**ENHANCING THE ABILITY OF STUDENTS**

**TO PRONOUNCE INTERDENTAL SOUNDS**

**BY APPLYING AUDIO-ARTICULATION METHOD**

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**ABSTRACT**

This research aims at proving whether or not the application of Audio-Articulation Method (AAM) can enhance the ability of the eleventh grade students of SMA Negeri 1 Palu to pronounce interdental sounds. The samples are XI Science 1 students as the control group and XI Science 2 students as the experimental group. They were selected by using purposive sampling technique. The researcher employed quasi-experimental research design where the two groups were given pre-test and post-test. There are two variables; the application of AAM as the independent variable and the students’ pronunciation ability as the dependent variable. The result of the research shows that the application of AAM gives significant improvement to the students’ ability to pronounce the interdental sounds. The mean score of the experimental group before the treatment is 8,93 while the control group’s is 10,19. After the treatment, the mean score of the experimental group is 67,3 and the control group’s is 19,2. It is also shown that the t-counted (8,565) is greater than the t-table (1,999). Thus, it can be concluded that the hypothesis is accepted. In other words, AAM can enhance the ability of the eleventh grade students to pronounce interdental sounds.

**Keywords:** Pronunciation; Audio-Articulation Method; Interdental Sounds

*Penelitian ini bertujuan untuk membuktikan apakah penerapan Audio-Articulation Method (AAM) dapat meningkatkan kemampuan siswa kelas sebelas SMA Negeri 1 Palu dalam mengucapkan bunyi interdental. Sampel penelitian ini adalah siswa XI IPA 1 sebagai grup kontrol dan siswa XI IPA 2 sebagai grup eksperimen. Keduanya dipilih menggunakan teknik purposive sampling. Peneliti menerapkan desain penelitian quasi-experimental dimana kedua grup tersebut diberikan pra-tes dan pasca-tes. Ada dua variabel; penerapan AAM sebagai variabel bebas dan kemampuan pengucapan siswa sebagai variabel terikat. Hasil penelitian menunjukkan bahwa penerapan AAM memberikan peningkatan yang signifikan terhadap kemampuan siswa dalam mengucapkan bunyi interdental. Nilai rata-rata grup eksperimen sebelum perlakuan adalah 8,93 sementara nilai grup kontrol adalah 10,19. Setelah perlakuan, nilai rata-rata grup eksperimen adalah 67,3 dan nilai grup kontrol adalah 19,2. Hal tersebut juga menunjukkan bahwa nilai hitung t (8,565) lebih tinggi dibandingkan nilai tabel t (1,999). Maka, dapat disimpulkan bahwa hipotesis diterima. Dengan kata lain, AAM dapat meningkatkan kemampuan siswa kelas sebelas SMA Negeri 1 Palu dalam mengucapkan bunyi interdental.*

***Kata Kunci:*** *Pengucapan; Audio-Articulation Method; Bunyi Interdental*

**INTRODUCTION**

Learning English as a second or foreign language, as learning other languages, means that we have to master four skills of language which are listening, speaking, reading, and writing. Not only do we have to learn the four language skills, but also we have to study components of language, i.e. vocabulary, grammar, and pronunciation. It is because learning the language skills absolutely cannot be separated from learning the language components.

Furthermore, pronunciation is crucial in learning English, especially in oral communication. Yates (2002:1) states “Learners with good pronunciation in English are most likely to be understood even if they make errors in other areas, whereas learners whose pronunciation is difficult to understand will not be understood even if their grammar is perfect.” Additionally, Yates (2002) adds that listeners may judge speakers whose pronunciation is poor as an incompetent and uneducated people and lacking knowledge as well even though they only react to the pronunciation produced. Based on those ideas, it can be simply assumed that having a good pronunciation is one of the essential signs of getting mastery in English.

However, based on researcher’s preliminary research conducted at SMA Negeri 1 Palu, she found some problems related to pronunciation. In teaching pronunciation, the teachers taught the students only by asking them to imitate the teachers to pronounce some words. This kind of pronunciation teaching style could sometimes create boredom to the students which distracted their attention in the classroom. Consequently, many students had improper pronunciation in English. Moreover, not only does the teachers’ teaching style in the classroom affect the students’ pronunciation mastery, but also the students’ native language, Bahasa Indonesia, does. In English pronunciation, there are some sounds which Bahasa Indonesia sound system does not have. Two of them are “TH” sounds which in International Phonetic Alphabet (IPA) represented by /θ/ phoneme which occurs such as in words *think, ethic,* and *cloth,* and /ð/ phoneme appearing in such words *these, other,* and *breathe.* The sounds are commonly called interdental sounds which are the sounds produced by putting the tongue between the upper and the lower teeth at the same time the airflow is released (Basri, 2005).

In line with the statement above, since the interdental sounds absolutely does not exist in phonological sound system of Bahasa Indonesia, the students of SMA Negeri 1 Palu found difficulties in pronouncing the words having either /θ/ or /ð/ phoneme. They tended to pronounce the word *three* as/triː/, /friː/, and /sriː/instead of /θriː/, *they* as /deɪ/ instead of /ðeɪ/, *ethic* as /ˈet.ɪk/ instead of /ˈeθ.ɪk/, and *breathe* as /briːt/ or /bret/, and /briːz/ instead of /briːð/. In addition, the English teacher admitted that it was difficult for the students to pronounce some English words correctly, especially the words containing interdental sounds.

Therefore, to overcome the aforementioned problems, the researcher applied a new pronunciation teaching method namely Audio-Articulation Method (AAM). This method differs from other pronunciation methods in which it offers a forty five to fifty minutes long lesson form to erase the pronunciation errors. The AAM includes minimal pairs, tongue twisters, and intensive further level exercises such as sentences including problematic sounds and their mother tongue interferences. This statement is supported by Demirezen (2005:183), “Basically, the principles of the AAM involve micro-listening and speaking, macro-listening and speaking activities in terms of automatic speech recognition and production exercises.” Thus, it can be understood that AAM is a pronunciation teaching method that requires listening and oral practices.

Furthermore, there are some advantages of the application of AAM in teaching pronunciation to the students. Firstly, even though AAM needs much time, this method does not create boredom to the students since it consists of many different types of drillings and exercises that are related to the problematic target sounds. Hismanoğlu (2007:114) states “AAM contributes to beautifying the articulations of non-native speakers of English by providing them with a lively, colorful, and motivating pronunciation lesson.” Hence, it can be obviously understood that this method is helpful for teachers to correct, to teach, and to improve students’ pronunciation because in each meeting the teachers may apply different types of drillings and exercises that can attract students’ attention and interest in learning pronunciation.

The minimal pairs were used as the main technique in the treatment which means that the technique appeared in every single meeting of treatment in this research. Moreover, the process of the AAM in the classroom dealt with preparation and schedule of activities as an implementation of the AAM process. In this research, to teach pronunciation, specifically to teach the English interdental sounds to the students, the researcher adapted the steps from the basic stages in applying AAM by Demirezen (2007) as follows:

1. Firstly, teacher gave warm-up and motivation. The teacher greeted students to get them get ready for the lesson.
2. Secondly, the teacher helped the students to remember the previous lesson by making a recapitulation of the phoneme which was taught in the previous lesson.
3. Thirdly, the teacher presented a new topic and attracted the students’ attention to the topic.
4. Fourthly, the teacher prepared a corpus with vocabulary which are commonly misarticulated and problematic for the non-native students.
5. Fifthly, the students were asked to focus their attention on the topic and on the rule for pronouncing the sounds.
6. Sixthly, the teacher continued the material by giving drillings and exercises. The teacher gave the minimal pair as the main technique in order to explain to the students about how meaning can change due to incorrect pronunciation. In this part, the teacher provided the students with different types of exercises that could enable the students to differentiate how actually the interdental sounds are different from other sounds in Bahasa Indonesia sound system which are similar to the English interdental sounds.
7. Seventhly, the teacher summarized the lesson in effective way for an easily recall. Questions also were directed to the students in order to check whether or not they had understood the rule.
8. In the last minute of the teaching and learning process, the students were given homework for the forthcoming week.

**METHOD**

In conducting this research, the researcher employed quantitative method in the form of quasi-experimental research design, specifically non-equivalent control group design. There was one experimental group and one control group in this research taken through purposive sampling technique. The experimental group was treated and the control one was not. Moreover, both of the groups were given a pre-test and post-test. Arikunto (2006) proposes the design of this research as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| experimental group | O1 | X | O2 |
| control group | O3 |  | O4 |

where O1 and O3 are pre-tests, X is treatment, and O2and O4 are post-tests.

The population of this research was the eleventh grade students of SMA Negeri 1 Palu, particularly the students of Sekolah Standar Nasional (SSN) class consisted of 96 students. The samples were XI Science 1 as the control group and XI Science 2 as the experimental group. In relation to the topic of this research, the dependent variable was the ability of the eleventh SSN grade students of SMA Negeri 1 Palu in pronouncing interdental sounds, and the independent variable was the application of AAM.

 In collecting the data, the researcher used two tests as the instrument of this research which were pre-test and post-test and a voice recorder. The pre-test was used to find out the students’ prior pronunciation knowledge before the treatment was conducted. After conducting the treatment, the students were given the post-test to measure the students’ enhancement in pronunciation, especially in pronouncing interdental sounds as well as to find out the effectiveness of applying AAM. The voice recorder was used in order to record the students when pronouncing the words provided during the test to avoid mistakes in scoring their performance.

To assess the students’ performance, the researcher used a scoring rubric adapted from Turumi (2015). Since the focus of this researcher was to enhance the segmental aspect of pronunciation, especially the pronunciation of interdental sounds, the researcher only put the word pronunciation test on the list. The scoring rubric of the test can be seen in the table 1.

**Table 1** The Scoring System of the Test

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Name of Test | Number of Test Items | Score per Item | Maximum Score |
| 1. | Word pronunciation test | /θ/ = 10/ð/ = 10 | 11 | $$\frac{r}{20} ×100$$ |
| Total 20 | 100 |

*(Adapted from Turumi, 2015)*

**FINDINGS**

 In presenting the data, the researcher only focused on the segmental aspect of pronunciation which was the interdental sounds. The data were taken from the pre-test and the post-test of the experimental group and control group. The pre-test was administered before conducting the treatment and the post-test was administered after implementing the treatment. In the tests, the students of XI Science 1 and XI Science 2 were asked to pronounce twenty words containing voiceless and voiced interdental sounds randomly. Then, the researcher assessed their performance by using the scoring rubric on table 1.

The pre-test of control group was conducted on February 25th, 2017.There were 32 students of control group received the pre-test. Further, the researcher only provided one kind of test which was word pronunciation test. The researcher asked the students of control group to individually read aloud the twenty words containing both voiceless and voiced interdental sounds provided when the researcher was recording the students.

Referring to the five scales by Nurgiyantoro (1995) in which 0%-39% categorized as  *very poor,*  40%-59% categorized as *poor,* 60%-74% categorized as *fair,* 75%-84% categorized as *good,*  and 85% - 100% categorized as *very good,* the pre-test’s results of control group showed that there was only a student acquired 85 as the highest standard score and received *“very good”* category. On the other hand, there was also a student in *“fair”* category because she could pronounce 14 words containing voiceless and voiced interdental sounds correctly. Further, the other 30 students of the control group were failed in pronouncing the words with 19 students received 0 as the lowest standard score of all. In other words, there were 93.8% students were failed in the pre-test. Further, it also can be obviously seen that from the total maximum score which is 640, the students’ obtained score was only 65 in total, and the students’ total standard score was 325.

**Table 2** The Pre-test Score of the Control Group

|  |  |  |
| --- | --- | --- |
| No. | Students’ Initials | Scores |
| Obtained Scores(X) | Maximum Scores(N) | Standard Scores(∑) | Categories |
| 1. | AU | 0 | 20 | 0 | Very Poor |
| 2. | AT | 2 | 20 | 10 | Very Poor |
| 3. | AR | 0 | 20 | 0 | Very Poor |
| 4. | AA | 0 | 20 | 0 | Very Poor |
| 5. | BM | 0 | 20 | 0 | Very Poor |
| 6. | CN | 0 | 20 | 0 | Very Poor |
| 7. | CA | 0 | 20 | 0 | Very Poor |
| 8. | DIA | 0 | 20 | 0 | Very Poor |
| 9. | FR | 0 | 20 | 0 | Very Poor |
| 10. | FM | 0 | 20 | 0 | Very Poor |
| 11. | G | 2 | 20 | 10 | Very Poor |
| 12. | GL | 0 | 20 | 0 | Very Poor |
| 13. | GA | 3 | 20 | 15 | Very Poor |
| 14. | IOA | 0 | 20 | 0 | Very Poor |
| 15. | JAS | 0 | 20 | 0 | Very Poor |
| 16. | KA | 7 | 20 | 35 | Very Poor |
| 17. | LA | 6 | 20 | 30 | Very Poor |
| 18. | MN | 0 | 20 | 0 | Very Poor |
| 19. | MA | 0 | 20 | 0 | Very Poor |
| 20. | MF | 0 | 20 | 0 | Very Poor |
| 21. | MG | 0 | 20 | 0 | Very Poor |
| 22. | M | 1 | 20 | 5 | Very Poor |
| 23. | MS | 0 | 20 | 0 | Very Poor |
| 24. | NA | 6 | 20 | 30 | Very Poor |
| 25. | NVP | 1 | 20 | 5 | Very Poor |
| 26. | RC | 17 | 20 | 85 | Very Good |
| 27. | RNA | 2 | 20 | 10 | Very Poor |
| 28. | SD | 0 | 20 | 0 | Very Poor |
| 29. | SG | 14 | 20 | 70 | Fair |
| 30. | SRA | 0 | 20 | 0 | Very Poor |
| 31. | ZL | 2 | 20 | 10 | Very Poor |
| 32. | TP | 2 | 20 | 10 | Very Poor |
| Total Score | 65 | 640 | $∑y$ = 325 |  |

After computing the students’ individual scores, the researcher calculated the classical students’ ability of the control group by using the formula from Hatch and Farhady (1982). To get the classical students’ ability of the control group, the researcher divided the total standard score by the number of the students. By having the formula, the classical students’ ability of the control group in the pre-test was only 10,16. It clearly indicates that the ability of the control group’ students in pronunciation, especially to pronounce interdental sounds was low.

Meanwhile, the pre-test of experimental group was conducted on February 23rd, 2017. The results of the pre-test showed that there were 31 students failed in the pre-test. 21 students or 93,9% students gained 0 in the standard score which was the lowest score of all. On the other hand, the rest of the two students were in *“good”* and *“fair”* category because their standard scores were 75 and 70 respectively. Further, the results also show that the students’ total obtained score was 59 while the maximum score was 660 in total. Besides, the students’ total standard score of the control group gained in the pre-test was 295.

**Table 3** The Pre-test Score of the Experimental Group

|  |  |  |
| --- | --- | --- |
| No. | Students’ Initials | Scores |
| Obtained Scores(X) | Maximum Scores(N) | Standard Scores(∑) | Categories |
| 1. | APN | 0 | 20 | 0 | Very Poor |
| 2. | AC | 0 | 20 | 0 | Very Poor |
| 3. | AA | 0 | 20 | 0 | Very Poor |
| 4. | AN | 3 | 20 | 15 | Very Poor |
| 5. | A | 0 | 20 | 0 | Very Poor |
| 6. | AS | 15 | 20 | 75 | Good |
| 7. | AIM | 0 | 20 | 0 | Very Poor |
| 8. | AFN | 0 | 20 | 0 | Very Poor |
| 9. | DGT | 0 | 20 | 0 | Very Poor |
| 10. | DN | 14 | 20 | 70 | Fair |
| 11. | D | 2 | 20 | 10 | Very Poor |
| 12. | DM | 3 | 20 | 15 | Very Poor |
| 13. | ER | 0 | 20 | 0 | Very Poor |
| 14. | FA | 1 | 20 | 5 | Very Poor |
| 15. | FK | 0 | 20 | 0 | Very Poor |
| 16. | FG | 7 | 20 | 35 | Very Poor |
| 17. | GA | 0 | 20 | 0 | Very Poor |
| 18. | HR | 3 | 20 | 15 | Very Poor |
| 19. | HS | 0 | 20 | 0 | Very Poor |
| 20. | I | 0 | 20 | 0 | Very Poor |
| 21. | IS | 0 | 20 | 0 | Very Poor |
| 22. | K | 0 | 20 | 0 | Very Poor |
| 23. | MR | 0 | 20 | 0 | Very Poor |
| 24. | MFH | 0 | 20 | 0 | Very Poor |
| 25. | MRQ | 1 | 20 | 5 | Very Poor |
| 26. | MH | 0 | 20 | 0 | Very Poor |
| 27. | NT | 1 | 20 | 5 | Very Poor |
| 28. | RA | 0 | 20 | 0 | Very Poor |
| 29. | RM | 0 | 20 | 0 | Very Poor |
| 30. | UN | 0 | 20 | 0 | Very Poor |
| 31. | UFS | 2 | 20 | 10 | Very Poor |
| 32. | YDS | 0 | 20 | 0 | Very Poor |
| 33. | WT | 7 | 20 | 35 | Very Poor |
| Total Score | 59 | 660 | $∑x$ =295 |  |

The researcher used the same formula that was also applied in determining the classical students’ ability of the control group. It reveals that the classical students’ ability in the pre-test was 8,93. Since the classical students’ ability of the control group in the pre-test was nearly equal to the classical students’ ability of the experimental group, it can be inferred that the ability of both students of control and experimental group to pronounce interdental sounds were low.

After administering the pre-test to the students, the researcher then conducted the treatment which was AAM in teaching them how to pronounce interdental sounds. The treatment was only conducted to the experimental group and lasted for eight meetings where each meeting took 1×45 minutes lesson. On the other hand, the control group was taught by using conventional method.

The post-test of the control group was administered afterward on March 25th, 2017. From 32 students, there was one student pronounced 18 words containing voiceless and voiced interdental sounds correctly. The students gained 90 as the highest standard score. Besides, a student was in *“good”* category because she gained 80 in standard score, one student got 60 in standard score as she could correctly pronounce 12 words provided and was in *“fair”* category. Two students gained 45 in the standard score meaning that they were in *“bad”* category. On the other hand, the rest of the 27 students were still in *“very poor”* category with 13 students gained zero as the lowest standard score of all. In other words, 84,4% were failed. Further, it also can be seen that the students’ total obtained score was 126, and the students’ standard score was 615 in total. Moreover, the classical students’ ability of the control group in the post-test was 19.2.

**Table 4** The Post-test Score of the Control Group

|  |  |  |
| --- | --- | --- |
| No. | Students’ Initials | Scores |
| Obtained Scores(X) | Maximum Scores(N) | Standard Scores(∑) | Categories |
| 1. | AU | 7 | 20 | 35 | Very Poor |
| 2. | AT | 4 | 20 | 20 | Very Poor |
| 3. | AR | 12 | 20 | 60 | Fair |
| 4. | AA | 0 | 20 | 0 | Very Poor |
| 5. | BM | 3 | 20 | 15 | Very Poor |
| 6. | CN | 7 | 20 | 35 | Very Poor |
| 7. | CA | 3 | 20 | 15 | Very Poor |
| 8. | DIA | 0 | 20 | 0 | Very Poor |
| 9. | FR | 5 | 20 | 25 | Very Poor |
| 10. | FM | 0 | 20 | 0 | Very Poor |
| 11. | G | 3 | 20 | 15 | Very Poor |
| 12. | GL | 0 | 20 | 0 | Very Poor |
| 13. | GA | 7 | 20 | 35 | Very Poor |
| 14. | IOA | 0 | 20 | 0 | Very Poor |
| 15. | JAS | 1 | 20 | 5 | Very Poor |
| 16. | KA | 6 | 20 | 30 | Very Poor |
| 17. | LA | 9 | 20 | 45 | Poor |
| 18. | MN | 0 | 20 | 0 | Very Poor |
| 19. | MA | 0 | 20 | 0 | Very Poor |
| 20. | MF | 0 | 20 | 0 | Very Poor |
| 21. | MG | 0 | 20 | 0 | Very Poor |
| 22. | M | 0 | 20 | 0 | Very Poor |
| 23. | MS | 5 | 20 | 25 | Very Poor |
| 24. | NA | 4 | 20 | 20 | Very Poor |
| 25. | NVP | 2 | 20 | 10 | Very Poor |
| 26. | RC | 18 | 20 | 90 | Very Good |
| 27. | RNA | 2 | 20 | 10 | Very Poor |
| 28. | SD | 0 | 20 | 0 | Very Poor |
| 29. | SG | 16 | 20 | 80 | Good |
| 30. | SRA | 0 | 20 | 0 | Very Poor |
| 31. | ZL | 3 | 20 | 0 | Very Poor |
| 32. | TP | 9 | 20 | 45 | Poor |
| Total Score | 126 | 640 | $∑y$ = 615 |  |

The researcher conducted the post-test in experimental group on March 23rd, 2017. As written on table 5 below, the post-test’s results of the students of the experimental group were various. 12 students or 36,3% students were in *“very good”* category with two students gained 100 as the highest standard score as they could pronounce all words provided which contained voiceless and voiced interdental sounds correctly. On the other hand, there were 6 students who received *“good”* category, and other 6 students were in *“fair”* category. In addition, the other 5 students or 15,1% students were still failed with one student gained 5 as the lowest standard score of all. Further, the table also shows that the students’ total obtained score in the post-test was 444 while the standard score of the students in total was 2220 and the classical students’ ability of the experimental group in the post-test was 67,3. Moreover, the comparison of the pre-test’s results and the post-test’s results was slightly improved. Nevertheless, experimental group had improvement that is more significant rather than the control group had.

**Table 5** The Post-test Score of the Experimental Group

|  |  |  |
| --- | --- | --- |
| No. | Students’ Initials | Scores |
| Obtained Scores(X) | Maximum Scores(N) | Standard Scores(∑) | Categories |
| 1. | APN | 16 | 20 | 80 | Good |
| 2. | AC | 17 | 20 | 85 | Very Good |
| 3. | AA | 15 | 20 | 75 | Good |
| 4. | AN | 17 | 20 | 85 | Very Good |
| 5. | A | 14 | 20 | 70 | Fair |
| 6. | AS | 20 | 20 | 100 | Very Good |
| 7. | AIM | 11 | 20 | 55 | Poor |
| 8. | AFN | 18 | 20 | 90 | Very Good |
| 9. | DGT | 19 | 20 | 95 | Very Good |
| 10. | DN | 18 | 20 | 90 | Very Good |
| 11. | D | 2 | 20 | 10 | Very Poor |
| 12. | DM | 17 | 20 | 85 | Very Good |
| 13. | ER | 1 | 20 | 5 | Very Poor |
| 14. | FA | 15 | 20 | 75 | Good |
| 15. | FK | 20 | 20 | 100 | Very Good |
| 16. | FG | 17 | 20 | 85 | Very Good |
| 17. | GA | 14 | 20 | 70 | Fair |
| 18. | HR | 19 | 20 | 95 | Very Good |
| 19. | HS | 6 | 20 | 30 | Very Poor |
| 20. | I | 13 | 20 | 65 | Fair |
| 21. | IS | 4 | 20 | 20 | Very Poor |
| 22. | K | 18 | 20 | 90 | Very Good |
| 23. | MR | 14 | 20 | 70 | Poor |
| 24. | MFH | 15 | 20 | 75 | Good |
| 25. | MRQ | 15 | 20 | 75 | Good |
| 26. | MH | 15 | 20 | 75 | Good |
| 27. | NT | 11 | 20 | 55 | Poor |
| 28. | RA | 4 | 20 | 20 | Very Poor |
| 29. | RM | 9 | 20 | 45 | Bad |
| 30. | UN | 13 | 20 | 65 | Fair |
| 31. | UFS | 14 | 20 | 70 | Fair |
| 32. | YDS | 18 | 20 | 90 | Very Good |
| 33. | WT | 5 | 20 | 25 | Very Poor |
| Total Score | 444 | 660 | $∑x$ = 2220 |  |

After presenting the individual score and the mean score of the students, then the researcher computed the deviation and square deviation. Based on the calculation, it was found that the highest deviation (d) of the control group score was 60 and the highest square deviation (d2) was 3600 while the highest deviation (d) of the experimental group score was 100 while the highest square deviation (d2) was 10000. After getting the deviation of the pre-test and post-test in each class, then the researcher calculated the mean deviation score for both experimental and control group. The mean deviation of the control group was 9,22 and the mean deviation of the experimental group was 58,3.

The researcher then calculated the mean square deviation score of the experimental and the control group. The mean square deviation score of the control group was 6955,47, and the mean square deviation score of the experimental group was 26983,33. In order to find out the significance between the experimental and control group, the researcher then analyzed the data by using formula from Arikunto (2006). The result of the data analysis showed that the t-counted was 8,565. By applying 0,05 level of significant with the degree of freedom (df) N1 + N2 – 2 = 32 + 33 – 2 = 63, the researcher found that t-counted (8,565) was greater than t-table (1,999). Thus, it means that the hypothesis was accepted. In other words, using AAM can enhance the students’ ability to pronounce interdental sounds.

**DISCUSSION**

 This research was started with preliminary research which was done before the researcher conducted this research. Then, the researcher found out that there were many students found it difficult to pronounce voiceless and voiced interdental sounds. Students got difficult to pronounce the words contained voiceless and voiced interdental sounds for the reason that those sounds do not exist in the sound system of Bahasa Indonesia.

The researcher afterward conducted pre-test to XI Science 1 as the control group and to XI Science 2 as the experimental group. The purpose of giving the pre-test was to find out the students’ prior knowledge in pronunciation especially in pronouncing the interdental sounds. After giving the pre-test, the researcher assumed that the students’ ability to pronounce words containing interdental sounds was nearly equally low. It was acknowledged by having the results of pre-test given. In the pre-test, the control group and the experimental group gained 10,16 and 8,93 respectively in the mean score.

Moreover, it was also supported by looking at the percentage of students’ errors in pronouncing words containing both voiceless and voiced interdental sounds. The following table is presented in order to show the error percentage of voiceless and voiced interdental sounds of both control and experimental group.

**Table 6** Percentage of Students’ Errors in Pre-Test

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Sounds | Total Words | Words Wrongly Pronounced | Error Percentage |
| Cont.Group | Exp. Group | Cont.Group | Exp. Group | Cont.Group | Exp. Group |
| 1. | /θ/ | 320 | 330 | 289 | 305 | 90,31% | 92,42% |
| 2. | /ð/ | 320 | 330 | 286 | 296 | 89,37% | 89,69% |

The table provided shows that the students of control group could not properly pronounce 289 out of 320 (90,31%) voiceless interdental sounds while the incorrect pronunciation of voiced interdental sounds occurred in the number of 286 out of 320 (89,37) words. Further, the same thing happened as well to the experimental group. 305 out of 330 (92,42%) voiceless interdental sounds were pronounced improperly while the students could not correctly pronounce 296 out of 330 (89,69) words contained voiced interdental sounds.

Therefore, it can be inferred that students of both control and experimental group found it more difficult to pronounce words contained voiceless interdental sounds by the fact that most of the students made more error in pronouncing the voiceless interdental sounds. Nevertheless, the students had difficulties as well in pronouncing words contained voiced interdental sounds, for the data revealed that the students’ errors were nearly equal to the errors that the students made in pronouncing voiceless interdental sounds. Briefly, before the researcher conducted a treatment using AAM to the experimental group, the students of both control and experimental group had nearly equal ability to pronounce the interdental sounds

Furthermore, the researcher conducted the treatment to the students of experimental group in order to overcome their problems in pronouncing the problematic interdental sounds while in the control group, the researcher implemented conventional method commonly used by the teachers. The researcher taught the narrative texts to the students of control group in eight meetings and drilled the students in pronouncing words contained interdental sounds appeared in the narrative texts twice.

The researcher conducted eight meetings of treatment in experimental group. In the first up to the third meeting, the researcher focused on teaching the voiceless interdental sound to the students. The fourth up to the sixth meeting were focused on teaching the voiced interdental sounds to the students. Meanwhile, in the seventh meeting, the researcher reviewed the materials of both voiceless and voiced interdental sounds before conducted the evaluation which was done in the eighth meeting.

In teaching and learning process, the researcher used minimal pairs as the main technique in the treatment. Not only did the researcher use minimal pairs, but also she used other techniques suggested in the implementation of the AAM, such as 1-2 drills, tongue twisters, minimal sentences, and recognition drills. The researcher also used narrative texts as the media to support the method.

In addition, on the first day of the treatment, the students found it funny to pronounce words contained interdental sounds, for they barely pronounced the words properly. Further, during the six treatment days, the researcher found that the minimal pairs as the main technique helped the students to differentiate the interdental sounds from other sounds such as /t/, /f/, /s/, /d/, and /z/. Moreover, the other exercises such as 1-2 drills, tongue twisters, minimal sentences, and recognition drills assisted the students to get familiar with the words contained interdental sounds. As a consequence of that, it was quite easy for most of the students of the experimental group to pronounce the words. The students as well showed their enthusiasm during the teaching and learning process. They did not seem bored during the class for the reason that they were provided with many types of exercises and tasks done individually, in pairs, in small groups, and in choir as well.

After the students of experimental group had the treatment for eight meetings, the researcher then continued the research by giving them the post-test. The researcher conducted the post-test to both control and experimental group with the same time. Additionally, the results of the post-tests showed that the application of AAM could enhance the students’ ability to pronounce interdental sounds. It was proved by the value of the t-counted (8,56) was much greater than the t-table (1,999). Further, it was also strongly supported by the error percentage of the interdental sounds made by the students of control and experimental group in the post-tests. The researcher provides the data percentage on the table 7.

**Table 7** Percentage of Students’ Errors in Post-Test

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Sounds | Total Words | Words Wrongly Pronounced | Error Percentage |
| Cont.Group | Exp. Group | Cont.Group | Exp. Group | Cont.Group | Exp. Group |
| 1. | /θ/ | 320 | 330 | 268 | 106 | 83,75% | 32,12% |
| 2. | /ð/ | 320 | 330 | 246 | 110 | 76,87% | 33,33% |

Thus, by analyzing the students’ errors, the researcher found out that the students of the control group still had difficulties in pronouncing the interdental sounds. It was proved by the fact that the percentages of the students’ errors of the control group in the post-test were more than 50% even though the percentages decreased. It was still difficult for the students of control group to pronounce 268 out of 320 (83,75%) words contained voiceless interdental sound, and 246 out of 320 words contained the voiced one.

On the other hand, the error percentages of the students of the experimental group in pronouncing the interdental sounds significantly decreased as the researcher applied the AAM in the treatment. The error made by the students were only 106 (32,12%) and 110 (33,33%) out of 330 words contained voiceless and voiced interdental sounds.

Referring to the above findings, the researcher relates them to the previous studies done by Imamesup (2011) and Ṻnsal (2012). Imamesup’s research proved that the implementation of AAM to the university students in pronouncing fricative sounds successfully increased the students’ mean score. The students’ mean score in pre-test and post-test were respectively 29,37 and 59,31. Meanwhile, Ṻnsal’s study showed that there were differences between the pre-test and post-test percentage of the correct interdental sound pronunciation of young learners; the correct voiceless interdental sound in pre-test and post-test were 1,04% and 30,6% while the voiced one were 0% and 28,12% respectively.

Moreover, this research proves that the application of AAM can enhance the students’ ability to pronounce the interdental sounds as well, for the classical students’ ability of the experimental group increases from 8,93 in the pre-test to 67,3 in the post-test or it increases 58,37. Therefore, it is obvious that the research hypothesis is totally accepted. In other words, the application of AAM at SMA Negeri 1 Palu enhances the students’ ability to pronounce the interdental sounds.

**CONCLUSION**

The researcher draws conclusion that the application of AAM at SMA Negeri 1 Palu can greatly enhance the students’ ability to pronounce the interdental sounds. There were differences between the classical students’ ability of both control and experimental group in the pre-test and the post-test. The classical students’ ability of control group in the pre-test and post-test respectively were 10,19 and 19,2 while the classical students’ ability of the experimental group in the pre-test and post-test were respectively 8,93 and 67,3. Further, to strengthen, the t-counted (8,56) was much greater than the t-table (1,999). In other words, the hypothesis of this research is undeniably accepted.

Moreover, during the first day of treatment, since the students were unfamiliar with the interdental sounds, it was quite funny for the students to produce the sounds. The students of experimental group then were able to pronounce words contained interdental sounds properly and without hesitation after the researcher conducted the eight meetings of treatment. The minimal pairs used by the researcher as the main technique helped the students to know the differences in pronunciation between words containing interdental sounds and words contained /t/, /f/, /s/, /d/ and /z/ sounds. Further, during the teaching and learning process, the students showed their excitement as well toward the application of AAM in the classroom.

**REFERENCES**

Arikunto, S.(2006). *Prosedur Penelitian: Suatu Pendekatan Praktis (edisi revisi VI).* Jakarta: Rineka Cipta.

Basri, H. (2005). *English Phonology I*. Unpublished Handout.

Demirezen, M. (2005). Rehabilitating a Fossilized Pronunciation Error: the /v/ and /w/ Contrast by Using the Audio Articulation Method in Teacher Training in Turkey. *Journal of Language and Linguistic Studies.* [Online] Vol.1 (2), 183-191. Retrieved from <https://www.jils.org/index.php/jils/article/view/99> [July 20th, 2016].

Demirezen, M. (2007). A Model to Rehabilitate a Fossilized Pronunciation Error of Turkish English Language Teachers: the English Consonant Phoneme /ŋ/ Wrongly Articulated as /ŋk/ Through Nasal Devoicing. *Journal of Language and Linguistic Studies.* [Online] Vol.3 (2), 290-303. Retrieved from <https://www.jils.org/index.php/jils/article/view/99> [July 20th, 2016].

Hatch and Farhady. (1982). *Research Design and Statistics.* Los Angeles: California University Press.

Hismanoğlu, M. (2007). The [ɔ:] and [oʊ] Contrast as a Fossilized Pronunciation Error of Turkish Learners of English and Solutions to the Problem. *Journal of Language and Lingusitic Studies.* [Online]Vol.3, (1). Retrievedfromhttps://www.researchgate.net/publication/228404760\_The [ɔ:] and [oʊ] Contrast as a Fossilized Pronunciation Error of Turkish Learners of English and Solutions to the Problem [July 22nd, 2016].

Nurgiyantoro, B. (1995). *Teori Pengkajian Fiksi.* Yogyakarta: Gadjah Mada.

Turumi, Y.L. (2015). *Using Tongue Twister to Improve the Pronunciation of Grade VIII Students of SMP Negeri 4 Palu.* Skripsi. English Education Study Program of Language and Art Department of Teacher and Training Education Faculty of Tadulako University.

Yates, L. (2002). Fact Sheet-What is Pronunciation?. *AMEP Research Centre.* Retrieved from <http://www.nceltr.mq.edu.au/pdamep> [July 20th, 2016].

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