

THE EFFECT OF PROBLEM BASED LEARNING TO IMPROVE STUDENT'S SPEAKING ABILITY ON ENGLISH EDUCATION PROGRAM STKIP KIERAHA TERNATE

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Abstract

Yesri Anti Warsito. 2018. The effect of Problem Based Learning to improve students' speaking ability on English education program at STKIP Kie Raha Ternate. A final project of English education program, College of Teacher Training and Education Kie Raha Ternate. Advisor I. Zainurrahman, S.S, M.Pd and Advisor II. Suhaimi Tegamuni, S.S, M.Pd. The purpose of this study was to investigate the effect of problem based learning in improving students speaking ability. The present study attempted to answer the following question: What is the effect of problem based learning in improving students speaking ability? The study was an quasy experiment with non-equivalent control group design. The participant in the study was 37 students, that is divided in two part there are experimental and control group. In collecting the data, the researcher used test, interview and documentasi. The researcher conducted the test before (pre-test) and after (post-test). The mean score of each test between experiment and control group was compared to know the students' in speaking skill. The research result show there is significant difference of students' speaking ability. The mean score of pre-test in experimental group was 24.62, result of pre-test in control group was 26.07, the post-test in experimental group was 24.69 and the post-test of control group was 26.62. It proved when they learned with problem based learning. They got better scores in post-test.

Keyword: *problem based learning, speaking, quasi experimental research design*

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1. Background

In learning English there are four skills that should be mastered by the students. One of them is speaking. Through speaking, we can convey information and ideas and maintain relationship by communicating with other. Speaking has an important role in daily life that is so convey someone mind directly. According to (Brown, 2001:8) Speaking is an interactive process of consrtructing meaning that involves producing, receiving and processing information. In addition, Hornby (2005:1467) states that "Speaking is used to show that what you are saying is true in general, to convey the ideas, and to have a conversation with somebody about something".

Making students speak English is a difficult job for English teachers. It needs a long process of practice and learning. Students of foreign language learners see that their native language is completely different from English while an opportunity to learn English and practice it in their real life is very limited in time and space. Therefore, they need more practice to speak English. Considering the importance of speaking skill, the Indonesian government states that students should master this skill fully, not only the theory of speaking itself but also the practice.

Based on the researcher observation to students of English education program. Especially, at four semester. It was found that there were some problem in English speaking from students. Some students felt ashamed and afraid to speak English in the classroom so that they preferred to use their mother language and then they felt that their peers would look down and laugh at them when they made mistakes and also some students, who did not have enough confidence to speak along with their friends. Another problem is the students had poor grammar and pronunciation.

From the explanation above, it can be concluded that teaching speaking in this school needs to be concerned. One of the ways to solve the problems above is by applying and appropriate technique in teaching speaking that can help students to be more active in learning. One of the technique is problem based learning (PBL). According to Hmelo (2004:235), PBL uses real life problem to gain students critical thinking.

In PBL, learning process is changed from teacher centered learning to students centered learning. This students centered learning could involve the students active participation in the learning process, especially in speaking activities. When students believe that they can achieve their goals, the daily tasks of homework, test preparation, and the overall learning process become easier.

According to Nurhasanah (2009:12), Problem based learning is a learning that uses real-world context to improve students' critical thinking and problem solving skill as well as to acquire the essential knowledge and concepts of the learning material.

Bandura (1997:142) says that students are also more motivated when they believe that the outcome of learning is under their control. Students are more motivated when they know what they are learning and when their educational activity is implicated in personal meaningful tasks (Ferrari and Mahalingham, 1998:33). Furthermore, Hmlo (2004:237) underlines the goal of problem based learning (PBL). It is to make students intrinsically motivated in the learning speaking. Intrinsic motivation occur when learner work on a task motiated by their own interest, challenges, or sense of satisfication.

The model of learning with PBL initiated by a problem (can be raised by students or teachers), and students deepen their knowledge about what they have already known and what they need to know tgo solve the problem. Students can choose the issues that are considered attractive to be solved so they encourage and activity role in learning. Blumberg and Michael (1992: 3) found that PBL students were more likely to use textbooks and other books and informal discussion with peers thn did not PBL students, who were more likely to rely on lecture notes.

In elaboration, students were divided into some small group and were asked to the problem. Teacher choose one problem to be solved by students in group while teacher acted as a facilitator in the students discussion. The teacher defined the problem then made the hypothesis about the problem to get the solution and gather information by find it with the group member. Students resolved the problem with the group help by teacher and prepared for presented their description in front of class. In confirmation, the teacher reviewed the students perfomance and may give some correction if there are mistakes made by the students. Then, the teacher gave feedback to the students by giving reinforcement. In the last teaching, the teacher gives the students two new topics and asks the student to choose the topic then students tell it in front of class.

Based on the background above, supported by some theories, it can be seen that the problem based learning can improve the students' speaking ability. As to activate learners to interact with each other in listening speaking class, problem base learning can be powerful. While students are focusing

on the problem to be solved, they will try to overcome the linguistic hindrance, retrieve prior knowledge of the language to be used, and finally, become skillful language users. Therefore, this study sought the effect of problem based learning in improving students' speaking ability on English Education Program STKIP Kie Raha Ternate.

Significance of the study

Theoretical significance

The result of the study will give theoretical significance to development of education in terms of English teaching learning especially in teaching speaking through problem based learning.

Practical significance

- a. This research is hoped can give input for English teacher in teaching English.
- b. To develop students' speaking through problem based learning can be apply in teaching to stimulate and as problem solving in teaching English speaking and also can make teaching and learning process interesting.

2. Theoretical Basis

2.1 Speaking

Speaking is an interactive process of constructing meaning that involves producing, receiving and processing information (Burn and Joyce 2008).

According to Levelt (2004) he identified three autonomous processing stages in speech production: (1) conceptualizing the message, (2) formulating the language representation, and (3) articulating the message.

According to Chaney, speaking is the process of building and sharing meaning through the use of verbal and non-verbal symbols, in a variety of contexts. While another expert, Theodore Huebner said Language is essentially speech, and speech is basically communication by sounds. And

according to him, speaking is a skill used by someone in daily life communication whether at school or outside. The skill is acquired by much repetition it primarily a neuromuscular and not an intellectual process. It consists of competence in sending and receiving messages.

From the definition above, it can be inferred that speaking is expressing idea, opinion, or feeling to others by using word or sound of articulation in order to inform and to entertain that can be learned by using some teaching learning methodologies.

2.1.1 Teaching Speaking

Speaking is a crucial part of teaching learning especially for second language learners. Despite its importance, for many years, teaching speaking has undervalued and English language teachers have continued to teach speaking just as a repetition of drills or memorization of dialogues. However, today's world requires that the goal of teaching speaking should improve student's communicative skills. Because, only in that way, students tend to be getting something done, exploring ideas, working out some aspect of the world, or simply being together.

Luoma, Sari (2004) cites some of the following features of spoken:

1. Composed of idea units (conjoined short phrases and clauses)
2. May be planned (e.g, a lecture) or unplanned (e.g., a conversation)
3. Employs more vague or generic words than written language
4. Employs fixed phrases, fillers, hesitation markers
5. Contains slips and errors reflecting online processing
6. Involves reciprocity (i.e., interaction are jointly constructed)
7. Show variation (e.g., between formal and casual speech), reflecting speaker roles, speaking purpose, and the context.

Now communicative language teaching is based on real-life situations that require communication. By using this method in ESL classes, students will have the opportunity of

communicating with each other in the target language. So, teacher should create a classroom environment where students have real-life communication, authentic activities, and meaningful tasks that promote oral language. This can occur when students collaborate in groups to achieve a goal or to complete a task.’

1.1.2 How to Teach Speaking

Many language learners regard speaking ability as the measure of knowing a language. These learners define fluency as the ability to converse with others, much more than the ability to read, write, or comprehend oral language. They regard speaking as the most important skill they can acquire, and they assess their progress in terms of their accomplishments in spoken communication.

Language learners need to recognize that speaking involves three areas of knowledge:

- Mechanics (pronunciation, grammar, and vocabulary): Using the right words in the right order with the correct pronunciation.
- Function (transaction and interaction): Knowing when clarity of message is essential (transaction/information exchange) and when precise understanding is not required (interaction/relationship building).
- Social and cultural rules and norms (turn-taking, rate of speech, length of pauses between speakers, relative roles of participants): Understanding how to take into account who is speaking to whom, in what circumstances, about what, and for what reason.

In the communicative model of language teaching, instructors help their students develop this body of language by providing authentic practice that prepares students for real-life communication situations. They help their students develop the ability to produce grammatically correct, logically connected sentences that are appropriate to specific contexts, and to do so using acceptable (that is, comprehensible) pronunciation (Burkart, Grace Stovall: 1998).

2.1.3 Reasons of Teaching Speaking

According to Brown (2001: 58), there are main reasons for getting students to speak in the classroom. Firstly, speaking activities provide good opportunities- chance to practice real life speaking in the safety of the classroom. Secondly, speaking tasks in which students try to use any language they know provide feedback for both teacher and students.

Aughes (2002: 135) as quoted Brown (2001: 59) state that there are three basic of spontaneous speech which language learners need to be made aware of and which language teacher may find it helpful to reflect on. The elements from the way speech is produced are :

1. Speaking is fundamentally an interactive task, as someone speaks; he/she makes an interaction with other.
2. Speaking happens under real life processing constraints as a force someone to do so.
3. Speaking is more fundamentally linked to the individual who produces it that the written form is.

2.2 Definition of Problem Based Learning

PBL is an instructional (and curricular) learner-centered approach that empowers learners to conduct research, integrate theory and practice, and apply knowledge and skills to develop a viable solution to a defined problem. Critical to the success of the approach is the selection of ill-structured problems (often interdisciplinary) and a tutor who guides the learning process and conducts a thorough debriefing at the conclusion of the learning experience. Several authors have described the characteristics and features required for a successful PBL approach to instruction. The reader is encouraged to read the source documents, as brief quotes do not do justice to the level of detail provided by the authors. Boud and Feletti (2006) provided a list of the practices considered characteristic of the philosophy, strategies, and tactics of problem-based learning. Duch, Groh, and Allen (2008) described the methods used in PBL and the specific skills developed, including the

ability to think critically, analyze and solve complex, real-world problems, to find, evaluate, and use appropriate learning resources; to work cooperatively, to demonstrate effective communication skills, and to use content knowledge and intellectual skills to become continual learners. Torp and Sage (2009) described PBL as focused, experiential learning organized around the investigation and resolution of messy, real-world problems. They describe students as engaged problem solvers, seeking to identify the root problem and the conditions needed for a good solution and in the process becoming self-directed learners. Hmelo-Silver (2004) described PBL as an instructional method in which students learn through facilitated problem solving that centers on a complex problem that does not have a single correct answer. She noted that students work in collaborative groups to identify what they need to learn in order to solve a problem, engage in self-directed learning, apply their new knowledge to the problem, and reflect on what they learned and the effectiveness of the strategies employed.

Based on the definition above, it can be concluded that Problem Based Learning is a strategy to make the students to be more active in the learning process.

2.2.1 Component of PBL

Based on Rayne and Symon (2005: 6) there are some components in Problem Based Learning which will be explained as follow:

1. Group Work: Students work together in small group and provide a framework in which students can test and develop their level of understanding of the material.
2. Problem Solving: The problem given in a PBL environment are often daily problem means that they face it every time in their life that need enquiry and critical to solve it.
3. Discovering new knowledge: In order to find a meaningful solution, students will have to seek new knowledge

4. Based on the real world: The main emphasis is to encourage students to start thinking like an expert early on in their careers, thereby easing them to solve their daily problem in their real life.

Based on the component of Problem Based Learning above, the researcher used in the research is all of the component of Problem Based Learning.

2.2.2 Problem Based Learning in Teaching Speaking

In teaching speaking language, communicative approaches have been known to promote language acquisition since in the late 1970. One of the communicative approach is Problem Based Learning. The expectation is that such interactions promote language acquisition. Because problem based learning shifts the emphasis on learning activity from teachers to students, it can also help students become more autonomous learners who will transfer the skills learned in the classroom. For adult English language learners in particular, carefully chosen problem directly related to their everyday lives can be not highly motivation but also practical for them to work.

In learning English, motivation and opportunities are important because the teacher can motivate the students to speak by giving them opportunity to speak. Gardner (2004) say that “motivation is the key factor in successful language learning-teaching process, because those students who can learn a language will be better if there is motivation by the teacher”. It means that motivation has an important role to make students to success to learn English. Furthermore, lack of motivation occur because the teacher never make exploration in their teaching.

Talking about motivation, sometimes in teaching learning process the teacher does not use an appropriate method to encourage the students to communicate actively. Consequently, the students will be discouraged to express their ideas in English. In other word, we can say that the teacher does not apply an interesting way to provide opportunity for the students with the intention that they can be motivated to practice their speaking skill.

According to Levin (2001: 2), Problem Based Learning is instructional method that engage students to apply critical thinking, problem solving skill, and content knowledge to real problems and issues. Problem Based Learning (PBL) is a learner-centered educational method. Problem based learning was described as instructional approach that students do an authentic problem to arrange their own knowledge, to develop inquiry and the higher thinking process, and to develop self confidence independently. From those activities, that offered by problem based learning are freely (let the students decided by them self, what they want to do). Hence, it can active or foster the students to explore their main in English consequently, it will help them improve their speaking ability.

Problem based learning is a method to engage the students to communicate, share each other in order to solve their learning problem, authomatically, the day by day their speaking ability will be improve. If the students are obedient to practice their speaking, it is has the significant effect in improving their speaking ability.

Through Problem Based Learning the students speaking ability will be improved from the weakness students to the stronger one and speaking ability can be activated because the activities in problem based learning angage the students to communicate and explore the ideas in English to solve the problem. Automatically it has the significant effect on students speaking ability.

2.2.3 The Advantages of Using Problem Based Learning In Teaching Speaking

The use of Problem Based Learning had several adventages towards the students' speaking skill, Bar and Tagg (2006). First, the most important is it improve the students in oral communication. Problem Based Learning forced the students to speak up only in English. All of the students must say something or must give about something. This condition that made the class become conductive for the students to learn speaking English. All of the students could be more active in class, it increased students' oral communication especially in English. The result is students speaking skill is getting better.

Second, the used of Problem Based Learning in teaching speaking could increase students motivation and interest in learning English especially for speaking skill. By using a fun treatment and not to formal students will like the learning atmosphere. Students will enjoy those condition so that their interest in English improves. Besides, the problem used in discussion was a daily problem that they often face. It made them more active in discussion the sollution of the problem. In addition, all the activities that were involved in this strategy gave the students an experience in speaking English so that they could be more confident in performing their speaking. Students also will not feel shy when conveying their ideas.

Third, Problem Based Learning is a technique that requires cooperation with other students in group. Students learn how to work together to achieve the goal and how to solve the problem. Thus, by conducting Problem Based Learning Method, students learn social skills such as cooperation, teamwork, and communication skills which are useful in their future life. More over, this method also required students to think critically before decided what they have to do, so that, it will help them to be a critical thinker.

3. Method

3.1 Research Design

Research design in this study is to seek and to answer the question of the study “What is the effect of problem based learning to student’s speaking ability ?

In doing so, the researcher intends to apply Quasi Experimental as the research which performed to analyze the effect of problem based learning to students speaking ability. Quasi experimental is one of the experimental research that used to compare the control group and experimental group.

According to McMillan & Schumacher (2006 : 342) “the most common reason that Quasi experimental design cannot be employed are the random assigment of subject to experimental and control group is impossible and that control or comparison groups is unavailable, inconvenient, or too

expensive. Fortunately, there are several goods designs that can be used under either of these circumstances. They are termed quasi experimental design”.

By the statement above, the researcher would like to utilize the design in this researcher to compare group into two groups, they are control group and experimental group. To complete this study, the researcher would like to use nonequivalent control group pretest-posttest.

According to Gall (2003) Non-equivalent control group design: research participants are not randomly assigned to the experimental and control groups, and both groups take a pretest and posttest.

Formula:

O1	X	O2
O3		O4

4. Finding and Discussion

4.1 Research Finding

This chapter presented the data gathered from four activities. The activities consist of pre-test, teaching learning process, post test and interview. As stated in chapter one, the purpose of the study was to investigate the effect of problem based learning on developing students’ speaking ability. For this purpose, the researcher conducted the study on a sample of two groups; there are experimental group which was taught with problem based learning and control group which was taught conventionally and then the difference were compared before and after they got the treatment. The result of this study appears in the tables to show the data gathered from speaking test and interview. The interview represented the questions about students’ responses toward the teaching and learning process conducted through problem based learning and the discussion of the finding presented according to the questions of the study.

4.2 Data Analysis

Data analysis is a body of methods that help to describe facts, detect patterns, develop explanations, and test hypothesis. It is used in all of the sciences. It is used in business, in administration, and in policy, Joel H. Levine (2010: 1).

In research practice, it is important to know which test should be used for which kind of data, and why a particular test may or may not apply to your research question, (Kohlmann & Noock, 2007: 95).

In order to test the hypothesis, the relevant data was analyzed mean, standard deviation and different of means was computed for each group. T-test (independent sample) was applied to measure the significance of the difference between the means of the two groups. Significance of difference between the mean scores of both the experimental and control groups on the variable of pre-test and post-test scores were tested at 0.05 levels.

In pre-test and post-test activities, the researcher did oral test in order to collect the students' scores. The researcher used rating scale developed by Walter Bartz (Bartz cited in Valette, 2001: 150). It measured four aspects; fluency, quality of communication, pronunciation and also vocabulary. After the researcher got the students' scores, it divided into four in order to get the mean (averages).

4.2.1 Analysis of the Pre-test in Experimental Group

Before implementing of the problem based learning, the researcher performs a pre-test to students to know how well the students' speaking. The pre-test scores can be seen in the table I below:

TABLE I
The Pre-Test Scores

No	Code	X_1	X_1^2
1	R- 01	190	36100
2	R – 02	180	32400

3	R – 03	257	67600
4	R – 04	220	48400
5	R – 05	170	32400
6	R – 06	272	73984
7	R – 07	190	36100
8	R – 08	340	119025
9	R – 09	315	108900
10	R – 10	235	65025
11	R – 11	240	57600
12	R – 12	357	129600
13	R – 13	275	81225
14	R – 14	267	72900
15	R – 15	281	78961
16	R – 16	200	40000
17	R- 17	165	30625
18	R- 18	270	72900
19	R – 19	255	65025
Σ		4679	1208057

The average of the students' result (x) = $\frac{\sum x}{N}$

$$= \frac{4679}{19}$$

$$= 24.62$$

The standard deviation (s) = $\frac{N\sum x^2 - (\sum x)^2}{N(N-1)}$

$$S = \frac{\sqrt{(19)(12.08057) - (4679)^2}}{19(19-1)}$$

$$s = \frac{\sqrt{22.953.083 - 21.893.041}}{19(18)}$$

$$s = \frac{\sqrt{1.060,042}}{342} = \sqrt{309.953}$$

$$s = 176.055$$

From the data analysis above, it shows that the mean is 24.62, the standard deviation is 176.055. The students' highest score in pre-test was 357 and the lowest score is 165. The result made the researcher concluded that the students had difficulties in speaking English.

4.2.2 Analysis of the Pre-test in Control Group

Before doing the teaching learning processes in the control group, the researcher performs a pre-test to students to know how well the students' speaking. The pre-test scores can be seen in table III below:

TABLE III
The Pre-Test Scores

No	Code	Y ₁	Y ₁ ²
1	R – 01	220	48400
2	R – 02	221	48841
3	R – 03	243	59049
4	R – 04	268	71824
5	R – 05	255	65025
6	R – 06	288	82944
7	R – 07	220	48400
8	R – 08	310	96100
9	R – 09	207	42849
10	R – 10	270	72900
11	R – 11	217	47089
12	R – 12	352	123904
13	R – 13	296	87616
14	R – 14	248	61504
15	R – 15	261	68121
16	R – 16	276	76176
17	R – 17	265	70225
18	R – 18	276	76176
Σ		4693	1247143

The average of the students result (x) = $\frac{\sum X}{N}$

$$= \frac{4693}{18}$$

$$= 26.07$$

The standard deviation (s) = $\frac{N\Sigma X^2 - (\Sigma X)^2}{N(N-1)}$

$$s = \frac{\sqrt{(18)(1.247.143 - (4693)^2)}}{18(18-1)}$$

$$s = \frac{\sqrt{22.448.574 - 22.024.249}}{18(17)}$$

$$s = \frac{\sqrt{424.325}}{306} = \sqrt{1.386.6}$$

$$s = 372.38$$

From the data analysis above, it shows that the mean is 26.07, the standard deviation is 372.38. the highest scores is 352 and the lowest score is 207.

4.2.3 Analysis of Post-test in Experimental Group

After impelementing the problem based learning, the researcher performs a post-test to students. The students got test like they did in the pre-test. The aim is make students provide more opinion. The post-test scores can be seen in the table below:

TABLE II
The Post-Test Scores

No	Code	X ₂	X ₂ ²
1	R – 01	210	44100
2	R – 02	200	40000
3	R – 03	270	72900
4	R – 04	237	56169

5	R – 05	190	36100
6	R – 06	287	82369
7	R – 07	210	4100
8	R – 08	368	135424
9	R – 09	342	116964
10	R – 10	255	65025
11	R – 11	260	67600
12	R – 12	372	138384
13	R – 13	295	87025
14	R – 14	285	81225
15	R – 15	286	81796
16	R – 16	220	48400
17	R – 17	185	34225
18	R – 18	288	82944
19	R – 19	274	75076
Σ		5034	1389826

The average of the students result (x) $= \frac{\Sigma X}{N}$

$$= \frac{5034}{19}$$

$$= 26.49$$

The standard deviation (s) $= \frac{N\Sigma X^2 - (\Sigma X)^2}{N(N-1)}$

$$s = \frac{\sqrt{(19)(1.389.826) - (5034)^2}}{19(19 - 1)}$$

$$s = \frac{\sqrt{26.406.694 - 25.341.156}}{19(18)}$$

$$s = \frac{\sqrt{1.056.538}}{342} = \sqrt{308.929}$$

$$s = 555.813$$

From the data analysis above, it shows that the mean is 26.49, the standard deviation is 555.813. The highest score 372 and the lowest score is 185.

4.2.4 Analysis of Post-test in Control Group

In the last activity of test, the researcher also did post test in control group. The aim of this activity was to know whether the students have a good changing in their learning without any treatment as in the Experimental group.

TABLE IV
The Post-Test score

No	Code	Y_2	Y_2^2
1	R – 01	224	50176
2	R – 02	226	51076
3	R – 03	241	58081
4	R – 04	269	72361
5	R – 05	254	64516
6	R – 06	287	82369
7	R – 07	226	51076
8	R – 08	308	94864
9	R – 09	212	44944
10	R – 10	271	73441
11	R – 11	217	47089
12	R – 12	362	131044
13	R – 13	294	86436
14	R – 14	248	61504
15	R – 15	261	68121
16	R – 16	277	76729
17	R – 17	264	69696
18	R – 18	280	78400
Σ		4721	1261923

The average of the students result (x) $= \frac{\sum X}{N}$

$$= \frac{4721}{18}$$

$$= 26.22$$

The standard deviation (s) $= \frac{N\sum X^2 - (\sum X)^2}{N(N-1)}$

$$s = \frac{\sqrt{(18)(1261923) - (4721)^2}}{18(18-1)}$$

$$s = \frac{\sqrt{22.714.614 - 22.287.841}}{18(17)}$$

$$s = \frac{\sqrt{426.773}}{306} = \sqrt{13.94}$$

$$s = 37.33$$

From the data analysis above, it shows that the mean was 26.22, the standard deviation is 37.33. The highest score is 362 and the lowest score is 212. The result made the researcher concluded that the students skill difficulties in speaking English.

4.3 The Comparison of the Two Means

The difference between two means is $(X_2 - X_1) = (26.49 - 24.62) = 1.87$ $(Y_2 - Y_1) = (26.22 - 26.07) = 0.15$. The last calculating is determining the result of t observation (to) of the test with formula:

$$T = \frac{M_x - M_y}{\sqrt{\left[\frac{\left(\sum x^2 - \frac{(\sum x)^2}{N_x} \right) + \left(\sum y^2 - \frac{(\sum y)^2}{N_y} \right)}{N_x + N_y - 2} \right] \left[\frac{1}{N_x} + \frac{1}{N_y} \right]}}$$

Where

T : t – value

Σ : Some the following score

M_x : Mean for group A

M_y : Mean for group B

X : Score in group A

Y : Score in group B

N_x : Number of score in group A

N_y : Number of score in group B

Df : degree of freedom or d.b $N_x + N_y - 2$)

$$T = \frac{\frac{5034}{19} - \frac{4721}{18}}{\sqrt{\left[\frac{\left(13.898.26 - \frac{(5043)^2}{19}\right) + \left(12.619.23 - \frac{(4721)^2}{18}\right)}{19 + 18 - 2} \right] \left[\frac{1}{19} + \frac{1}{18} \right]}}$$

$$T = \frac{264.9 - 262.2}{\sqrt{\left[\frac{\left(13.898.26 - \frac{25.341.156}{19}\right) + \left(12.619.23 - \frac{12.619.23}{18}\right)}{35} \right] \cdot [19 + 20]}}$$

$$T = \frac{27}{\sqrt{\left(\frac{56.081 + 23.710}{35} \right) \cdot [39]}}$$

$$T = \frac{27}{\sqrt{\frac{79.791}{35} \cdot (39)}}$$

$$T = \frac{27}{\sqrt{22.797 \cdot (39)}}$$

$$T = \frac{27}{\sqrt{889.083}}$$

$$T = \frac{27}{\sqrt{94.291}}$$

$$T = 286.348$$

4.4 Test of Significance

The researcher finally found out the result after having collected and analyzed the experimental and control group scores. It shows that the coefficient is 286.348. after getting the t-value, the researcher consulted the critical value on the t-table to check whether the difference was significant or not.

Then, to complete the result of the research, the researcher finds out the degree of freedom (df) with the formula:

$$Df = (N_x + N_y - 2) 19 + 18 - 2 = 35$$

$$Df = 35 \text{ (see table of t. value at the degree of significance of 5\%)}$$

There is no definite critical value with degree of freedom 35, so the researcher took the closest value in the t-table. Due to df 37 is closest with 35, so that the researcher took df 37. with the $t_o = 286.348$ and $df = 35$ the critical value of $t_{s 0.05}$ is 1.684 and $t_{s 0.01}$ is 1.303. meanwhile, the obtained t-table was 286.348 so the t-value was higher than the critical value on the table ($1.684 < 286.348 > 1.303$).

from the critical value above, t-value score obtained from the result of calculating, the Alternative Hypothesis (H_a) is accepted and the Null Hypothesis (H_o) is rejected.

1. If the result of t observation is higher than t -table ($t_o > t_t$), the null hypothesis (H_o) is rejected and alternative hypothesis (H_a) is accepted. It means that there is a significance difference between variable X and Variable Y .
2. If the result of t observation is lower than t -table ($t_o < t_t$), the null hypothesis (H_o) is accepted and alternative hypothesis (H_a) is rejected. It means that there is no significance difference between variable X and Variable Y .

Based on the data analysis, the researcher concluded that students' speaking can be increased with problem based learning. The comparison between before and after they got treatment was significant difference. Teaching speaking after using problem based learning in experimental groups was more effective than the control groups who didn't got teaching learning by using problem based learning.

4.5 Data from Interview

Beside doing implementation teaching learning through Problem Based Learning and the test, the researcher also did the Interview. The purpose of the interview is to know their improvement speaking ability and also their interpretation about the treatment given by the researcher. From the data interview of the students, there was some information about the factors of students' difficulties in speaking English. The interview covered for two categories. There were students' responses toward speaking, students responses toward problem based learning. The researcher provided the interview using English. There were 10 questions. The question no 1 considered for students' responses toward speaking. In the other hand, question no 2 until no 10. Considered for students responses toward problem based learning.

The result of interview as follows:

- a). For question no. 1, 23 students answer that speaking is easier than other language comprehension as (listening) but 14 students answer that they were difficulties in learning speaking it caused by grammatical in language.
- b). For question no. 2 all of students answered that learning speaking by using problem based learning was very help them to improve their speaking. And also they should try to speak because it can help them to get the point.
- c). For question no. 3 all of the students answer that they were difficulties in speaking because they were say to speak out and there was nothing to trigger them to speak out.
- d). For the question no. 4, 18 students answered in learning speaking by using problem based learning it's effective, it was enjoyable, and through the problem in the learning process because the problem given in a PBL environment are often daily problem means that they face it every time in their life that need enquiry and critical to solve it.
- e). For the question no. 5 all of students answered that they difficulties in learning speaking without problem based learning because they don't know what is the solution of the problem that they learning.
- f). For the question no.6, 27 students answered that they don't difficulties in learning speaking with problem based learning but they feel that it's easy because according to them with problem based learning in teaching learning process they can know the problem and solution of the problem.
- g). For the question no. 7, 30 students answered that the problem have to use in the teaching learning process because it's very easy to they understood.

- h). For the question no. 8, 36 students said that the effect of problem based learning to them speaking it's very good because in the learning process the problem given by the teacher based real life problem so they felt it's very easy and when they fast speak.
- i). For the question no. 9 all of students answered that by using problem based learning in teaching learning process could improve their speaking.
- j). For the question no. 10 all of students answered that one real example of used problem based learning that can improve their speaking as question by given the researcher is some sentence emptied so as to make it easier for students to think and answer the question.

Based on the data above, it can be assumed that the students were interested enough to the problem based learning implemented by the researcher. They found the problem is useful, the problem introduce them was different and fresh. They also stated that the problem is effective to apply in the classroom.

4.6. The Advantages of Problem Based Learning In Teaching Speaking

Before the Problem Based Learning was applied in teaching speaking is not effective because the students were not active in teaching learning especially in teaching speaking. When the students are asked to speak, most of the students do not want to talk and usually students who are always active in the class are 5-6 students.

But after the researcher applied Problem Based Learning in teaching speaking the students began to be motivated to learn especially in learning speaking skill. In the

learning process the students divided into four groups each of group consisted of five students.

After formed study groups, the researcher give a topic of the problem that associated with daily problem or based on the students experince and then the students star a discussion with friends in their group, how to solve the problem.

Problem Based Learning forced the students to speak up only in English. All of the students must say something or must give about something. This condition that made the class become conductive for the students to learn speaking English. All of the students could be more active in class, it increased students' oral communication especially in English.

Through Problem Based Learning the students speaking ability can improved from the weakness students to the stronger one and speaking ability can be activated because the activities in problem based learning angage the students to communicate and explore the ideas in English to solve the problem.

5. Conclusion

The research that use of researcher is quasi-experimental was a study that examined whether the implementation of problem based learning has effect to students' speaking skill or not. After collecting, generating, and analyzing the data from four semester students' of STKIP Kie Raha, the researcher make the conclusions about the study as follow:

From the result of analysis data statistic that the Alternative Hypothesis (H_a) is accepted and Null Hypothesis is rejected. It means that there is influence of problem based learning to students'



speaking skill. The effect is the students speaking can improved after applied problem based learning whereas the result of analysis from the interview sheets about student respons toward the use of problem based learning in teaching speaking that the implementation of problem based learning itself was easy and students seemed to like this method based on the interview analysis. This method was applied in class and the students played their role seriously, discussed the solution of the problem together with their group member and constructed the argumentation to back up their solution before they told their solution in front of the class.

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