

THE EFFECT OF TEACHING STRATEGY ON STUDENTS' ACHIEVEMENT IN LEARNING PHONOLOGY

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ABSTRACT

English Phonology is very difficult to study. Cause, there are many elements that have to master in studying it. Cooperative learning is a successful teaching strategy in which small teams, each with students or different levels of ability, use a variety of learning activities to improve their understanding of the subject. By applying Strategy that is hoped can progress the students' achievement in learning English Phonology is the main points underlining in this study. The aims of this research are: (1) to know the students' difficulties in learning Phonology, and (2) to know if there is effect of cooperative learning strategy on the students' achievement in learning Phonology or not. Population is all members of well defined class of people, events or objects. the sample of the research are 57 students of Educational English Department 2017/2018. The students' achievement in learning Phonology who taught by using cooperative learning strategy have higher score than the students' achievement in learning Phonology who taught by using other strategy (conventional strategy). Event, the effect is not significant.

Keywords: Cooperative Learning Strategy, Students' Achievement, Phonology Study

INTRODUCTION

Faculty of Tarbiyah Science and Teacher Training of State Islamic University has one department that educated the students to be a good English Teacher. The department is English Education Department that chaired by Dr. Sholihatul Hamidah Daulay, S.Ag., M.Hum. In English Education Department, English divided into many subject as department subject, one of the subject is English Phonology.

English Phonology is very difficult to study. When the writer asked to the students who study it, they answer that English Phonology is very difficult to study, why? Cause, there are many elements that have to master in studying it. The elements that have to master to study English Phonology such as: theory of phonology, vowels, consonants, minimal pairs of vowel, minimal pairs of consonant, allophones, words syllable, phonemes, phonetics symbols, segmentals and suprasegmentals features, and messages language. If the students master all of the elements, they will be easy to master English Phonology. Because, all of the elements are parts of phonology.

There are several ways to teach English Phonology. Even though, there are many ways or theories in teaching and learning to increase students' achievement in learning English Phonology but not all of those theories and ways are successes. This research will find out the effective way to teach phonology for Department of English Educational students of Faculty of Tarbiyah Science and Teacher Training of State Islamic University of North Sumatra (UIN-SU) Medan.

English Phonology is studied at fourth semester. The fourth semester students should mastered phonology, because when they sit in the first semester, they had studied pronunciation course. But in reality, they are still having trouble in learning phonology.

In teaching English Phonology, the lecturer has to master many strategies. Cooperative learning is a successful teaching strategy in which small teams, each with students or different levels of ability, use a variety of learning activities to improve their understanding of the subject. Each member of a team is responsible not only for learning what is taught but also for helping teammates learn, thus creating an atmosphere of achievement.

Teaching strategy is important for teaching English Phonology, because strategies is mean by which learners can guide and evaluate their own understanding. By applying Strategy that is hoped can progress the students' achievement in learning English Phonology is the main points underlining in this study.

Phonology is one of subject in English Educational Department of Faculty of Tarbiyah Science and Teacher Training of the State Islamic University North Sumatra Medan. The students who learn it is at fourth semester.

An important question is how phonology differs from the closely related discipline of phonetics. Making a principled separation between phonetics and phonology are difficult – just as it is difficult to make a principled separation between physics and chemistry, or sociology and anthropology. A common characterization of the difference between phonetics and phonology is that phonetics deals with “actual” physical sounds as they are manifested in human speech, and concentrates on acoustic waveforms, formant values, measurements of duration measured in milliseconds, of amplitude and frequency, or in the physical principles underlying the production of sounds, which involves the study of resonances and the study of the muscles and other articulatory structures used to produce physical sounds. On the other hand, phonology, it is said, is an abstract cognitive system dealing with rules in a mental grammar: principles of

subconscious “thought” as they relate to language sound. Yet once we look into the central questions of phonology in greater depth, we will find that the boundaries between the disciplines of phonetics and phonology are not entirely clear-cut. As research in both of these fields has progressed, it has become apparent that a better understanding of many issues in phonology requires that you bring phonetics into consideration, just as a phonological analysis is a prerequisite for any phonetic study of language.

Etymologically, Phonology from the Greek, means "sound, voice". The aim of phonology is to discover the principles that govern the way sounds are organized in languages and to explain the variations that occur. We begin by analyzing an individual language to determine which sound units are used and which patterns they form the language's sound system. We then compare the properties of different sound systems, and work out hypotheses about the rules underlying the use of sounds in particular groups of languages. Ultimately, phonologists want to make statements that apply to all languages. Phonology is the study of how we find order within the apparent chaos of speech sounds (McMahon, 2002).

Phonology, come from the Greek roots phono-, “voice, sound” and -logy “saying, speaking.” 1. The study of spoken sounds. 2. The system of sounds in a language. phonological, adj. relating to phonology (Harley, 2006)

Phonology is the study of sound structure in language, which is different from the study of sentence structure (syntax) or word structure (morphology), or how languages change over time (historical linguistics). One of the goals of phonology is to discover exactly what these cognitively important properties are, how they function in expressing regularities about languages (Frost & Katz, 2006). An important feature of the structure of a sentence is how it is pronounced – it is sound structure. The pronunciation of a given word is also fundamental part of the structure of the word. Certainly, the principles of pronunciation in a language are subject to change over time. Thus, phonology refers either the representation of the sounds and sound pattern's in a speaker's mental grammar or the study of patterns in a language or human language in general.

A phonological word is sequence of sounds which is identified as a unit on the basis of how it is pronounced- a collection picked out by the phonology of a language (Victoria, at all, 2003), Phonologist like anatomist and physiologist, aim to help us understand the nature of that underlying complexity and to describe fully and formally what we know in a particular domain, but don't know we know. However, phonological differences also exist below the level of the language; frequently, two people think of them selves as speakers of the same language, but vary in their usage (sometimes yo do say *tomayto*, while I say *tomahto*). This is not just an automatic, phonetic matter: in some cases a single speaker will always use one variant, but in others, individuals will use different variants on different occasions (Daulay, 2011).

Then, phonology is the study of linguistic systems, especially the way in which sound represents differences of meaning in language. In English, native speakers know that the words *pin* and *bin* mean something different and the difference resides in the two different initial sounds.

One away to understand how this works is to think of the phonology as subjecting words to a set of rules that transform sequence of phonemes into representation with all detail necessary to specify how speech is articulated.

Phonology is the study of how sounds are organized and used in natural languages. Phonology is just one of several aspects of language. It is related to other aspects such as phonetics, morphology, syntax, and pragmatics.

Phonology is one of the core fields that composes the discipline of linguistics, which is defined as the scientific study of language structure. One way to understand what the subject matter of phonology is, is to contrast it with other fields within linguistics. A very brief explanation is that phonology is the study of sound structure in language, which is different from the study of sentence structure (syntax) or word structure (morphology), or how languages change over time (historical linguistics). This definition is very simple, and also inadequate. An important feature of the structure of a sentence is how it is pronounced – its sound structure. The pronunciation of a given word is also a fundamental part of the structure of the word. And certainly the principles of pronunciation in a language are subject to change over time. So the study of phonology eventually touches on other domains of linguistics (Odden, 2005)

Phonology is the branch of linguistics concerned with the study of speech sounds with reference to their distribution and patterning. Adjective: phonological. A linguist who specializes in phonology is known as a phonologist (Daulay, 2011).

Phonology is not only about phonemes and allophones. Phonology also concerns itself with the principles governing the phoneme systems-that is, with what sounds languages 'like' to have, which sets of sounds are most common (and why) and which are rare (and also why). It turns out that there are prototype-based explanations for why the phoneme system of the languages of the world have the sounds that they do, with physiological/ acoustic/perceptual explanations for the preference for some sounds over others (Nathan, 2008)

Based on the above explanation that phonology is one of the core fields that composes the discipline of linguistics, which is defined as the scientific study of language structure. Means that phonology not only study about sound, but also phonology defined as the scientific study of language that study about phonemes, morphemes, syntax and other about language knowledge. And someone who the expert in studying phonology we call phonologist. But, in studying phonology or in this subject of the Department of English Education the students will guide to study parts of sound that include about English Vowels, English Consonants, Allophones, Minimal Pairs of Vowel, Minimal Pairs of Consonant, Words and Syllable, Phonemes, Phonetics Symbols, Messagers Language and Suprasegmental Features of Language.

Fromkin and Rodman further add that everyone who knows a language knows (unconsciously of course) its phonology. In general, the problems of phonology are categorized into two : the problems of writing system (graphology) and the problems of spelling system (orthography) (Fromkin et al. (2003)

Based on the above explanation of Fromkin and Rodman, that who knows the language knows its phonology. And they divided into two problems in studying of Phonology, they are the problems of writing system (graphology) and the problems of spelling system (orthography).

Phonology is the study of the organization and structure of the sounds of language. Like most areas of grammar, it deals both with universal and language-specific principles. All spoken human languages make all (or virtually all) their words with combinations of consonants and vowels, and all (or virtually all) languages group those sounds into units called syllables, and generally, group the syllables into larger groups called feet. These constitute universal aspects of phonology, although the reader will notice hedges even within these statements.

On the other hand, different languages make use of different sounds, and different languages choose the structure of their syllables differently. Some allow very complex syllables (the English word strengths is one of the most complex syllables in the world), while others, such as Hawai'ian, only permit syllables consisting of a single consonant followed by a single vowel.

Similarly, some languages use enormous numbers of different sounds (some have as many

as seventy) while other languages get by with tiny numbers (one language has only 13). There are enormous numbers of possible combinations of sounds, but in fact, languages tend to use a small common set over and over, and rare sounds are rare because only a few languages use them.

Students often are confused about the relationship between *phonetics* and *phonology*. **Phonetics** deals with all the possible human speech sounds -it is an inventory of possibilities, as defined by the human vocal apparatus, or the human perceptual system. Phonetics deals with what kinds of sounds humans can make. *Phonology*, on the other hand, deals with what languages do with those sounds – how they select certain sounds, how those sounds are fitted into their environments, and how they are constructed into larger and larger units, such as syllables, feet, words and so on (Nathan, 2008).

Based on the above quotation, that phonology and phonetics have differentiate. Phonology studied about sound based on the syllable in the word. While phonetics studied about how to pronounce every syllable in the words are like a system of symbol based on the RPA. So, the people can pronounce the words correctly.

A good teacher/lecturer should be able to make students feel happy and comfort in learning teaching process. Because of that, the condition of the class and the way of teacher deliver the material influence students ability in achieving material especially in English lesson. So, the teacher has to be wisdom in using teaching strategy. If the teacher is not wisdom in using teaching strategy the students will be bore.

Besides that, there are some factors which influence students' learning activity (Makmun, 2004), they are;

- a. the leaner must want something
- b. the leaner must notice something
- c. the learner must do something
- d. the learner must get something

Then, Kinsella observed that the whole process teaching and learning a foreign language should be fun (Kinsella, 1985). So, to create that condition teachers need teaching strategy.

Strategy is art to do stratagem (planning). Muhibin Syah says teaching strategy is a set of steps which made to reach the learning purpose. According J.R. David in teaching strategies for college class Room (1976) teaching strategy is a plan, method, or series of activities designed to a particular educational goal (Syah, 2004).

In this case, Muhibin Syah focused on a set of step to reach the education purpose, whereas Syaiful, Bahri Djamarah, Aswin Zaini gave a meaning of strategy to a bow line to act in reach target. It is connected to learning teaching process. And strategy can be meant as general pattern of teacher students' activity to scratching purpose (Syaiful & Zaini, 1999).

Differ with them, Douglas give the meaning of strategy deeper to teaching process directly, he said that strategy is specific method of approaching a problem or task, modes of operation for achieving a particular end, planned design for controlling and manipulating certain information (Brown, 2000).

From the meaning of strategy above, there are some points that we can get. The first, a teacher should have a set of step of teaching to make learning teaching process done well. Second, a teacher should choose the right method in delivering the material to student.

As a teacher/lecturer, in teaching learning process needs to master teaching strategy. One of it is Cooperative Learning Strategy.

Cooperative learning strategy is a successful teaching strategy in which small teams, each with students or different levels of ability, use a variety of learning activities to improve their

understanding of the subject. Each member of a team is responsible not only for learning what is taught but also for helping teammates learn, thus creating an atmosphere of achievement. Student work through the assignment until all group members successfully understand and complete it (<http://www.kagan.online.com>).

Johnson & Holubec “cooperative learning is an approach to teach that makes maximum use of cooperative activities involving pairs and small groups of learners in the class room (Johnson & Holubec, 1994).

According to Olsen cooperative learning is group learning activity organized so that learning is dependent on the socially structured exchange of information between learners in group and which each learner is held accountable for his or her own learning and is motivated to increase the learning of other (Olsen & Kagen, 1992).

So the synthesis of definition cooperative learning is successfully teaching strategy in which small teams or small groups of learners in the class room.

The design of Cooperative learning strategy is as follows:

1. **Jigsaw**, Groups with five students are set up. Each group member is assigned some unique material to learn and then to teach to his group members.
2. **Think – Pair – Share**, Involves a three step cooperative structure. During the first step individuals think silently about a question posed by the instructor. Individuals pair up during the second step and exchange thoughts. In the third step, the pairs share their responses with other pairs, other teams, or the entire group.
3. **The – Step Interview**, Each member of a team chooses another member to be a partner.
4. **Round Robin Brainstorming**, Class is divided into small groups (4 to 6) with one person appointed as the recorder. A question is posed with many answers and students are given time to think about answers. After the “think time” members of the teams share responses with one another round robin style. The recorder writes down the answer of the group members. The person next to the recorder starts and each person in the group in order gives an answer until time is called.
5. **Three–Minute Review**, Teaching stop any time during a lecture or discussion and give teams three minutes to review what has been said, ask clarifying or answer questions.
6. **Numbered Heads Together**, A team of four is established. Each member is given numbers of 1,2,3,4. Questions are asked of the group. Groups work together to answer the question so that all can verbally answer the questions. Teacher calls out a number (two) and each two is asked to give the answer.
7. **Team Pair Solo**, Students do problems first as a team, then with a partner, and finally on their own. It is designed to motivate students to tackle and succeed at problems which initially are beyond their ability. It is based on a simple notion of mediated learning.
8. **Circle the sage**, First the teacher polls the class to see which students have a special knowledge to share.
9. **Partners**, The class is divided into teams of four. Partners move to one side of the room. Half of each team is given an assignment to master to be able to teach the other half (<http://www.Kaganonline.Com>).

And then, this the procedure of Cooperative Learning Strategy in teaching:

Step1. Students must see value in group work. Since most students come to EFL classes expecting the traditional classroom arrangement, with the teacher in front of the class and the students in straight rows watching the teacher, they will be confused and hesitant when these expectations are not met. If teachers want students to react positively to their first experiences in cooperative learning, students must understand at least some of the many rationales for this kind

of classrooms experience. They need to understand why it is that they are doing things differently and how it will help them reach their goals.

What follows is a list of ideas that were generated by my own students. The list is not meant to be exhaustive, but rather to provide you with some ideas on the value of cooperative learning for your own students:

1. We can interact with our classmates
2. We find out what our classmates think and know
3. We get more opportunities to talk
4. We hear more English
5. We get a change to be a leader
6. We have more fun!
7. We learn more about each other and that's interesting
8. We learn to respect different ideas and opinions
9. We have to really think in order to solve the problems
10. We see other points of view
11. We learn more vocabulary words
12. Others listen to what I have to say
13. We can ask more questions

Step 2. Students must be aware of the necessary skills for successful group work in order to know what they are supposed to do, in order to function in a group situation, for example, students need to know how to get information from the other members and respond to question. Student need to know before the activity begins that getting information and responding to questions are the skills being practiced.

Step 3. Students must practice the skill. The major responsibilities teachers have in cooperative learning are to design and set up practice situations.

Step 4. Students need to process the skills they have practiced. Processing means that students need to become aware of what exactly it is they have practice of the skills. Teachers can assist students by preparing questions for them to answer and worksheets to help students evaluate their own performance or the performance of other group members. Teacher can also model the processing skills (Thomas, 1993).

Advantages of cooperative learning. Research has that cooperative learning techniques:

1. Promote student learning and academic achievement
2. Increase student retention
3. Enhance student satisfaction with their learning experience
4. Help students develop skills in oral communication
5. Develop student' social skill
6. Promote student self – esteem
7. Help to promote positive race relations

On the surface, a teacher who uses cooperative learning techniques might seem to have less work than one who uses traditional techniques, since a good deal of academic learning time is dedicated to students learning from other students. On the contrary, a teacher who uses cooperative learning assumes a number of responsibilities. These include the following:

1. Planning lessons, activities, and evaluation;
2. Grouping students;
3. Physical placement of students;
4. Presenting and explaining the task to the students;
5. Monitoring group activities and intervening when necessary;

6. Helping students with social skills; and
7. Evaluating students.

It is advised that the teacher use a wide variety of cooperative learning groupings, in addition to individual and competitive learning. It would probably be a mistake to have students work in the same self-selected group for a number of activities. Instead, a teacher should place students in a wide variety of groups of 2, 3, 4, and more students. During the course of a semester, there is usually enough time for every student in a class to work with every other as a pair for some activity. Many different pairs and threesomes should also be established. A times, students should be given the opportunity to select their own groups. This can provide a type of support for the learner that might not be possible with teacher-selected groups.

Phonology is one of difficult subject at English Department of Faculty of Tarbiyah Science and Teacher Training of State Islamic University. Phonology studied about sound in English, so students have to investigate *articulatory phonetics* and *phonological rules*, and cooperative learning is successfully teaching strategy in which small team or small groups of learners in class room.

In teaching and learning process, and more strategy in reaching the students achievement and also to avoid the problems in studying articulatory phonetics and phonological rules, they have to study hard, because English is not their mother tongue and include in the second foreign language to be learnt. If the teacher whose has large qualification in order to motivated the pupils in interesting ways, it to be wished that they can increase their students' achievement. Later on their students can get clear understanding about the material that they learn special for phonology subject.

RESEARCH METHOD

This research carried out by applying a quantitative approach with an experimental design, which tends to find the effect of one independent variable on the dependent variable.

There are two variables in this research, they are *independent variable*: Teaching Strategy, and *dependent variable*: students' achievement in learning Phonology.

The population of this research is the fourth semester of Educational English Department of Faculty of Tarbiyah Science and Teacher Training of State Islamic University North Sumatra Medan students, that consists of six classes, but the writer just take three classes for the population. The total number of the students is 131 students, PBI-3 consist of 43 students, PBI-4 consist of 45 students PBI-5 consist of 43 students.

The sample of the research are 57 students, it is taken from 131 students of Educational English Department 2017/2018. The sample is taken by using random sampling, because all the subjects have the same chance to be the sample. Random technique used is ordinal sampling by arranging all the students' names: the students who are at the even numbers are taken as samples.

FINDING AND DISCUSSION

FINDING

Before counting the correlation both variable, it is need to analyze the test, the first Normality test and the second Homogeneity test. Normality test is used Liliefors test while Homogeneity test is used F test.

From the founding that the Observation Liliefir value or $Lo = -0,2528$ and the table Liliefir

value or L_t with $N = 57$ and real level $\alpha = 0,05$ from the critics list is found $L_t = 0,2912$. So that it can be known that the value of $L_o (-0,2528) < L_t (0,2912)$, so it can be concluded that the students' achievement in learning Phonology who taught by cooperative learning strategy of Educational English Department of Faculty of Tarbiyah and Teacher Training of State Islamic University North Sumatra Medan on 2017/2018 academic year have normal distribution.

From the founding can be shown that the value of Observation Liliefors or $L_o = 0,2527$ and the table Liliefir value or L_t with $N = 57$ and real level $\alpha = 0,05$ from the critics list is found $L_t = 0,3264$. So that it can be known that the value of $L_o (0,2527) < L_t (0,3264)$. So it can be concluded that the data of the students' achievement control class in learning Phonology who taught by conventional strategy of Educational English Department of Faculty of Tarbiyah and Teacher Training of State Islamic University North Sumatra Medan have normal distribution.

After counted the normality test, then continue to test the Linearity test. Linearity test of variable of the students' achievement in learning Phonology who taught by cooperative learning strategy and the students' achievement control class in learning Phonology who taught by conventional strategy Educational English Department of Faculty of Tarbiyah and Teacher Training of State Islamic University North Sumatra Medan as follows:

$$\Sigma N = 57$$

$$\Sigma X_i = 4540$$

$$\Sigma X_i^2 = 364800$$

$$\Sigma Y = 4060$$

$$\Sigma Y^2 = 301800$$

$$\Sigma X_i Y = 322400$$

$$\begin{aligned} \text{a.} &= \frac{(\Sigma Y)(\Sigma X_i^2) - (\Sigma X_i)(\Sigma X_i Y)}{n(\Sigma X_i^2) - (\Sigma X_i)^2} \\ &= \frac{(4060)(364800) - (4540)(322400)}{57(364800) - (4540)^2} \\ &= \frac{1481088000 - 1463696000}{20793600 - 20611600} \\ &= \frac{17392000}{182000} \\ &= 95.56 \end{aligned}$$

$$\begin{aligned} \text{b.} &= \frac{n(\Sigma X_i Y) - (\Sigma X_i)(\Sigma Y)}{n(\Sigma X_i^2) - (\Sigma X_i)^2} \\ &= \frac{57 \times 322400 - 4540 \times 4060}{57 \times 364800 - 4540^2} \\ &= \frac{18376800 - 18432400}{20793600 - 20611600} \\ &= \frac{-55600}{182000} \\ &= -0.305 \end{aligned}$$

Line regression is $\hat{Y} = 95.56 + (-0.305 X)$

$$Jk \text{ total} = Y^2 = 301800$$

$$\begin{aligned}
 \text{Jk reg (a)} &= \frac{(\sum Y)^2}{N} \\
 &= \frac{4060^2}{57} \\
 &= \frac{16483600}{57} \\
 &= 289185.96
 \end{aligned}$$

$$\begin{aligned}
 \text{Jk reg (b/a)} &= b \left(\sum X_1 Y - \frac{(\sum X_1)(\sum Y)}{N} \right) = -0.305 \left(322400 - \frac{(4540)(4060)}{57} \right) = -0.305 (322400 \\
 &- 323375) \\
 &= -0.305 (-975) \\
 &= 297.375
 \end{aligned}$$

$$\begin{aligned}
 \text{Jk res} &= \text{Jk (total)} - \text{Jk reg (a)} - \text{Jk (b/a)} \\
 &= 301800 - 289185.96 - 297.375 \\
 &= 12316.665
 \end{aligned}$$

$$\text{Degree of freedom (total)} = N = 57$$

$$\text{Degree of freedom reg (a)} = 1$$

$$\text{Degree of freedom reg (b/a)} = 1$$

$$\text{Degree of freedom (res)} = 57 - 2 = 55$$

$$\text{RJK (a)} = \frac{\text{Jk reg (a)}}{\text{dk reg (a)}} = \frac{289185.96}{1} = 289185.96$$

$$\text{RJK reg (b/a)} = \frac{\text{Jk reg (b/a)}}{\text{dk reg (b/a)}} = \frac{297.375}{1} = 297.375$$

$$\begin{aligned}
 \text{RJK res} &= \frac{\text{Jk res}}{\text{dk res}} = \frac{12316.665}{55} \\
 &= 223.939
 \end{aligned}$$

$$\begin{aligned}
 \text{Degree of freedom (tc)} &= k - 2 \\
 &= 7 - 2 \\
 &= 5
 \end{aligned}$$

$$\begin{aligned}
 \text{Degree of freedom (g)} &= N - k \\
 &= 57 - 7 \\
 &= 50
 \end{aligned}$$

$$\text{JK (g)} = 9509.56$$

$$\begin{aligned}
 \text{Jk (tc)} &= \text{Jk res} - \text{Jk (g)} \\
 &= 12316,665 - 10509,56 \\
 &= 1807,1
 \end{aligned}$$

$$\begin{aligned}
 \text{Rjk (tc)} &= \frac{\text{Jk (tc)}}{\text{dk (tc)}} \\
 &= \frac{1807,1}{5} \\
 &= 361.42
 \end{aligned}$$

$$\text{Rjk (g)} = \frac{\text{jk (g)}}{\text{dk (g)}}$$

$$\begin{aligned}
 &= \frac{9509,56}{50} \\
 &= 190.19 \\
 F_{\text{counted}} &= \frac{R_{jk}(tc)}{R_{jk}(g)} \\
 &= \frac{351.42}{190.19} \\
 &= 1.847
 \end{aligned}$$

F table (5,33) at $\alpha = 0,05$ is 2,49.

Because of $F_{\text{counted}} (1.847) < F_{\text{table}} (2,49)$ so the variable of the students' achievement in learning Phonology who taught by cooperative learning strategy and the students' achievement control class in learning Phonology who taught by conventional strategy Educational English Department of Faculty of Tarbiyah and Teacher Training of State Islamic University North Sumatra Medan does not linearity.

To know the correlation variable the students' achievement in learning Phonology who taught by cooperative learning strategy (X) and the students' achievement control class in learning Phonology who taught by conventional strategy (Y) Educational English Department of Faculty of Tarbiyah and Teacher Training of State Islamic University North Sumatra Medan is used analysis of Correlation Product Moment Statistic. The result of the counting of the variables as follows:

Table 1. Work Table of Product Moment Variable X and Variable Y

NO	Xi	Y	X ²	Y ²	XY
1	80	60	6400	3600	4800
2	80	60	6400	3600	4800
3	80	60	6400	3600	4800
4	80	60	6400	3600	4800
5	80	50	6400	2500	4000
6	90	50	8100	2500	4500
7	90	60	8100	3600	5400
8	90	70	8100	4900	6300
9	90	80	8100	6400	7200
10	70	80	4900	6400	5600
11	70	90	4900	8100	6300
12	70	60	4900	3600	4200
13	70	70	4900	4900	4900
14	70	80	4900	6400	5600

15	80	90	6400	8100	7200
16	90	90	8100	8100	8100
17	70	50	4900	2500	3500
18	90	60	8100	3600	5400
19	90	60	8100	3600	5400
20	90	60	8100	3600	5400
21	80	80	6400	6400	6400
22	80	90	6400	8100	7200
23	70	70	4900	4900	4900
24	80	60	6400	3600	4800
25	70	60	4900	3600	4200
26	80	80	6400	6400	6400
27	70	90	4900	8100	6300
28	70	70	4900	4900	4900
29	70	70	4900	4900	4900
30	90	60	8100	3600	5400
31	90	60	8100	3600	5400
32	90	80	8100	8100	7200
33	80	80	6400	8100	6400
34	90	70	8100	4900	6300
35	80	90	6400	8100	7200
36	80	90	6400	8100	7200
37	70	60	4900	3600	4200
38	70	90	4900	8100	6300
39	80	70	6400	4900	5600
40	80	60	6400	3600	4800
41	80	60	6400	3600	4800
42	70	70	4900	4900	4900
43	70	90	4900	8100	6300
44	80	80	6400	6400	6400
45	80	60	6400	3600	4800

46	80	70	6400	4900	5600
47	90	90	8100	8100	8100
48	80	90	6400	8100	7200
49	80	60	6400	3600	4800
50	90	50	8100	2500	4500
51	90	70	8100	4900	6300
52	80	60	6400	3600	4800
53	80	90	6400	8100	7200
54	80	80	6400	6400	6400
55	80	70	6400	4900	5600
56	70	70	4900	4900	4900
57	70	80	4900	6400	5600
	$\Sigma X = 4540$	$\Sigma Y = 4060$	$\Sigma X^2 =$ 364800	$\Sigma Y^2 =$ 301800	$\Sigma XY =$ 322400

From the above table is known:

$$\Sigma N = 57$$

$$\Sigma X = 4540$$

$$\Sigma X^2 = 364800$$

$$\Sigma Y = 4060$$

$$\Sigma Y^2 = 301800$$

$$\Sigma XY = 322400$$

The above values are confirmed to Product Moment formula as follows:

$$\begin{aligned}
 r_{xy} &= \frac{N \Sigma XY - (\Sigma X)(\Sigma Y)}{\sqrt{\{N \Sigma X^2 - (\Sigma X)^2\} \{N \Sigma Y^2 - (\Sigma Y)^2\}}} \\
 &= \frac{57 \times 322400 - (4540)(4060)}{\sqrt{\{57 \times 364800 - (4540)^2\} \{57 \times 301800 - (4060)^2\}}} \\
 &= \frac{18376800 - 18432400}{\sqrt{(20793600 - 20611600)(17179800 - 16483600)}} = \frac{-55600}{\sqrt{(182000)(696200)}} \\
 &= \frac{-55600}{\sqrt{126708400000}} \\
 &= \frac{-55600}{355961.23} \\
 r_{xy} &= -0.1561
 \end{aligned}$$

Because of the result of the counted is negative, so the researcher multiply it to negative one (-1), so the result to be positive.

Next, to compare r_{counted} (0.1561) to r_o (Product Moment Value table) in significance level 95% and $N = 57$ that is 0,254, because of r_{counted} (0,1561) is lower than r_t (0,254), so the alternative hypothesis is rejected. It means that there is no significant correlation between the the students' achievement in learning Phonology who taught by cooperative learning strategy and the students' achievement control class in learning Phonology who taught by conventional strategy Educational English Department of Faculty of Tarbiyah and Teacher Training of State Islamic University North Sumatra Medan.

Then, to test the significance between the students' achievement in learning Phonology and its effect of Implementating of Cooperative Learning Strategy in Teaching Phonology at Educational English Department of Faculty of Tarbiyah and Teacher Training of State Islamic University North Sumatra Medan is used the t_{test} formula as follows:

$$\begin{aligned} t &= \frac{r \sqrt{n-2}}{\sqrt{1-r^2}} \\ &= \frac{0,1561 \sqrt{57-2}}{\sqrt{1-0,1561^2}} \\ &= \frac{0,1561 \sqrt{55}}{\sqrt{1-0,395}} \\ &= \frac{0,1561 \times 7.41}{\sqrt{0,605}} \\ &= \frac{1.1567}{0,777} \\ &= 1.488 \end{aligned}$$

Then the value that is gotten that is 1.488. And the value is confirmed to distribution t table. Where the value of t distribution in $N = 57$ and real $\alpha = 0,05$ is 1.671, because of the t_{counted} (1.488) is lower than distribution value of t_{table} (1.671), it can be told that there is no significant effect between the students' achievement in learning Phonology in Implementating of Cooperative Learning Strategy in Teaching Phonology at Educational English Department of Faculty of Tarbiyah and Teacher Training of State Islamic University North Sumatra Medan.

Based on the counted the students' score that there are no difficulties in learning Phonology, because the students who had taken as sample in this research not only able to master about sound knowledgement, but also able to identify of Phonetics Symbol and how to pronounce the English words correctly as the indicators of that the students' achievemem in learning Phonology. Eventhough each other has no correlation.

DISCUSSION

From the result of the statistic counting has shown the prove that the students are able to master about sound knowledgement has no significant correlation with the students are able to identify of Phonetics Symbol and how to pronounce the English words correctly in Implementating of Cooperative Learning Strategy in Teaching Phonology at Educational English Department of Faculty of Tarbiyah and Teacher Training of State Islamic University North Sumatra Medan. This matter meant that students who has able to master about sound knowledgement will not able to identify of Phonetics Symbol and how to pronounce the English words correctly, in other word that the students who has able to master about sound

knowledge, hence excelsior they are not able to identify of Phonetics Symbol and how to pronounce the English words correctly, and so do on the contrary progressively lower capability in mastering about sound knowledge, so they are able to identify of Phonetics Symbol and how to pronounce the English words correctly progressively lower too.

From the above discuss, the writer concludes that the implementation of cooperative learning strategy has effect in teaching Phonology. It can be prove that the students who has taken as sample are able to master about sound knowledge and able to identify of Phonetics Symbol and how to pronounce the English words correctly. All of the students got score about 70 – 90 in learning Phonology and they are able to master about sound knowledge 100%. And, the students got score 60 – 90 in learning Phonology and they are able to identify of Phonetics Symbol and how to pronounce the English words correctly, 92.98 %. It can prove that the students' achievement in learning Phonology who taught by using cooperative learning strategy have higher score than the students' achievement in learning Phonology who taught by using other strategy (conventional strategy). Event the effect is not significant.

CONCLUSIONS

The end of this writing, the writer will give the conclusion as follows;

1. The score of the students' achievement in learning Phonology who taught by using cooperative learning strategy of Educational English Department of State Islamic University North Sumatra Medan 2017/2018 academic year after given test get the highest score is 90 and
2. lower score is 70 and mean score is 79.65.
3. The score of the students' achievement in learning Phonology who taught by using conventional strategy is found from the students of Educational English Department of State Islamic University North Sumatra Medan 2017/2018 academic year after given test get the highest score is 90 and lower score is 50 and mean score is 64.91.
4. By using correlation that has done, it has gotten correlation coefficient 0.1561. if we confirmed to interpretation correlation coefficient that $r = 0.1561$ is no correlation, because $r_{counted}$ is lower than r_{table} . It means that there is no significant correlation between the students' achievement in learning Phonology who taught by using cooperative learning strategy and the students' achievement in learning Phonology who taught by using conventional strategy at of Educational English Department of State Islamic University North Sumatra Medan 2017/2018 academic year.

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