

# The Effect of English Laboratory Use in Speaking Ability

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## ABSTRACT

The paper aims at finding out whether or not English laboratory use affects students' achievement. As one of basic skills, speaking involves oral and written features. English laboratory may refer to conventional computer uses or the Computer Assisted Language Laboratory (CALL) in the process of English teaching. The English Department of Nommensen HKBP University uses conventional one which is considered primitive form of language laboratory teaching. The conventional lab has a tape recorder and a few audiocassettes of the target language for students. The research was conducted in the Department of English in which its population was taken from the first semester students appearing in the academic year 2017/2018 and sitting in five classes and each class had thirty five students. The result is supported by the data showing  $t_{obs} > t_{table}$  ( $P = 0.05$ ); ( $df = 48$ )  $8,031 > 2,010$  ( $P = 0.05$ ); ( $df = 48$ ). If  $t_{obs} < t_{table}$ , the null hypothesis ( $H_0$ ) is accepted and the alternative hypothesis ( $H_a$ ) is rejected. There is a difference mean score obtained from both of controlled group at 65,28 showing 44.87% and the experimental group reaches 8,031 referring to 55.13 %. The students who had treatment in English laboratory use successfully got higher score than students who did not have treatment about such use.

**Key words:** Speaking, English as the second language, Language laboratory

## INTRODUCTION

Technology helps the process of speech teaching and its influence on both language ability and lab use has gained more attention during the last decade. Teaching is a way to help someone to know something, meaning that teaching refers to a process to organize the students' condition in order they are motivated to learn. Teaching activity consists of interaction between the teacher and his students.

At this technological era, English is the most widely spoken language in the world. It is a world language and is the major language of news and information (Mercy, 2016). Hence, one cannot doubt the important role English plays within the modern day knowledge-driven economic

and political systems. Thus, a working knowledge of English has become an utmost necessity especially for the university students in order to survive in the competitive world (Karunaratne, 2014).

In modern university contexts, English has become the primary medium of gaining knowledge and it acts as a gateway in securing employment (Perera, 2013). The HKBP Nommensen University's English Department has a long history for the attempts made by second language professionals to change English teaching and learning into an innovative and interesting process. Thus, in this era where technology plays a predominant role in teaching and learning English as a second language it is thoroughly believed that

technology can bring a new light into old teaching and learning practices of English.

Laboratory-assisted language learning is often perceived as an approach to language teaching and learning. Conceptually, language laboratory conducts the outstanding system in English teaching process since there are such many outcomes expected to which the process goes. Language laboratory assesses teachers to be more experimentative actor during training students to speak such as pronunciation and vocabulary improvement. "By observing and reflecting on their own problems and failures as learners, English teachers can seek to establish principles, which will help them improve their teaching" (Hafiz, 2013).

There are some students' difficulties in speaking activity; besides they said vocalized pause, and lost idea, they were sometimes obviously afraid of making mistake and few students who spoke English also tend to use inappropriate grammar. Moreover, some students convinced that most of English sessions were boring so they think that English is not important and they can live and find a job without English. This perhaps is caused by lack of motivation-related engagement from the researcher during speaking session.

The problem occurring in the HKBP Nommensen University's English Department is the availability of systems to gain their capacity in speaking English. Currently, they hardly engaged with language activates in a lively manner. Thus, the teachers constantly have the distinction between conventional and technological or modern systems through language laboratory. In this case, the language lab is expected produce good results and strong belief that it has the capacity to transform a language lesson into a new form and format which motivate the second language learners.

To overcome those problems, the researchers applied English laboratory as an aid to teach English speaking and to find out whether or not English laboratory use affects students' achievement.

## LITERATURE REVIEW

Speaking is one of the fundamental skills in foreign language learning and has two categories: oral and written features. As what state in Oxford Dictionary orally means through spoken word, of, by, or for mouth. Speaking means the aural/oral skill production and consists of producing systematic verbal utterances to convey meaning" Nunan 2003: 48). Fulcher (2003:23) stated that speaking is the verbal use of language to communicate with others". In addition, Hughes (2001: 73) explained" speaking is interactive and is addressee to accomplish pragmatics goal trough interactive discourse with other speaker of language". Thus, speaking is the systematic oral skill to convey meaning utterances through interactive discourse. Speaking ability is described as the ability to express oneself in life situation, to report acts or situation with precise words, or the ability to converse, to express a sequence or ideas fluently. Hughes (2001:135) stated that:

1. speaking is fundamentally on interactive task
2. speaking happens under real-time processing constrains
3. speaking is more fundamental linked to the individuals who procure it than the written from.

Dobbson (1987:58) argued that communication through speaking is performed in face to face interaction and occurs as part of a dialogue or as form of verbal exchange. There are some purposes when someone communicates: 1. he wants to speak, 2. he has some communicative purposes, 3. he wants to listen to something and is interested in the communicative purpose about what is being said.

From the point of view, speaking is meant to communicate with others and to express our feeling or ideas orally. The goal of speaking is to build communication between the speaker and the listener in interactive way. Scoot (2005:90-91) made the criteria for speaking tasks, namely, productivity, purposefulness, interactivity,

challenge, safety, and authenticity; whereas, the communication purposes for the speaker should be:

1. They want to say something.
2. They have some communicative purposes; speakers say something because they want something to happen as a result of what they say.
3. They select from their language store. Speakers have an inventive capacity to create new sentences. In order to achieve these communicative purposes they will select the language they think is appropriate for this purpose.

All this means that the purpose of speaking is to share what the speaker wants to communicate to the listener and to get information from the speaker and understand the spoken at normal speed, and the ability to answer questions which require short or extended answer.

English laboratory is a powerful tool with which students can acquire the target language in a low anxiety setting and interesting, rich and comprehensive input (Al-Hmoud, 2014). He found that students had positive attitudes towards using English labs for learning and practicing English pronunciation. Mecy in 2016 when discussing the history of language laboratory pointed out that the word language laboratory supported positively when compared to traditional language teaching methods. It is convenient for both the low and high achievers and can solve many languages.

There are eight types of language laboratory in teaching. First, it is intended to mean an audio or audio-visual installation used as an aid in modern language teaching. It can be found in schools and universities, especially universities having language departments. Laboratory allows teachers to listen to and manage their students with audio via a hard wired analogue tape-deck-based system with sound booths in fixed locations. Second, conventional laboratory means the primitive form of the language laboratory, having a tape recorder and a few audiocassettes of the target language. The

teacher plays the tape and the learners listen to it and learn the pronunciation.

Third, a conventional type of lab, with a little modernization. Learners are given a headset to listen to the audiocassettes being played; here distractions are minimized. There is also a modernized lingua phone laboratory available today, which uses an electronic device that works as a cassette player with all the features of a normal cassette player on the left side, and as a repeater on the right side that helps one to record one's voice and replay it for comparison. Fourth, the computer-assisted language laboratory (CALL) uses computer to teach language. The course materials are already fed into the computer and are displayed according to the features available in the system. Nowadays, there are also laboratories with computers with a connection to the internet. Fifth, the dial access laboratory (DAL) needs more spaces than the conventional lab. It also needs more technicians at any given time. It is basically a broadcast operation. Depending on the size of operation, any number of students can access a particular tape at any given time.

Sixth, mobile laboratory is basically a console on wheels with storage spaces for headsets. It is best used within a single building where it can be moved from one room to another. While the advantage of the mobile lab is that any classroom may be turned into a lab, the drawback is that the equipment is heavy and hampers free movement. It requires time and energy to set up. Seventh, wireless laboratory is the laboratory which connects the sources to student headsets are replaced by radio transmission in a wireless laboratory. The console contains a small transmitter that serves this purpose. Monitoring and intercom are NOT possible with this lab. (It combines well with the mobile lab, though the important functions of monitoring and intercom are forfeited). The last, portable laboratory is similar to the mobile lab except that instead of being placed on

wheels, it is placed in weather–proofed packages enclosed in containers with handles. It is either powered by batteries or portable electric generators. It is ideal for poverty stricken areas. Nommensen HKBP University uses conventional laboratory in teaching English language.

**MATERIALS AND METHODS**

The research design was the experimental quantitative design. There were two variables, such as: dependent variable as a speaking ability and independent variable as an English laboratory use. According to Best (2002: 133) experimental research is the classic method of the science laboratory, where manipulated elements and observed effects can be controlled. In this experimental research, we used two groups namely, experimental group and control group. In experimental group the students were taught how to use the English laboratory use and in control group they were taught without the English laboratory use. The design could be figured as following:

**Table 1. Research Design**

| Group            | Types    | Treatment                                 | Types     |
|------------------|----------|---|-----------|
| Experimental (X) | Pre-test | Have treatment (Audio-lingual)            | Post-test |
| Control (Y)      | Pre-test | Without treatment (Conventional strategy) | Post-test |

The population in this research was the first semester of English Department at in academic year 2017/2018. There were five classes with 35 students for each class. The cluster sampling was used (Arikunto, 2010: 131) and two classes were selected as the samples for the experimental group and control group. The instrument was oral test which was used to examine the students’ abilities. Each student was invited to appear in front of the class to perform his/her speaking ability and he/she should speak about the topic he/she has learned. The data was taken from the speaking tests and in conducting the tests, we provided a topic.

**RESULTS AND DISCUSSION**

The data in Table 2 was taken from the students’ pre-test and post-test scores

from both experimental and control groups. Each score is based on accent, grammar, vocabulary, fluency, and comprehension. The clustering sample was taken from group A which was used as the control group consisting of 25 students and from group E which became the experimental class, having 25 students.

**Table 2. The Score of the Control Group**

| No               | Student’s Initial | Pre-Test (Y1) | Post-Test (Y2) | D (Y2-Y1) | D <sup>2</sup> |
|------------------|-------------------|---------------|----------------|-----------|----------------|
| 1                | AF                | 69            | 70             | 1         | 1              |
| 2                | BA                | 54            | 57             | 3         | 9              |
| 3                | JB                | 66            | 68             | 2         | 4              |
| 4                | AS                | 56            | 60             | 4         | 16             |
| 5                | AP                | 55            | 59             | 4         | 16             |
| 6                | JA                | 67            | 69             | 3         | 9              |
| 7                | HH                | 59            | 62             | 3         | 9              |
| 8                | EW                | 53            | 56             | 3         | 9              |
| 9                | IS                | 64            | 69             | 5         | 25             |
| 10               | IP                | 71            | 73             | 2         | 4              |
| 11               | FD                | 58            | 59             | 1         | 1              |
| 12               | AA                | 70            | 77             | 7         | 49             |
| 13               | DF                | 72            | 74             | 2         | 4              |
| 14               | PP                | 64            | 66             | 2         | 4              |
| 15               | YB                | 63            | 65             | 2         | 4              |
| 16               | KP                | 51            | 59             | 8         | 64             |
| 17               | HM                | 55            | 61             | 6         | 36             |
| 18               | WT                | 54            | 57             | 3         | 9              |
| 19               | AR                | 69            | 70             | 1         | 1              |
| 20               | RJ                | 58            | 64             | 6         | 36             |
| 21               | JA                | 63            | 65             | 2         | 4              |
| 22               | CF                | 63            | 67             | 4         | 16             |
| 23               | FO                | 71            | 75             | 4         | 16             |
| 24               | RL                | 59            | 63             | 4         | 16             |
| 25               | MS                | 64            | 67             | 3         | 9              |
| Total (Σ)        |                   | 1548          | 1632           | 75        | 371            |
| Mean             |                   | 61,92         | 65,28          | 3         |                |
| Total percentage |                   | 42.65 %       | 44.87 %        |           |                |

The Table 2 shows that in control group, the total score of pre-test is 1548 and the mean score is 61,92 (42.65 %). The total score of the post-test is 1632 and the mean score is 65,28 (44.87 %). The result also shows that the students were significantly superior in listening skill, especially in the post-test. In control group, we taught the students with conventional way and such a way does not significantly affect students’ ability in speaking. This means that students were more active to speak since they could pronounce well through repetition. However, those students applied less practice in speaking English as shown by marks in Table 3.

**Table 3. The Score of the Experimental Group**

| No.              | Student's Initial | Pre-Test X1 | Post-Test X2 | D (X2-X1) | D <sup>2</sup> |
|------------------|-------------------|-------------|--------------|-----------|----------------|
| 1                | JA                | 58          | 79           | 18        | 324            |
| 2                | DF                | 62          | 76           | 14        | 196            |
| 3                | AJ                | 59          | 72           | 13        | 169            |
| 4                | AF                | 70          | 79           | 9         | 81             |
| 5                | AY                | 63          | 72           | 9         | 81             |
| 6                | AS                | 71          | 85           | 14        | 196            |
| 7                | AH                | 75          | 89           | 14        | 196            |
| 8                | DK                | 56          | 71           | 25        | 625            |
| 9                | PF                | 71          | 78           | 7         | 49             |
| 10               | LF                | 62          | 75           | 13        | 169            |
| 11               | DD                | 65          | 78           | 13        | 169            |
| 12               | ES                | 63          | 75           | 12        | 144            |
| 13               | IL                | 59          | 78           | 19        | 361            |
| 14               | MT                | 75          | 83           | 8         | 64             |
| 15               | LI                | 76          | 81           | 5         | 25             |
| 16               | SF                | 56          | 68           | 12        | 144            |
| 17               | SH                | 65          | 85           | 20        | 400            |
| 18               | KS                | 61          | 73           | 12        | 144            |
| 19               | SL                | 75          | 78           | 3         | 9              |
| 20               | JH                | 57          | 70           | 13        | 169            |
| 21               | SR                | 61          | 73           | 12        | 144            |
| 22               | IM                | 60          | 78           | 18        | 324            |
| 23               | JS                | 65          | 86           | 21        | 441            |
| 24               | FD                | 67          | 81           | 14        | 196            |
| 25               | IP                | 63          | 89           | 26        | 676            |
| Total (Σ)        |                   | 1615        | 1952         | 328       | 5123           |
| Mean             |                   | 64,6        | 78,08        | 13,12     | 340,68         |
| Total Percentage |                   | 48.63 %.    | 55.13 %.     |           |                |

The table above shows that in experimental group, the total score of pre-test is 1615 and the mean score is 64,6 (48.63 %). The total score of the post-test is 1952 and the mean score is 8,031 (55.13 %). In experimental group, we taught the students with English laboratory use and this method produced higher score than the conventional way. In order to know whether the conversation during peer support method has a significant effect on students' speaking ability, the result of the t-test is calculated by using t-test formula below.

$$t = \frac{Mx - My}{\sqrt{\left(\frac{\sum dx^2 + \sum dy^2}{Nx + Ny} \left(\frac{1}{nx} + \frac{1}{ny}\right)\right)}}$$

Where :

- t : the effect
- Mx : the mean of experimental group
- My : the mean of control group
- Σ dx : the sum square of standard deviation of experimental group
- Σ dy : the sum square of standard deviation of control group
- Nx : the total of experimental group

Ny : the total sample of control group

The result of t-calculation shows that t-observed is 8,031 (55.13 %). The critical values of t- distribution are calculated according to the probability of two alpha values and the degrees of freedom. The values of alpha (α) are 0.05 at one tailed and 0.1 at two tailed and the two columns are compared with the degrees of freedom in the row of the Table.

**Testing Hypothesis**

Testing hypothesis was applied to find out whether the hypothesis is accepted or rejected. The bases for testing hypothesis in this research are declared in the following:

If t-observed > t-table, the alternative hypothesis (Ha) is accepted and the null hypothesis (Ho) is rejected.

If t-observed < t-table, the null hypothesis (Ho) is accepted and the alternative hypothesis (Ha) is rejected.

In this research, the value of t-table for the degree of freedom (df) 48 and the level of significance (α) 0.05 is 2,010. While the t-observed from calculating the t-test formula for the degree of freedom (df) 48 at level of significance (α) 0.05 is 8,031. The result of computing t-test shows that the t<sub>obs</sub> is bigger than t<sub>table</sub>. It is formulated below:

$$t_{obs} > t_{table} (P = 0.05); (df = 48)$$

$$8,031 > 2,010 (P = 0.05); (df = 48)$$

It can be concluded that the alternative hypothesis (Ha) is accepted and the null hypothesis (Ho) is rejected, meaning that English laboratory use gives significant effect on students' speaking ability. In this research, what the students did the task is relate to the speaking skill, practice, use, and word processing. The result shows that the English laboratory use helps the students to increase their speaking skill. The point of the students keeps growing from the pre-test up to the post-test in experimental group. The English laboratory use was used to increase the students' speaking skill as shown in Table 4.



**Table 4. The Percentage Result of the Students' Speaking Ability**

| The Percentage Result of the Students' Speaking Ability |                  |           |             |           |
|---|------------------|-----------|-------------|-----------|
| Group   | Experimental (X) |           | Control (Y) |           |
| Types   | Pre-Test         | Post-test | Pre-Test    | Post-test |
| Total   | 48.63 %.         | 55.13 %.  | 42.65 %.    | 44.87%    |

Having analyzed the data, we find that English laboratory use affects students' speaking ability. There is a difference mean score obtained from both control groups, namely 65,28 (44.87%) and the experimental group reaching 8,031 (55.13%). The students who were taught speaking by using English laboratory use get higher score than students who did not get English laboratory use. The result of the calculation is:

$$t_{obs} > t_{table} (P = 0.05); (df = 48)$$

$$8,031 > 2,010 (P = 0.05); (df = 48)$$

which means that the alternative hypothesis is accepted.

## CONCLUSION

If  $t_{observed} < t_{table}$ , the null hypothesis ( $H_0$ ) is accepted but the alternative hypothesis ( $H_a$ ) is rejected. The result shows that there is a significantly positive effect of English laboratory use on the students' speaking ability, compared to those who did not get the English laboratory use. Sometimes, they lacked of vocabularies that fluenced their speaking ability. When they lack of vocabularies, so they need time to think what they want to say. So, the score of vocabulary and influence refers to minus and then if the students' lack of grammar, their partner misunderstands, so their score of grammar and comprehension is minus. But the English laboratory use can minimize the lack all of the components of conversation or the English laboratory use can improve their speaking ability.

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