's speaking skill .

REVIEW OF RELATED LITERATURE

Previous Study

There are several previous studies that have similarities with this research. The first was by Ahyauddin Ma'id Azwandi Arono 2018, the titled "The Effect of Scientific Approach Based on Tutorial Video on Students' Reading Comprehending of Procedure Text (A Quasi-Experimental Research at Grade VIII of SMPN 4 Kota Bengkulu)". The second was by Anisa Juni Fidriani, Entika Fani Prastikawati, and AB Prabowo Kusumo Adi 2021 with the title "Video Vlog as Teaching Media in Improving the Students' Speaking Ability in Procedure Text XI AKL 2 from SMK N 01 Pati". And the third was by Renda Lestari, Winda Trisnawati, and Umul Fatihatun Nisa 2022 with the title "The Effectiveness of Learning Procedure Text in Speaking practice by Using Video Vlog at SMPN 7 Muara Bungo". According to the previous studies, all of them have one independent variable and dependent variable. All previous studies

also have the same results, that is able to significantly improve student abilities.

Review of related theories

1. Scientific Approach

a. Definition of Scientific Approach

(Prayoga et al., n.d., p. 5) scientific approach is one of the learning approaches in 2013 curriculum, the approach applies science principles through analyzing the knowledge and the student as subject of learning. (Ma'id et al., 2018, p. 3) explained the scientific approach is a method used to investigate one or more phenomena or symptoms, acquire new knowledge, or correct and integrate existing knowledge. Scientific approach is a learning method that uses scientific steps and rules in the learning process (UIN Kiai Haji Achmad Siddiq Jember & Wahono, 2023a, p. 64).

b. Teaching Scientific approach

(Ma'id et al., 2018, p. 3) the scientific approach was utilized in teaching certain types of text to junior high school students, including narrative, procedure, recount, report, and descriptive. And then it can also be implemented in the use of tutorial creative video to improve student's reading comprehension. There are five steps involved in learning the scientific approach. (Zaim, 2017, p. 34) said that the scientific approach to teaching and learning involves observing, asking questions, using logic, conducting experiments, and creating connections across all subjects.

From the information above it can be conclude that scientific approach is a technique that important in learning process, it is also used in "Kurikulum Merdeka" the current curriculum in Indonesia. By method student-centre, the teacher just guiding the student to explore the material to improve their comprehending. The procedures of scientific approach are observing, questioning, experimenting, associating, and communicating.

2. Video Media

a. Definition of Video

According to (Cahyati, 2018, n.d., p. 6) a video is a blend of visual motion and audio that carries informational content. While according to (Maya & Saragih, 2021, p. 72) the term "video" originates from the latin word "video-vidivisum" meaning "to see", video serves as a medium for delivering educational content. Then according to (Andriani et al., 2021, p. 27) stated that video is a combination of illustrations, sound, graphics and text. Video is one of the multimedia that can make the learning process interesting (UIN Kiai Haji Achmad Siddiq Jember & Wahono, 2023a, p. 64).

b. Teaching using video

According to (Jupri, 2019a, p. 114) Video recipe presentation triggers the student's interest, pleasure, enthusiasm and curiosity towards the learning process. Showing videos that include images, animations, audio, and text can assist students in developing their potential to create, communicate, and imagine (UIN Kiai Haji Achmad Siddiq Jember & Wahono, 2023a, p. 64). Video is one of the interesting learning media in teaching speaking. According to (Kaniadewi et al., n.d., p. 15) As students watch videos, they naturally acquire the skills to express themselves and engage in interactions without feeling pressured, as videos offer an engaging method of learning.

3. Procedure Text

a. Definition of procedure text

According (Jupri, 2019b, p. 109) Procedure text is a text that contains a sequence of ways to make or to do something. While (Lating, 2022, p. 462) procedure text is a text that shows a series of step by step for manufacturing or performing something.

b. Teaching procedure text

(Fidriani et al., 2021) said the procedure text starts with the goal, followed by the ingredients or materials needed, and ends with a step-by-step explanation of how to complete the task.

4. Speaking Skill

a. Definition of Speaking

According (Tristiana & Swondo, n.d., p. 149) speaking is activity of people to show the ideas, feeling, or something that in mind to get the response from other people by spoken language. Speaking make an easy way to understand all the information about the material. While (Prayoga et al., n.d., p. 2) Speaking aims to provide efficiency in communication and the teacher want the students to be able to use language properly and correctly according to the aims. Then according (*Yasinta Anwar, Arso Setyaji, and Ririn Ambarini.Pdf*, 2023,n.d., p. 18) speaking serves multiple purposes, including: 1) informative, where the goal is for the listener to understand the speaker's message. 2) invitational, where the speaker extends an invitation for approval or evaluation to the listener. 3) Dispositional talks are more convincing than solicitations as they aim to align on attitudes, values, or beliefs. 4) activation.

From the explanation above, it can be concluded that speaking is an important ability for everyone that requires motor sensors in the oral organs to express ideas, exchange information, and share knowledge. By speaking we can

understand each other, find out all the information efficiently, and the learning process can be carried out comfortably

b. Components of speaking

There are elements of speaking that the students must master. There are pronunciation, grammar, vocabulary, fluency, and Comprehension.

1) Pronunciation

According (Marbes & Idayani, 2022, p. 111) the process of producing the sounds of words, known as pronunciation, is closely linked to phonological processes, which encompass the rules and elements of grammar that determine variations in sound patterns within a language. Pronunciation is important sub skill of speaking, if the speaker makes a mistake in pronounce, it can cause misunderstanding for listeners. So pronunciation is the sound of a word to be pronounced correctly.

2) Grammar

According (Saraswati, n.d., pp. 29 & 30) Grammar is words put together according to grammatical rules that has a meaning, and these words are conveyed by sound. By grammar, wish it can helps the readers, listeners, and the viewers to understand the sentences or utterances that the reseacher or speaker produces. Another meaning is grammar refers to group of words or vocabulary that has been arranged according to grammatical rules in grammar.

3) Vocabulary

According (Rahmawati, 2021, p. 3) Vocabulary is a collection of words or phrases that are usually arranged sequentially and translated. The simple meaning from vocabulary is group of word that has meaning in every word and it can be arrange to be sentences.

4) Fluency

(Marbes & Idayani, 2022, p. 111) explained that fluencyis the ability to communicate effectively, accurately, and smoothly. Fluency is how to speak effectively without confusing to choose the vocabulary or grammar again.

5) Comprehension

(Yusmalinda & Astuti, 2020, p. 81) said that when students demonstrate procedure text into a performance, it means they are able to comprehend and understand the text, especially if they perform without text. Which is they should to speak about the procedure text without reading the text

METHODOLOGY

The type of the research is quantitative research and used quasi-experimental design as the method that applied pre-test, treatment, and post-test. The method is used to identify and compare the significant differences in student ability to speak procedural text when taught with and without the use of a scientific approach and video as a media tool. To compare the significant differences, the researcher divided into two group. Group A as experimental class and group B as control class. Only the experimental group receives the treatment. There are two type variable in the research. The independent variable is teaching procedure text using scientific approach and video as media, while the dependent variable is improving students' speaking ability. The population of the research is all students at the ninth grade of SMPN 32 Semarang, then the researcher chosen cluster sampling as the technique of sampling, which is that the researcher should choose the sample randomly. They were from class IX F and class IX G of SMPN 32 Semarang that consists of 60 students. The instrument was an oral test to measure these two variables and collected the data using speaking test. The pre-test was carried out by providing a procedural text and then the researcher asked them to read it in front of the class one by one. While the post-test was carried out by giving assignment to students to create a procedural text and communicate it in video form. To find out the students' ability in improving speaking, the processing the data used SPSS 25.

Table 1 The Scoring Categories of Achievement

Categories	Score
Great	90 – 100
Good	80 – 89
Enough	70 – 79
Inadequate	60 – 69
Failed	< 60

Table 2 The Scoring Categories of Speaking Test

Categories	Score
Pronunciation	20
Vocabulary	20
Fluency	20
Grammar	20
Comprehending	20

RESEARCH FINDING AND DISCUSSION

Research Findings

The researcher has collected data through pre-test and post-test from both classes, which is in IX F class as an experimental class who was received the treatment and IX G class as a control class who was not received the treatment, for four day. Because the research is concern in speaking ability, so the pre-test and the post-test in the form of the oral test. The pre-test consisted of a text that the researcher had been provided and all the students should to read it one by one in front of the researcher. it was to determine the extent of the student's speaking ability. The result was the two classes, both the control class and the experimental class most of the students still have low abilities. Thats mean the researcher has same quality of the sample. According to the sequence of data collection, after taking a test at the beginning. The students in the class who got the scientific approach and fun videos as a media had a great time and learned a lot, and the control class without treatment that did not use scientific approach and video as a media carried out cooperatively and successfully. After doing the treatment, the reseacher gave a post-test. The post-test consisted of created a procedural text and presented it in video form with a minimum duration is 1 minute and maximum 3 minutes, then all the students should sent it one by one to the researcher. Both of the test have same scoring categories as shown in the table 3.2. The post-test was carried out to determine how far students understood the material that had been presented by the reseacher and to determine the significant differences in the result of classes who received the treatment and those who did not recieve.

Data Results of Control Class

The control class was from IXG class of SMPN 32 Semarang. It has 30 students who were taught without by scientific approach and video as a learning media. The data were collected from all students from both the pre-test and post-test. Result of the test are presented in the table 4.1 below:

Table 3 Data Pre-test and post-test of Control Class

No	Student's code	Pre-test	Post-test
1	C-01	51	62
2	C-02	67	70
3	C-03	56	68
4	C-04	52	61
5	C-05	50	60
6	C-06	70	72

7	C-07	54	66
8	C-08	58	68
9	C-09	62	65
10	C-10	60	68
11	C-11	51	56
12	C-12	54	59
13	C-13	61	70
14	C-14	52	65
15	C-15	64	71
16	C-16	58	67
17	C-17	50	51
18	C-18	49	51
19	C-19	58	68
20	C-20	54	69
21	C-21	63	64
22	C-22	52	53
23	C-23	51	62
24	C-24	57	63
25	C-25	60	62
26	C-26	50	56
27	C-27	52	64
28	C-28	50	59
29	C-29	49	64
30	C-30	53	62
Mean Score		55,6	63,2
Minimum Score		49	51
Maximum Score		70	72

From the table 3 above, it can be conclude that all of the students had been done pre-test and post-test with a variety score. The score was achieved from the process learning without using scientific approach and video media. And the result, the average score of pre-test was 55.6 while the average score of post-test was 63.2. Then, the minimum score of pre-test was 49 and the maximum score was 70. Meanwhile, the minimum score of post-test was 51 and the maximum score was 72.

It can be seen that there was a slight development between the pre-test and post-test in

the control class. The mean score increased from 55.6 to 63.2. The increase was 7.6 and 14% in percentage form. Then, the minimum score increased from 49 to 51. The increase was 2 and 4% in percentage form. The last, the maximum score increased from 70 to 72. The increase was 2 and 3% in percentage form.

Categorizing the Students' Score of Control Class

After collecting pre-test and post-test score from the control class, the average score was calculated, then looked for the highest and lowest scores. The next step is categorizing the scores. Categories are divided into five types. It can be seen in table 4.3 below:

Table 4 Students' Category Score of Control Class

No	Score	Category	Σ		%	
			Pre	post	pre	post
1	Great	90 – 100	0	0	0%	0%
2	Good	80 – 89	0	0	0%	0%
3	Enough	70 – 79	1	4	3%	13%
4	Inadequate	60 – 69	7	19	23%	63%
5	Failed	< 60	22	7	73%	23%

Based on the table 4 above, the researcher found the percentage of the score both the pre-test and post test from control class. It can be seen start from pre-test column then post-test column. Most students are in a position of failed. The total percentage is 73% containing 22 students. Then the second highest position is in the inadequate. The total percentage is 23% containing 7 students. The last from pre-test is in the enough category. The total percentage is 3% containing only 1 students. Next from post-test column. There was not much increase in the post-test category. Total percentage in failed is 23% containing 7 students. Total percentage in inadequate is 63% containing 19 students. And the last total percentage in enough category is 13% containing 4 students.

The failed category decreased from 22 to 7. It means there are 15 fewer students from this category. The decline occurred because some of them managed to move up to the higher level category. Next the inadequate category increased from 7 to 19. There were 15 students who progressed and only 12 students succeeded in advancing to this category. The last, enough category increased from 1 to 4. It means that the remaining 3 students who were progressing have successfully advanced to this category.

After looking at the data results form the control class, It can be concluded that there was not significant both pre-test and post-test. Even though the difference was not significant, there was an increase in student's understanding of the material after the researcher explained

it with regular learning methods and the students still enjoy the lesson because researcher add ice breaking before starting the lesson. The researcher found that there was a slight improvement in student's speaking ability in control class.

Data Results of Experimental Class

The experiment class was from IXF class of SMPN 32 Semarang. It has 30 students who were taught used scientific approach and video as a media. The data were collected from all students from both the pre-test and post-test. Result of the test are presented in the table 4.2 below:

Table 5 Data Pre-test and post-test of Experimental Class

No	Student's code	Pre-test	Post-test
1	C-01	56	83
2	C-02	63	84
3	C-03	57	78
4	C-04	50	90
5	C-05	53	79
6	C-06	68	80
7	C-07	59	75
8	C-08	70	89
9	C-09	61	81
10	C-10	53	78
11	C-11	57	80
12	C-12	70	77
13	C-13	49	82
14	C-14	52	75
15	C-15	53	90
16	C-16	61	78
17	C-17	55	86
18	C-18	52	75
19	C-19	50	83
20	C-20	63	77
21	C-21	55	79
22	C-22	70	80
23	C-23	66	75
24	C-24	52	90

25	C-25	52	78
26	C-26	49	84
27	C-27	55	77
28	C-28	56	81
29	C-29	59	77
30	C-30	50	86
Mean Score		57,2	80,9
Minimum Score		49	75
Maximum Score		70	90

From the table 5 above, it can be seen that all of the students in experimental class had been done pre-test and post-test. It has a different score from the control class. The score was achieved from the process learning with using scientific approach and video media. And the result, the mean of pre-test score was 57.2 while the mean of post-test score was 80.9. Then, the minimum of pre-test score was 49 and the maximum score was 70. Meanwhile, the minimum of post-test score was 75 and the maximum score was 90. From the data description, it can be conclude that there was a good influence from the effect of using a scientific approach and video media.

It can be seen that there was a lot of development between the pre-test and post-test in the experimental class. The mean score increased from 57.2 to 80.9. The increase was 23.7 and 41% in percentage form. Then, the minimum score increased from 49 to 75. The increase was 26 and 53% in percentage form. The last, the maximum score increased from 70 to 90. The increase was 20 and 29% in percentage form.

Categorizing the Students' Score of Experimental Class

After collecting pre-test and post-test score from the experimental class, the average score was calculated, then looked for the highest and lowest scores. The next step is categorizing the scores of the experimental class. Categories are divided into five types. It can be seen in table 4.4 below:

Table 6 Students' Category Score of Experimental Class

No	Score	Category	Σ		%	
			Pre	post	pre	post
1	Great	90 – 100	0	3	0%	10%
2	Good	80 – 89	0	13	0%	43%
3	Enough	70 – 79	3	14	10%	47%
4	Inadequate	60 – 69	6	0	20%	0%
5	Failed	< 60	21	0	70%	0%

Based on the table 6 above, after the researcher found the percentage of the score both the pre-test and post test from control class, the next is from experimental class. It can be seen start from pre-test column then post-test column. Most students are in a position of failed. The total percentage is 70% containing 21 students. Then the second highest position is in the inadequate. The total percentage is 20% containing 6 students. The last from pre-test is in the enough category. The total percentage is 10% containing 3 students. The pre-test scores for the experimental class have similar number in each pre-test category of control class. It means both control class and experimental class have similar speaking abilities in pre-test. Next from post-test column. There are good different categories in the post-test, namely is 0% in failed and inadequate category. Total percentage in enough category is 47% containing 14 students. Next total percentage in good category is 43% containing 13 students. And the last total percentage in great category is 10% containing 3 students.

The failed category decreased from 21 to 0. All students in this category move to a higher level category. Next the Inadequate category increased from 6 to 0. All students in this category also move to a higher level category. The enough category increased from 3 to 14. There were 11 students who have advanced to this category. The good category increased from 0 to 13. There were 13 students who have advanced to this category. The last, the great category increased from 0 to 3. There were 3 students who have advanced to this category.

After looking at the data results form the experimental class, it can be concluded that there was significant both pre-test and post-test. Even though the great category only contains 3 students, there was a significant decrease in the failed and inadequate categories of students in understanding the material after the researcher explained it with scientific approach and video as the learning media and the students also gave a positive response to the learning process. The researcher found that there is a significant improvement of the student's speaking ability in experimental class.

Data Analysis

The researcher analyzed the students' score from experimental and control class by using IMB SPSS version 25 with three steps. First step was normality test to looked for the pre-test and post-test are normally distributed, then homogeneity test to looked for that the data was homogeneous, and last t-test formula to looked for the significant difference between students' speaking ability in the control class and experimental class. The researcher used independent sample t-test. The independent sample t-test is used to determine whether there is a difference in the mean of two unpaired samples statistically. After the data has been thoroughly analyzed, the result will answer the research question or not. The results of the analysis data are provided below:

Normality Test

The normality test is in the first step when the researcher want to analized the data, because it is to find out that the data is normally distributed or not. The normality test of independent sample t test using data from the post-test score. The researcher used Lilliefors Significance Correlation in IMB SPSS version 25. The requirement to determine whether the data is normally distributed is to look at the significance. If Sig. is higher than $\alpha = 0.05$ (5%) so the data is normally distributed. The normality test results from the research can be seen as follows:

Table 7 The Normality Test Results of the Experimental and Control Class

Tests of Normality							
	CLASS	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
ENGLISH LEARNING OUTCOME	Pre-Test	,178	30	,017	,905	30	,011
	Control						
	Post-Test	,117	30	,200*	,948	30	,152
	Control						
	Pre-Test	,145	30	,106	,902	30	,010
	Experimental						
	Post-Test	,143	30	,122	,908	30	,013
	Experimental						
*. This is a lower bound of the true significance.							
a. Lilliefors Significance Correction							

From the table 7 above, it can be concluded that all of the test were normally distributed. It can be seen from the Sig. column from Shapiro-Wilk. The significance of pre-test from control class is $0.011 > 0.05$ and experimental class is $0.010 > 0.05$. Both of them was higher than ($>$) the degree if significance $\alpha = 0.05$ (5%). So it can be concluded that the data pre-test of both the control class and the experimental class was normally distributed. Whereas, the significance of post-test from control class is $0.152 > 0.05$ and experimental class is $0.013 > 0.05$. Both the significance show that the number was higher than ($>$) the degree if significance $\alpha = 0.05$ (5%). So it can be conclude that the data post-test of both the control class and the experimental class was normally distributed. A diagram illustrating that all tests were normally distributed is in the image below :

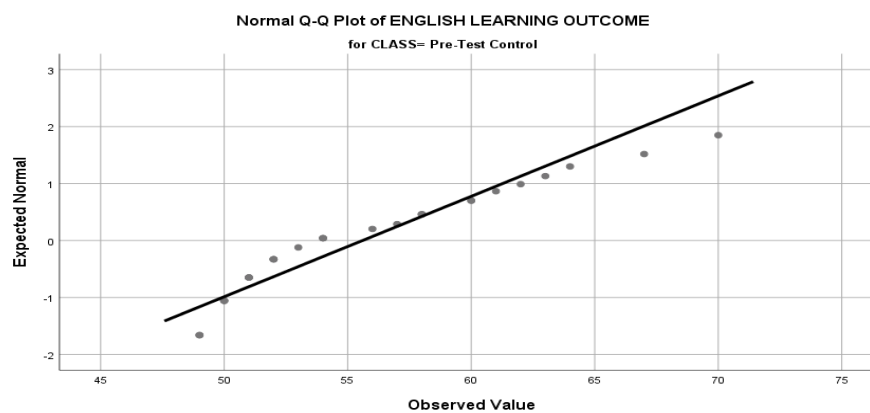


Diagram 1 Diagram of Normality Test Results from The Pre-Test of Control Class

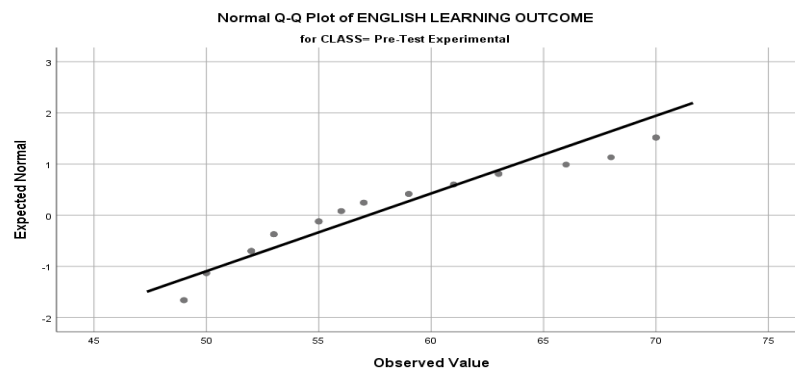


Diagram 2 Diagram of Normality Test Results from The Pre-Test of Experimental Class

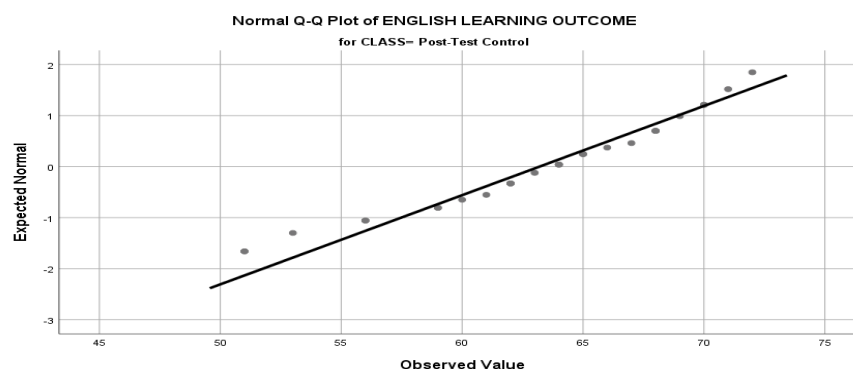


Diagram 3 Diagram of Normality Test Results from The Post-Test of Control Class

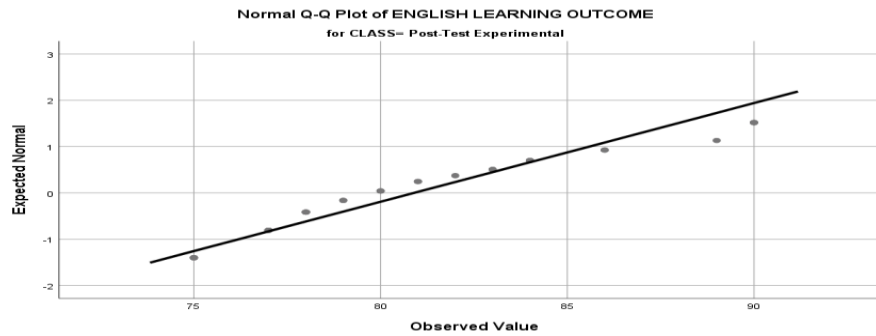


Diagram 4 Diagram of Normality Test Results from The Post-Test of Experimental Class

Homogeneity Test

The second step after the reseacher knew that the test was normally distributed is do the homogeneity test. The homogeneity test aims to find out whether the data is homogeneous or not. Homogeneous is the difference in data variation from the two classes, so it means to find out whether the two classes' data has different variations or not. The reseacher used Levene statistic in IMB SPSS version 25. The requirement to determine whether the data is homogeneous is to look at the significance. If Sig. is higher than $\alpha = 0.05$ (5%) so the data is homogeneous. The results can be seen as follows:

Table 8 The Homogeneity Test Result

		Levene Statistic	df1	df2	Sig.
ENGLISH LEARNING OUTCOME	Based on Mean	1,232	3	116	,301
	Based on Median	,847	3	116	,471
	Based on Median and with adjusted df	,847	3	108,803	,471
	Based on trimmed mean	1,120	3	116	,344

From the table 8 above, it can be seen on significant column. The significant shows that all of the category is above the homogeneity test calculation. The significance based on mean is $0.301 > 0.05$, based on median is $0.471 > 0.05$, then based on median and with adjust df is $0.471 > 0.05$, the last based on trimmed mean is $0.344 > 0.05$. All of them were higher than ($>$) the calculation if significance $\alpha = 0.05$ (5%). So it can be conclude that both of the variance classes has differences or the sample of the population was homogeneous.

Hypothesis Test

After the data was proven to be normally distributed and the sample of population was homogeneous, the last step is to carry out the t-test. T-test aims to find out whether the differences between students' speaking ability in control and experimental class. The reseacher used the independent sample t test. The independent sample t-test is used to determine whether

there is a difference in the mean of two unpaired samples statistically. The requirement to determine whether the data is significant is to look at the value of Sig.(2-tailed). If the value is lower than ($<$) Sig.(2-tailed) < 0.05 , then there is a significant difference between the two classes. After carrying out the t-test, the problem of the research can answer whether the scientific approach and video media can improve students' speaking abilities or not. The result can be seen as follows:

Table 9 Independent Sample t-test

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
ENGLISH LEARNING OUTCOME	Equal variances assumed	,794	,377	-13,103	58	,000	-17,700	1,351	-20,404	-14,996
	Equal variances not assumed			-13,103	55,868	,000	-17,700	1,351	-20,406	-14,994

From the table 9 above, it can be seen that the significant in Sig.(2-tailed) column. The value from equal variances assumed is Sig.(2-tailed) $0.000 < 0.05$ and equal variances not assumed is Sig.(2-tailed) $0.000 < 0.05$. So it can be concluded that there is a significant difference in the average student learning outcome in result the post-test between the control class and experimental class.

Discussion

In this case, the researcher discusses the results of the research findings that has been presented above in more detail. The results of the pre-test dan post-test, both control class and experimental class have been analyzed. Based on table 4.1 from control class, it can be seen that the mean of pre-test is 55.6 and based on table 4.2 from experimental class, the mean of

pre-test is 57.2 before do the treatment and regular learning. Both have almost the same average score comparison. It means, the student's speaking ability is at the same level before the lesson was given. Not only that, even the lowest and highest scores from both classes also have the same score. The lowest score is 49 and the highest score is 70. It shows that each class has students with the same lowest and highest levels. After the lesson was given according to their class, the control class received regular learning and experimental class received the scientific approach and video media, the post-test was analyzed and produced different results. Based on table 4.1 from control class, it can be seen that the mean of post-test is 63.2, the lowest score is 51, and the highest score is 72. Meanwhile, based on table 4.2 from experimental class, the mean of post-test is 80.9, the lowest score is 75, and the highest score is 90. It shows that each class improves the results of different score. therefore, IX F as a control class who was taught without a scientific approach and video media has a slight improvement in students' speaking abilities. While IX G as an experimental class who was received the scientific approach and video media has a significant increase.

Through analysis using IMB SPSS version 25, all tests have been analyzed for normality and homogeneity. Based on table 4.5, It can be seen that the Shapiro-Wilk significance of the control class pre-test is 0.011 and experimental class is 0.010. Meanwhile, the Shapiro-Wilk significance of the control class post-test is 0.152 and experimental class is 0.013. Both the significance show that the number was higher than the degree of significance $\alpha = 0.05$ (5%). So it can be conclude that the data pre-test and post-test of both the control class and the experimental class was normally distributed. After know that the data was normally distributed, the reseacher find out the variance of the data with homogeneity test. Based on table 4.10, it can be seen that the significance based on mean is 0.301, based on median is 0.471, then based on median and with adjust df is 0.471, the last based on trimmed mean is 0.344. All of them were higher than the calculation if significance $\alpha = 0.05$ (5%). So it can be concluded that both of the variance classes has differences or the sample of the population was homogeneous. After the data was normally distributed and homogeneous, it conducted the independent sample t test. From the table 4.11, The value from equal variances assumed is Sig.(2-tailed) 0.000 and equal variances not assumed is Sig.(2-tailed) 0.000. So it can be concluded that the alternative hypothesis (H_a) is accepted and the null hypothesis (H_o) is rejected. Since the (H_a) is axcepted and the (H_o) is rejected, So the problem of the research has been answered that the scientific approach and video media are effective in improving students' speaking abilities.

The research findings are similar to several theories that used by researchers. The researcher taught experimental class using scientific steps and rules in the learning process as (UIN Kiai Haji Achmad Siddiq Jember & Wahono, 2023b, p. 64) said. There are five steps, observing, asking, collecting information, associating, and communicating or presenting. In this case, the students presenting by video. The learning media used by researcher was video recipes. It is considered fun and can arouse students' enthusiasm like theory from (Jupri, 2019c, p. 144).

The research finding is similar with a study done by Anisa Juni Fidriani, Entika Fani Prastikawati, and AB Prabowo Kusumo Adi 2021. In their study, it stated that the use of video can improve student's speaking skill because video media makes the learning process more fun and easy to learn to develop their skills, especially in speaking. They mentioned that the students feel comfortable and relaxed, even they wanted to use variation in the video such as 3C videos. They argue that the video can be played repeatedly until students can imagine the words on their own. And then, another similarities reaserch by Fajar Prayoga, Cucu Sutarsyah, Hery Yufriзал (2020). In their study, it was stated that the use of scientific approach can improve student's speaking skill because it can make the students easy to get new covabulary. They argue that employing scientific methodologies facilitates the comprehension of video content during observation, leading to a positive impact on students' preparedness for subsequent discussions on the material or topic.

The difference between this research and previous studies is in the variables used by reseacher. If previous studies paired scientific approach variable with speaking ability variables and video learning media with speaking ability, in this research the independent variables were combined and produced significant results. Students in the experimental class who received treatment completed the post-test in video form more quickly than students in the control class. They who are taught using scientific steps are more structured in carrying out their assignments. They know the order of what must be done first so that their preparation is more thorough. Apart from being faster, those who receive treatment have better speaking results because they can practice imitating pronunciation through videos that can be played repeatedly.

The experiment has answered the research problem that the significant differences resulting from the pre-test and post-test between the control class and the experimental class show that the scientific approach and video media are effective in improving stundets' speaking skills. A scientific approach that trains students to think creatively and critically can be balanced with interesting videos. With visuals that provide interesting excerpts and clear sounds in English pronunciation, it is able to give students a memory of how to pronounce it

as well as motivate them to continue learning through other video media. And then through scientific steps, students can easily understand the video and expand their vocabulary, and can be better prepared to communicate the results of their observations.

CONCLUSION AND SUGGESTIONS

Conclusion

Based on all the data presented in the previous chapter, the following conclusions can be drawn:

1. IX G class as the experimental class who was taught using scientific approach and video media got a significant improvement. It can be seen in table 4.2. The mean score of post-test from 57.2 to 80.9. That means students experienced a lot of improvement in their grades after treatment, so it could result in an increase of as much as 41%.
2. IX F class as the control class who was not received the scientific approach and video media, or it means it conducted the regular learning got a insignificant improvement. It can be seen in table 4.1. The mean score of post-test from 55.6 to 63.2. That means students experienced little improvement in their grades after treatment, so it could result in an increase of as little as 14%.
3. There was a significant difference in students' speaking ability who were taught using scientific approach and video media and without using that. It can be seen from the data of independent sample t-test shows that the result of significant value was 0.000 which was less than $\alpha = 0.05$ (5%), therefore the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted since the p-value or sig (2- tailed) 0.000 is lower than $\alpha = 0.05$ (5%). So it can be concluded that using scientific approach and video media was effective to improve students' speaking ability.

Suggestion

The fact that classes taught using a scientific approach and video media have better speaking skills than those who was not receive the approach and media, Suggestions offered to teachers, students and researcher:

1. For English teachers

The result of the research has a big influence for English teachers, because it relates to effective ways of teaching students to improve their speaking skills. Therefore, the researcher suggests that English teachers apply the scientific approach and use learning media that are interesting to students so that they can motivate students to learn English. Therefore, teaching and learning activities will be more effective and enjoyable.

2. For students

One treatment does not guarantee the stability of student learning outcomes, so researcher suggests that students must remain diligent in studying to balance their learning outcomes. Then, even though the results of the treatment were not completely successful for all students, the experiment still requires the help of cooperation between students. Students must pay attention when the teacher is teaching and help each other to motivate other friends to learn english in their own way.

3. For the next reseachers

For the next reseachers, it is recommended to use this research as reference material in future research. The aim is to increase insight involving students' speaking skills using a scientific approach and exploring other learning media that are also fun and effective for students.

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