



The Effectiveness of Using A1 Speechtron as a Medium to Teach Pronunciation of –Ed Ending Regular Verbs in the Narrative Texts (An Experimental Research at the Tenth Graders of SMK Nurul Islami Semarang in the Academic Year of 2011/2012)

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Abstract

The study investigates the effectiveness of A1 SpeechTRON as a medium for teaching –ed ending regular verbs to tenth graders at SMA Unggulan Nurul Islami Semarang in the academic year 2010/2011. This study aimed; (1) How the use of A1 SpeechTRON as medium to teach pronunciation of –ed ending regular verbs in the narrative texts at the tenth graders of SMA Unggulan Nurul Islami Semarang in academic year of 2011/2012?, (2) How the effectiveness of A1 SpeechTRON as medium to teach pronunciation of – ed ending regular verbs in the narrative texts at tenth graders of SMA Unggulan Nurul Islami Semarang in academic year of 2011/2012?. The research involved 24 students and was conducted in two groups; an experimental group taught using the software and a control group taught without the software. Data collection involved pre and post-test reading aloud tests, with t-tests used to analyze differences between the two groups. The study found that teachers needed to conduct lessons in language laboratory, provide multiple computers/laptops, and group students into groups to practice using the software. Additionally, the software was CALL-learning-based, allowing students to practice outside of class. The pre-test average for the experimental group was 57.50, while the control group had 58.92. The post-test average was 68.75, and the t-test score was higher than the t-table ($1.905 > 1.717$). Researcher suggests that A1 SpeechTRON may be an alternative media for teaching –ed ending regular verb pronunciation. The study concludes that A1 SpeechTRON is an effective tool for teaching –ed ending regular verbs in narrative texts.

Keywords: A1 SpeechTRON, pronunciation, student

INTRODUCTION

Pronunciation is a key component of language as a communication tool. Pronunciation plays a crucial role in language when someone is teaching others, as is well known. To prevent misunderstandings, they must pronounce particular terms clearly enough for listeners to understand. This alludes to a crucial aspect of pronunciation. Proper pronunciation is an important communication technique, especially when conveying ideas and messages. As evidenced by Hadith, when Prophet Muhammad spoke to certain individuals, they were able to understand what he was saying.

English pronunciation is one component of language, in addition to grammar and vocabulary (Jones, 2012). These days, it's common to come across teachers who acknowledge they don't know enough about pronunciation theories and find it difficult to teach the pronunciation of certain English terms. As a result, it obviously has a significant impact on students' ability to pronounce English more accurately in the classroom. It is therefore expected of teachers to enhance their practical pronunciation teaching skills.

Recent observations by the researcher indicate that there are numerous issues with teaching pronunciation. Specifically, the majority of students struggle to speak regular verbs with a -ed ending, and are unsure which one to pronounce (/ -id/, / -d/, or /t/). The students from SMA Unggulan Nurul Islami Semarang have trouble pronouncing normal verbs with a -ed. Students' mastery of the pronunciation of words ending in -ed such as watched, stopped, waved, etc. is inadequate. Students have difficulty in making the right sounds when

reading English words ending in -ed. The material is also not sharply remembered and clearly captured by students. The method used by the teacher could not transfer well. The teacher has difficulty transferring her knowledge. So that students find it difficult to pronounce the words ending in -ed. However, students struggle to absorb and retain the information. Additionally, the teacher found it challenging to impart the knowledge through the method. As a result, the students' proficiency with pronouncing the -ed ending is insufficient.

In pronunciation teaching, teachers can use a variety of strategies to improve their students' pronunciation when teaching pronunciation. To boost their students, they can attempt varying their approaches or media. Furthermore, as a phenomena of the globalization era, marked by the rapid growth of technology, teachers can employ some electronic media, such as software that is built into computers because provides us with an engaging and different approach to teaching and learning.

Computer-assisted language learning (CALL), spurred on by the explosive growth of technology in the early 1980s, has emerged as a key element of foreign language learning pedagogy. In an effort to foster student engagement with the language used as the target language both in the classroom and outside the classroom, CALL activities based on communicative instruction can be used. Activities that were once only considered as an adjunct to classroom teaching. So, this context has been defined as "the search for and study of computer-based applications in language learning and teaching" which are now commonly used in the field of education, that also requires teachers to have information about CALL knowledge which requires practical skills in information technology (IT) (Browne & Fotos, 2004). Therefore, the researcher will conduct a study on the effectiveness of one software called A1 SpeechTRON in teaching.

A1 SpeechTRON is a software that is able to convert written form into spoken form with the main focus on regular verbs ending in -ed. The software is believed to improve students' pronunciation especially on verbs ending in -ed. Students can use the device easily if they have difficulty in pronouncing words ending in -ed. They only need to input the word and click on the "Speak Button" section. Then the device will emit a sound that can be heard by students. So this device is considered effective in teaching verbs ending in -ed to students.

For the reasons, the researcher would like to conduct a pronunciation teaching experiment using computer media entitled "The Effectiveness of A1 SpeechTRON as a medium for teaching pronunciation of regular verbs ending in -ed in narrative text" (An Experimental Study with tenth grade students of SMA Unggulan Nurul Islami Semarang Academic Year 2011/2012).

METHOD

This study researchers will use the experimental method. The experimental method is a method in research that uses two groups as a comparison to test or verify the cause-and-effect hypothesis by regulating the situation (Suryabrata, 1995). In this case, the first group will be given treatment while the other group is not given treatment.

In this study, there are two groups are used: the experimental group, which receives treatment (X), and the control group, which does not. Pretest and posttest will be undertaken by the two groups. First, tests were conducted by the two groups. Second, using an analytic scale to assess the results of the test. Third, determine the mean scores of the two groups. Finally, comparing the average values of the two groups using the t-test formula. In determining whether or not the effectiveness of the software is significant, a t-test will be used to test the test results of students using the software and without using the software.

A diagram of the pre test and post test control group design is shown below (Hadjar, 1996):

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E	O1	X	O2
C	O3	Y	O4

Where:

- E : Experimental group
 C : Control group
 O1 : Pre-test for the experimental group
 O2 : Post-test for the experimental group
 O3 : Pre-test for the control group
 O4 : Post-test for the control group
 X : Treatment with the software as an aid
 Y : Treatment without the software as an aid

From the above design, the research subjects were divided into experimental and control groups. To check the quality of the subjects, a pre-test (O1 and O3) was conducted. After that, the program was used to assist the experimental group during instruction, while the control group received instruction without its use. Statistically, the results of the post-test (O2 and O4) are calculated.

In this study, a quantitative approach will be used. A test of pronunciation of verbs ending in -ed was conducted on the group of students taught with the software and the group of students not taught with the software. The purpose of this t-test is to determine whether the software is effective or not. Statistical calculations were used to analyze the data collected.

SMA Unggulan Nurul Islami, on Wonolopo Street in Mijen Semarang, was the site of this study. The study was conducted in the first semester and involved the Xth grade students of SMA Unggulan Nurul Islami Semarang in the academic year 2011/2012. Since there was only one class with 24 students, the sample from this class was not taken for this study. All students were divided into two groups: twelve students in the control class and twelve students in the experimental class to fulfill the requirements of experimental research.

In the research of teaching the pronunciation of -ed suffix words with software media, there are two variables, among which are:

- a. The independent variable
 The independent variable is "the variable that affects because of the change or the emergence of the dependent variable" (Arikunto, 2010). The usage of media in the teaching and learning process by both groups is the independent variable in this study. The experimental group used the software to learn pronunciation of ending words, while the control group used lecture alone to learn pronunciation.
- b. The dependent variable
 The variable that is affected by the independent variable is called the dependent variable (Arikunto, 2010). The dependent variable in this study is students' mastery of the pronunciation of the -ed suffix, which is indicated by students' grades.

In narrative text, the achievement indicators of this study are as follows:

- a. Students can pronounce regular verbs with -ed ending;
- b. Students can distinguish the types of regular verbs with -ed ending in narrative text.

Research instruments. Several instruments were used in this study in order to obtain accurate results. This instrument is a tool for collecting data.

1. Test

To put it simply, a test is a tool used to gather data by assessing an individual's or a group's skills, knowledge, intelligence, talent, and talents (Brown, 2004). In order to assess the students' pronunciation of verbs with the suffix -ed in line with the theory put out, the test instrument in this study involves reading aloud a narrative text that contains

verbs with the suffix. In this instance, reading comprehension is not assessed; instead, it just concentrates on pronouncing the -ed suffix correctly (linguistic sound test).

It is considered a subjective test because it is a type of non-verbal test that conducts an assessment without requiring the examiner or examinee to use receptive or expressive language (McCallum, Bracken & Wasserman, 2001). This test simply requires direction from the instructions or examiner. Then the testee demonstrates the answer. This test requires a sound recording of the student's pronunciation of the word ending in -ed. In addition, to reduce subjectivity the test requires a definite scoring guide. There are several considerations in choosing the type of test. These considerations include:

- a. Pronunciation is the focus of the material.
- b. The read aloud test is for pronunciation points (practicing pronunciation).
- c. Measure of achievement; teacher diagnoses students' problems in pronunciation.

In the study, there is a pre-test and post-test. Before the teacher teaches the new material with the software, a pre-test is given, in which the teacher asks the students to read aloud the material containing verbs ending in -ed. The pre-test was given to both class groups in the same way. The test is given before the experiment is run.

Furthermore, a post-test was given to both the experimental class and the control class. Students were asked to read the text aloud to determine how much their achievement had improved after learning with the software and without it.

This formula can be used to compute the student's achievement score, as a shown below (Arikunto, 2010):

$$\text{Score} = \frac{\text{The number of right answer}}{\text{The number of questions}}$$

In this research, it is necessary to document and record the research results easily and systematically. To find out the data of students and teachers of SMA Unggulan Nurul Islami Semarang in the academic year 2011/2012 starting from learning devices, student progress reports, teacher and student rosters, and sketches of the high school came from the academic department. The data was also assisted by an English teacher from the school.

Both pre-test and post-test to analyse the research data. Before the treatment, a pre-test was administered. The author sets the statistical analysis method after the test to determine whether the two groups have a normal or homogeneous distribution. If the data is considered normal or homogeneous, treatment and teaching can be conducted in both groups. After each treatment is completed, a post-test is given to evaluate student performance. To conduct statistical analyses, the mean scores and percentages of the test results were calculated. To compare the pre-test and post-test, the formula used was the same as previously described. The t-test results were used to calculate the overall significance of the study.

The researcher will listen to the students' voices from their notes in order to collect assessment data, including pre- and post-test outcomes. More care is required to guarantee that the student voices are reliable data because the test is an oral one. It is used to gauge how well individuals can pronounce words after receiving treatment from the researcher and determine whether they have improved. Alternatively, pupils were required to enunciate twenty terms from the narrative.

Therefore, the test scoring guidelines are as follows:

1. If students pronounce the sound of a regular verb ending in -ed correctly for each item, they will receive a score of five.
2. The test consists of twenty questions to be answered. There are four score levels: the highest score is 100, a student with a score of 4 who pronounces the corresponding sound almost correctly, a student with a score of 1 who pronounces the word related to the sound incorrectly, and a student with a score of 0 who does not pronounce the word in question.

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The researcher creates an additional form to calculate the percentages of each level. It can be seen below:

Table 1. Percentages of Students Score

Test Score	Number of Students	Level of Achievement	Percentages
80-89		Very Good	
70-79		Good	
60-69		Fair	
50-59		Poor	
Below 50		Fail	
			100 %

RESULTS AND DISCUSSION

This study found that in terms of the pronunciation of verbs with endings, the experimental class taught with AI SpeechTRON and the control class not taught with AI SpeechTRON had different results. The tenth grade students from SMA Unggulan Nurul Islami on Jalan Wonolopo Mijen Semarang participated in this study during their first semester of school. The class consisted of one class with 24 students, which was divided into two classes: control class and experimental class, with 12 students each.

The study started on July 25, 2011, with introductions and random sampling. To get the experimental procedure, the researcher also recorded the names of the students for a representative sample. Then, they randomly divided the students into two classes: twelve for the control group and twelve for the experimental group.

Pre Test

On July 26, 2011, both classes received a pre-test from the author. The test consisted of reading aloud a narrative text containing twenty common verbs ending in -ed. All students' voices were recorded. The students were divided into three groups and given voice recording devices to help them finish quickly. The voices were analyzed after being recorded. The results of the pre test of both groups are as follow:

Table 2. Pre Test Score of Control Students

No	Student Code	Correct	Almost Correct	Incorrect	Do not pronounce	TOTAL SCORE
		X5	X4	X1	X0	
1.	C-1	4	5	11	0	51
2.	C-2	3	7	10	0	53
3.	C-3	8	2	10	0	58
4.	C-4	6	4	10	0	56
5.	C-5	7	3	10	0	57
6.	C-6	13	4	3	0	83
7.	C-7	7	3	10	0	57
8.	C-8	6	3	11	0	53

9.	C-9	5	6	9	0	58
10	C-10	3	7	10	0	52
11	C-11	9	5	6	0	71
12	C-12	5	6	9	0	58

Table 3. Pre Test Score of Experimental Students

No	Student Code	Correct	Almost Correct	Incorrect	Do not pronounce	TOTAL SCORE
		X5	X4	X1	X0	
1.	E-1	5	5	10	0	56
2.	E-2	5	5	10	0	56
3.	E-3	9	1	10	0	59
4.	E-4	7	2	9	2	52
5.	E-5	1	4	15	0	36
6.	E-6	10	4	6	0	72
7.	E-7	5	6	9	0	58
8.	E-8	8	5	7	0	66
9.	E-9	8	4	8	0	64
10	E-10	5	7	8	0	61
11	E-11	7	2	9	2	52
12	E-12	8	2	10	0	58

Then, the mean and interval scale of the result are as follow:

a. Mean

The mean or average (\bar{X}) score can be described:

Table 4. The mean of pre-test for both groups

Variant Sources	Control G	Experimental G
Sum	707	690
N	12	12
	58,92	57,50
\bar{X}		

b. Interval Scale

Table 5. The interval scale of control pre-test score

No	Interval	SOF	Scale	%
1.	80-89	1	Very good	8,3%
2.	70-79	1	Good	8,3%
3.	60-69	0	Fair	0%
4.	50-59	10	Poor	83,3%
5.	40-49	0	Fail	0%
Sum		12		100 %

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Table 6. The interval scale of experimental class pre-test

No	Interval	SOF	Scale	%
1.	70-79	1	Good	8,3%
2.	60-69	3	Fair	25%
3.	50-59	7	Poor	58,3%
4.	40-49	0	Fail	0%
5.	30-39	1	Fail	8,3%
	Sum	12		100%

The author determines the material and learning activity plan after the pre-test. The pre-test was conducted to ensure that the two groups were homogeneous and normal.

Since the experimental and control groups had the same variance, the treatment was conducted simultaneously in the experimental and control classes for 35 minutes. This time reduction was due to the fact that the study was conducted during the month of Ramadan. On August 2, 2011, the control group was treated with listen and repeat, drill, or classical methods. On August 3, 2011, the experimental group was treated with software media.

The results of the research evaluation showed that there were several obstacles in the teaching and learning process in the control class. First, because this experimental study was carried out during the month of fasting, most students were hungry to improve the environment or pay more attention to the subject matter. However, by using AI SpeechTRON media during the learning process, the experimental students had a wonderful opportunity to develop creativity and receive the subject matter easily in a friendly classroom environment.

The researcher also decided that, in order to achieve better learning outcomes, this study should be conducted at normal times. In addition, the teacher should know the students' names because they would laugh if the teacher appointed some students to practice while others did not. They do not do or take the teacher's instructions seriously. This evaluation was conducted on the control class treatment. Thus, it is expected to be a reference for further teaching.

Pos-test

On August 8, 2011, the researcher will give the post-test to both groups. The instrument used was reading aloud a narrative text containing 20 items that contained verbs ending in -ed which would later be recorded. Following treatment of the experimental group and conventional teaching of the control group, the test is given. Students will be divided into three groups with each group having one sound recording device with the intention that students will not get bored. The results of the post-test are as follows:

Table 7. Post Test Score of Control Students

No	Student Code	Correct	Almost Correct	Incorrect	Do not pronounce	TOTAL SCORE
		X5	X4	X1	X0	
1.	C-1	6	4	10	0	56
2.	C-2	3	8	9	0	56
3.	C-3	5	7	8	0	61
4.	C-4	7	4	9	0	60

5.	C-5	7	4	9	0	60
6.	C-6	13	4	3	0	83
7.	C-7	7	4	9	0	60
8.	C-8	5	5	10	0	55
9.	C-9	7	4	9	0	60
10	C-10	6	4	10	0	56
11	C-11	10	5	5	0	73
12	C-12	5	8	7	0	61

Table 8. Post Test Score of Experimental Students

No	Student Code	Correct	Almost Correct	Incorrect	Do not pronounce	TOTAL SCORE
		X5	X4	X1	X0	
1.	E-1	8	6	6	0	70
2.	E-2	7	5	8	0	63
3.	E-3	9	1	10	0	73
4.	E-4	7	6	7	0	66
5.	E-5	2	5	13	0	43
6.	E-6	11	6	3	0	82
7.	E-7	7	6	7	0	66
8.	E-8	10	4	6	0	72
9.	E-9	10	6	4	0	78
10	E-10	8	7	5	0	73
11	E-11	7	6	7	0	66
12	E-12	5	8	7	0	73

Then, the mean and interval scale of the result are as follow:

a. Mean

The mean or average score (\bar{X}) can be described:

Table 9. The Mean of Post Test for Both Groups

Variance Sources	Control G	Experimental G
Sum	741	825
N	12	12
\bar{X}	61,75	68,75

b. Interval Scale

Table 10. The interval Scale of Control Post Test Score

No	Interval	SOF	Scale	%
1.	80-89	1	Very good	8,3%
2.	70-79	1	Good	8,3%
3.	60-69	6	Fair	50%

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4.	50-59	4	Poor	33,3%
5.	40-49	0	Fail	0%
	Sum	12		100 %

Table 11. The Interval Scale of Experimental Class Post Test

No	Interval	SOF	Scale	%
1.	80-89	1	Very good	8,3%
2.	70-79	6	Good	50%
3.	60-69	4	Fair	33,3%
4.	50-59	0	Poor	0%
5.	40-49	1	Fail	8,3%
	Sum	12		100%

Data Analysis

1. Pre-test

a. Test of Normality

To find out whether the control and experimental group data that has been collected comes from a normal distribution or not, a normality test is used. Because the number of students in each group is small, in this study the normality test uses a 5% significance level to calculate the Chi-Quadrat (X^2 count) which is then compared to the Chi-Quadrat table (X^2 table). Furthermore, calculations using SPSS (Statistical Package for Social Science) were used to determine normality. The calculation method is One-Sample Kolmogorov-Smirnov Test. The calculation results are as follows:

Table 12. One-Sample Kolmogorov-Smirnov Test (Control Pre Test)

		Controlpretest
N		12
Normal Parameters ^a	Mean	58.92
	Std. Deviation	9.170
Most Extreme Differences	Absolute	.373
	Positive	.373
	Negative	-.194
Kolmogorov-Smirnov Z		1.293
Asymp. Sig. (2-tailed)		.071

a. Test distribution is Normal.

Because the value of asymp. Sig. (2-tailed) is 0.071, it can be concluded that the control group pre-test data has a normal distribution. The results of the test also showed a normal distribution.

b. Test of Homogeneity

In research, the homogeneity test will be measured by comparing the score obtained from (Fscore) with Ftable to find out whether the sample in the study comes from a population with the same variance or not. It can be said that Ho is accepted if the score

obtained (Fscore) is smaller than Ftable or the same, which means that the variance is homogeneous. The results of the homogeneity test analysis can be seen in the table below:

Table 13. Test of Homogeneity (Pre-test)

Variant Sources	Control G	Experimental G
Sum	707	690
N	12	12
\bar{X}	58,92	57,50
Variance (s ²)	84,08	78,82
Standard deviation (s)	9,17	8,88

The writer can test the equality of two pre-test variants between the experimental and control groups by knowing the mean and variance. For example, the calculation for the homogeneity test is as follows:

$$\begin{aligned}
 F &= \frac{\text{Biggest Variance}}{\text{Smallest Variance}} \\
 &= \frac{84,0833}{78,8182} \\
 &= 1,067
 \end{aligned}$$

On a 5% with df numerator (nb - 1) = 12 - 1 = 11 and df denominator (nk - 1) = 12 - 1 = 11, it was found Ftable = 2,818. Because of Fscore ≤ Ftable, so it can be concluded that the experimental and control groups are not different. The results show that both groups have the same variant (homogeneous).

b. Test of difference two variants in pre-test between experiment and control group

After calculating the standard deviation and variance, it was found that there was no difference between the two groups in the test of equality of two variances in the pre-test scores. The writer tested the hypothesis mentioned in chapter two to find out whether the pronunciation results of students in the experimental group and the control group were significant. They did this with a t-test. There are two formulas used by the writer:

$$t = \frac{x_1 - x_2}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

Where:

$$s = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

Based on table 17, first the researcher had to find out S by using the formula above:

$$\begin{aligned}
 S &= \sqrt{\frac{(36-1)122,96 + (36-1)101,49}{36+36-2}} \\
 &= 9,025
 \end{aligned}$$

After S was found, the next step was to measure t-test:

$$\begin{aligned}
 t &= \frac{58,92 - 57,50}{9,02007 \sqrt{\frac{1}{12} + \frac{1}{12}}} \\
 &= 0,384
 \end{aligned}$$

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To determine whether the difference is significant, the critical value of t_{table} is compared with the t -test result. The t_{table} value of $0.975_{70} = 1.717$ was found for $\alpha = 5\%$ and $df = 12 + 12 - 2 = 22$. All experimental and control groups had the same conditions before receiving treatment, so $t_{score} < t_{table}$. The result indicates that there is no significant difference between the experimental and control groups.

2. Post-test

a. Test of Normality

August 8, 2011, observed another round of testing for both groups. The test was carried out right away following the explanation and therapy. The experimental group's students learned how to pronounce normal verbs with a -ed ending by using the AI SpeechTRON program. The software was not used to serve the students in the control group. Students were required to read the narrative text aloud on each exam, which was the same, following explanation and therapy.

The Kolmogorov-Smirnov Test was also used in this work to assess post-test results. The findings were as follows:

Table 14. One-Sample Kolmogorov-Smirnov Test (Control Post Test)

		control post test
N		12
Normal Parameters ^a	Mean	61.75
	Std. Deviation	8.181
Most Extreme Differences	Absolute	.370
	Positive	.370
	Negative	-.205
Kolmogorov-Smirnov Z		1.281
Asymp. Sig. (2-tailed)		.075

Table 15. One-Sample Kolmogorov-Smirnov Test (Control Post Test)

		control post test
N		12
Normal Parameters ^a	Mean	61.75
	Std. Deviation	8.181
Most Extreme Differences	Absolute	.370
	Positive	.370
	Negative	-.205
Kolmogorov-Smirnov Z		1.281
Asymp. Sig. (2-tailed)		.075

a. Test distribution is Normal.

a. Test distribution is Normal.

According to the table, since the value of asymp. Sig. (2-tailed) is 0.75, it can be concluded from the table above that the data after the control group test is normally distributed. The test results show normal distribution.

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Table 16. One-Sample Kolmogorov-Smirnov Test (Experimental Post Test)

		exp post test
N		12
Normal Parameters ^a	Mean	68.75
	Std. Deviation	9.753
Most Extreme Differences	Absolute	.222
	Positive	.165
	Negative	-.222
Kolmogorov-Smirnov Z		.770
Asymp. Sig. (2-tailed)		.593

a. Test distribution is Normal.

Based on the table, the asymp. Sig. (2-tailed) is 0.593, it can be concluded that the data after the experimental group test is normally distributed, as shown in the table above. The results show that the test distribution is normal.

b. Test of Homogeneity

The writer determines the mean and variance of student scores in both the experimental and control groups. With the intention of testing the equality of the two variances in the post-test between the two groups.

Table 17. Test of Homogeneity (Post-test)

Variance Sources	Control G	Experimental G
Sum	741	825
N	12	12
\bar{X}	61,75	68,75
Variance (s ²)	66,93	95,11
Standard deviation (s)	8,18	9,75

The computation of the test of homogeneity as follows:

$$F = \frac{\text{Biggest Variance}}{\text{Smallest Variance}}$$

$$= \frac{95,11}{66,93}$$

$$= 1,421$$

On a 5% with df numerator (nb - 1) = 12 - 1 = 11 and df denominator (nk - 1) = 12 - 1 = 11, it was found $F_{table} \leq 0.025 \leq 35:35 = 3,47$.

Because of $F_{score} \leq F_{table}$, so it could be concluded that both experimental and control group both had the same variance, or homogeneous.

c. Test of difference two variants in post-test between experiment and control group

The test of equality of two variances on the post-test scores did not reveal any differences between the two groups, according to the standard deviation and variance calculations. The author used a t-test to assess the hypothesis presented in chapter three



and determine the significance of the pronunciation outcomes of students in the experimental group compared to the control group. The author used the following formula to compare the experimental group with the control group:

$$t = \frac{x_1 - x_2}{s \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

Where:

$$s = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

Based on table 17, first the researcher had to find out S by using the formula above:

$$s = \sqrt{\frac{(12-1)95,1136 + (12-1)66,9318}{12+12-2}}$$

$$= 9,00126$$

After S was found, the next step was to measure t-test:

$$t = \frac{68,75 - 61,75}{9,00126 \sqrt{\frac{1}{12} + \frac{1}{12}}}$$

$$= 1,905$$

The t-test result is compared with the critical value of the ttable $t_{0.95; 20} = 1,717$ is obtained with $\alpha = 5\%$ and $df = 12 + 12 - 2 = 22$. Since t score is larger than ttable, it is evident that the experimental group and the control group cannot be compared. In other words, the experimental group outperforms the control group following the treatment.

This difference is considered statistically significant because the obtained t value is greater than the critical value in the table. Therefore, the calculation shows that students in the tenth grade of SMA Unggulan Nurul Islami Semarang show a significant difference between teaching regular verbs ending in -ed with software and without software. The software seems to teach the pronunciation of regular verbs ending in -ed better than without the software. The test results showed that students taught with the software scored higher than students taught without the software.

By reading narrative texts and focusing on verbs ending in -ed to collect pre-test and post-test data. The pre-test score for the experimental group was 57.50, while the post-test score for the control group was 68.75, and the mean score for the experimental group was 58.92, while the mean score for the control group was 61.75. The following is a simple table of the mean scores of the pre-test and post-test of the narrative reading test. The full calculation can be found in the appendix.

Table 18. The Average Pre-test and Post-test of Students' Scores of the Experimental and Control Group

No	Group	The Average Percentage of Pre-test	The Average Percentage of Post-test
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1	Experimental	57.50	68.75
2	Control	58.92	61.75

There was no new treatment in the teaching and learning process of the control group. They were treated as they were usually taught to pronounce verbs ending in -ed in the narrative text. Only the text as a tool and the teacher's listen and repeat method in the teaching and learning process. The teacher had used monotonous media which could not improve the students' ability in pronouncing -ed ending words. Students feel shy to practice so that students cannot enjoy the learning process. There were also not many opportunities to practice. This is demonstrated by the control group's lower average compared to the experimental group. The control group had a lower post-test (61.75) than the experimental group (68.75), while their pre-test average (58.92) was greater than the experimental group's (57.50)..

1. Students' Condition in Experimental Group

a. The Analysis of Students' Pronunciation of -ed Ending Before Treatment (Pre-test)

Pre-test was conducted before the treatment, students' ability to pronounce the word ending in -ed was still low. From the results of pre-test, it was found that students had difficulty in pronouncing words ending in -ed. Only a few got good scores on the test. Their pronunciation was not correct. Their ability is still at a low level influenced by Indonesian writing. The researcher collected the students' voices by recording and then corrected them to minimize the students' mistakes in pronouncing words ending in -ed. That way it can be determined which words need more attention to be taught during the treatment.

b. The Analysis of Students' Pronunciation After Treatment (Post-test)

In the product of the treatment, students' voice recordings were collected and analyzed. Students' abilities were found to improve after the treatment. Students were given software that had complete content according to the pronunciation of verbs ending in -ed and easy to use. Using the software guide the words are pronounced well. The voice will be heard if entering the word and clicking the speaking button. Thus the score will increase.

Using 5% alpha (1.717), the results of the t-test analysis show that the t-score (1.905) is greater than the t-table. This indicates that, since the t-score is greater than the table, there is a significant difference between the improved student achievement with the new software treatment compared to the improved student achievement with the usual treatment.

CONCLUSION

The research indicates that before utilizing the program as a tool, teachers should perform a lesson in the language lab. If the students are having trouble with the lesson, the teacher should assign some computers or laptops, and the students should be divided into groups with a computer or laptop for each member. The second benefit is that teachers may instruct students in using the program through CALL-based learning. When employing software coaching to learn pronunciation, the goal is to raise students' drive and maturity. They possess the capacity to learn more and independently.

A1 SpeechTRON has proven to be highly effective in teaching the pronunciation of regular verbs with -ed endings in narrative texts. The t-test score of 1.905 is higher than the t-table score (1.717), according to the t-test findings. This suggests that H_a is accepted while H_0 is rejected. This is due to the fact that the computed t value is higher than the table t value; the experimental group's mean scores were 68.75 and 61.75, respectively,

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when compared to the control group. This demonstrates that students in the control group, who learned pronunciation without the use of software, performed much worse than students in the experimental group, who learned pronunciation using the program.

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The Effectiveness of Using AI Speechtron as a Medium to Teach Pronunciation of –Ed Ending Regular Verbs in the Narrative Texts (An Experimental Research at the Tenth Graders of SMK Nurul Islami Semarang in the Academic Year of 2011/2012)

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