

Error Analysis in Pronouncing English Words Containing Diphthong Sounds Made by EFL Students

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Abstract

This research aims to find out the ability in pronouncing diphthong sounds /eɪ/, /aɪ/ and /ɔɪ/ the English Department Students of the English Education Study Program at the University of Bengkulu. This research was descriptive quantitative analysis. The population was the fourth-semester students' English study program, University of Bengkulu. The sample was selected by Random Sampling, totalling 38 students who were taken randomly from each class. The data were collected by several pronunciation tests with English words which contain English diphthongs / eɪ /, / aɪ /, / ɔɪ /. Data collection was supported by audio recording. The data obtained was then analyzed using the Audacity application with the help of Google Translate as a reference for the pronunciation received. The result of this study showed that most English students' pronunciation of the word diphthongs was bad pronunciation; the three diphthongs got more than half of the students' mispronunciations. In conclusion, the ability in pronouncing the diphthong sounds /aɪ/, /eɪ/, and /ɔɪ/ was poor and the dominant respondent's pronunciation error was diphthong /ɔɪ/. For future researchers, it is recommended to continue this research by investigating the problems of English students from all types of English diphthongs with a larger sample and investigating the causal factors.

Keyword: *Diphthong, Error, Pronouncing*

Introduction

There are three pronunciation terms, namely consonants, vowels, and diphthongs. A diphthong is a sound made by combining two vowels, especially when it starts as one vowel sound and another vowel sound (Ogden, 2017). Trask

(2004) also states that diphthongs are used in the phonetic classification of vowels based on how they are pronounced. It refers to vowels in which a change occurs in the singular (perceptual) qualities seen in the syllable. Diphthongs are vowels that have two sounds in one syllable. So, if the vowel sound constantly changes within one syllable, we call it a diphthong. Changes in voice quality can be done by moving the tongue or lips. There are 8 kinds of diphthongs in English, namely /ɪə/, /eə/, /ʊə/, /eɪ/, /aɪ/, /aʊ/, /ɔɪ/, and /əʊ/. Each diphthong has difficulty pronouncing it (Pusfarani et al., 2021).

Diphthongs are very important when speaking English because the correct pronunciation of diphthongs has an important influence on communication. If you make mistakes in pronunciation, it can make the word difficult to apply and even have a completely different meaning. Fikriyah (2019) states that most students have habits that tend to pronounce sounds according to Indonesian pronunciation. English vowels have other articulation systems besides Indonesian, so they can cause errors. They tend to ignore foreign voices outside the Indonesian Database. Therefore, they do not take this type of sound seriously. We must try to correct every sound, both vowels and consonants, and this is the basis that must be mastered to become fluent in a foreign language.

Errors in the use of language can occur because mispronunciation causes a change in meaning. In this case the accuracy of the selection becomes important so that the purpose of the conversation with the listener is correct. According to Silalahi (2017), the influence of regional languages can also change the form of intonation and human pronunciation. As we all know, there are many varieties of regional languages in this country. Especially in Bengkulu, Bengkulu has a variety of regional languages, including Rejang, Pasemah, Malay, Serawai, Lembak and many other languages, this creates different accents and pronunciations among the people. In this case, pronunciation errors made by Indonesian speakers who learn English are considered reasonable and acceptable (Rahayu, 2020). This is reasonable and acceptable considering the status of English in Indonesia as a foreign language, not a first or second language. So when Indonesians speak English, regional accents or pronunciations are always related and it sometimes causes errors in English pronunciation.

As students of the English Education Study Program who will become teachers, we must be able to pronounce English words correctly. Harmer (2007) says

that teacher's pronunciation in the classroom greatly affects the process of teaching foreign languages. Also, Marpaung et al (2021) states that students will assume that what the teacher says at school is the right thing to do when following what the teacher has done unconsciously. Rohmah (2013) adds that schools are often the first place students learn a foreign language, especially English. English classes in schools often use the principles of American English. And because of that, English vocabulary and how to pronounce it conforms to the stresses and rules of American English. The knowledge and learning you learn in school will be transferred to the university. When we learn a foreign language, if one of the components of the sound/tone is mispronounced or the tone is sounded outside the rules of vowel sound, it will affect the meaning of the word. So we should minimize our mistakes and try our best from an early age patiently and gradually in diphthong English pronunciation.

According to Fatimah (2016), there were several errors in pronouncing diphthongs by second graders of high school. For example, in the word /rain/, the correct pronunciation of the word rain is / reɪn /, but 85% of students were found to have pronounced it wrong, and only 15% pronounced it correctly. Another example is the word / same / the correct pronunciation of the same word is / seɪm /, but none of the students has pronounced it correctly. In her findings, it can be concluded that high school students have many errors in the pronunciation of the diphthong sound.

Based on the researcher's preliminary when attending a micro-teaching in the English course at the University of Bengkulu, many research classmates made mistakes in pronouncing the diphthong sound when making presentations. For example, in the word "face", some people pronounce it as / fes /, but the correct pronunciation of Face is / feɪs / with / ɪ / in the middle of the word. They did not realize that they had mispronounced them. It made the researcher interested in finding errors in the pronunciation of the English diphthong sound. Therefore, the researcher became curious whether other students had the same problem with words containing diphthong?

There are findings that have a relation with this research: The first previous studies conducted by Donal (2016), In his research, he found that Indonesian students tended to have difficulty pronouncing diphthongs /au/ and it was easier to pronounce diphthongs /ɔɪ/. The second is Suryatiningsih (2015); in her research, she found that almost all students have difficulties in pronunciation diphthong. The third is

Rasaki et al (2018); in his research, he found that the student was inconsistent with pronouncing the diphthong. The four is Dewi (2019); in her research, she found that diphthong can be produced correctly; meanwhile, diphthong cannot produce ideally. And the last is Saadah & Ardi (2020); in their research, the researcher found that learners' ability in pronouncing diphthong was in level fair.

From the description above, it can be concluded that students still make many errors in pronouncing diphthongs. Therefore, the author is interested in researching some errors made by students of the English Education Study Program at the University of Bengkulu in pronouncing several words containing diphthong in English. Based on the explanation above, the researcher conducted research entitled "An Analysis of Error in Pronouncing English Words Containing Diphthong Sounds Made by English Department Students."

Research Methodology

The researcher used descriptive quantitative analysis. According to Creswell (2014), Quantitative research identifies social problems based on testing theories including variables, numerical measures, and analysis using statistical procedures to determine whether the general predictions of the theory are correct or not. In this study, a descriptive quantitative method was used to know what the students' ability in pronouncing diphthong sounds of the English Study Program at the Bengkulu University.

The population of this study was the fourth-semester students' English study program, University of Bengkulu. Meanwhile, the research sample in this study amounted to 38 students who were taken randomly from each class with a certain scale originating from all fourth-semester students of the English study program at Bengkulu University.

In this study, the researcher obtained data using several pronunciation tests with English words which contain English diphthongs / eɪ /, / aɪ /, / ɔɪ /. In order to focus on this research more accurate, the researcher chose 30 words to be used as the pronunciation test, 30 words of closing diphthong / eɪ /, / aɪ /, / ɔɪ /. 10 words containing diphthong / eɪ /, 10 words containing diphthong / aɪ / and 10 words containing diphthong / ɔɪ /. The word is chosen based on a familiar word to make it easier for the respondent to pronounce.

In this study, the data collection process was as follows: First, made a pronunciation test consisting of a list of three diphthongs / eɪ /, / aɪ /, / ɔɪ /. Then, sent a message via WhatsApp to each chairperson of each class to create a group to make easier to contact the respondents who have been selected through random sampling technique. After that, the researcher asked the respondents to say the words from the three diphthongs. After getting data from respondents, the researcher used Audacity to analyze the data to check the students' correct and incorrect pronunciation.

In this study, a pronunciation test was used. Data were collected by audio recording. The research data were analyzed using quantitative descriptive methods. This method is used to collect data with the results obtained from the quantitative test for statistical analysis of the sample. The data obtained was then analyzed using the Audacity application with the help of Google Translate as a reference for the pronunciation received.

Recorded data obtained from respondents was entered into the Audacity Application, as well as audio from native speakers. Then, the results of the two data were compared to get the desired results. The resulting difference in amplitude between the two were analyzed further by paying attention to the errors produced in the diphthong sound in the word and comparing the transcription with the pronunciation of the received diphthong words to identify the incorrect and correct pronunciation of the words.

After that, the results of the amplitude difference between the received pronunciation and the student's pronunciation are then used to analyze the percentage of errors made by students. To calculate the errors, use the following formula to make a percentage:

$$E = \frac{n}{N} \times 100\%$$

Where:

E : percentage of student achievement in exam

n : total student score for each item

N : maximum possible total score for each item

(Adopted from Suryatiningsih (2015))

After getting the number of percentages, the researcher classified the level of mastery of students by using the mastery level used in the Tinambunan criteria

as quoted by Tartiasih in Astutik (2017) to find out the students ability to pronounce English words containing diphthong sounds in English as follows:

Table 1: Mastery level used in Tinambunan's criteria

Number of errors in percentage	Level of ability
0-25%	Excellent
26-50%	Good
51-75%	Fair
76-100%	Poor

Finally, the researcher used the results of the average score to determine the difference in the average score of students' pronunciation errors for each diphthong sound.

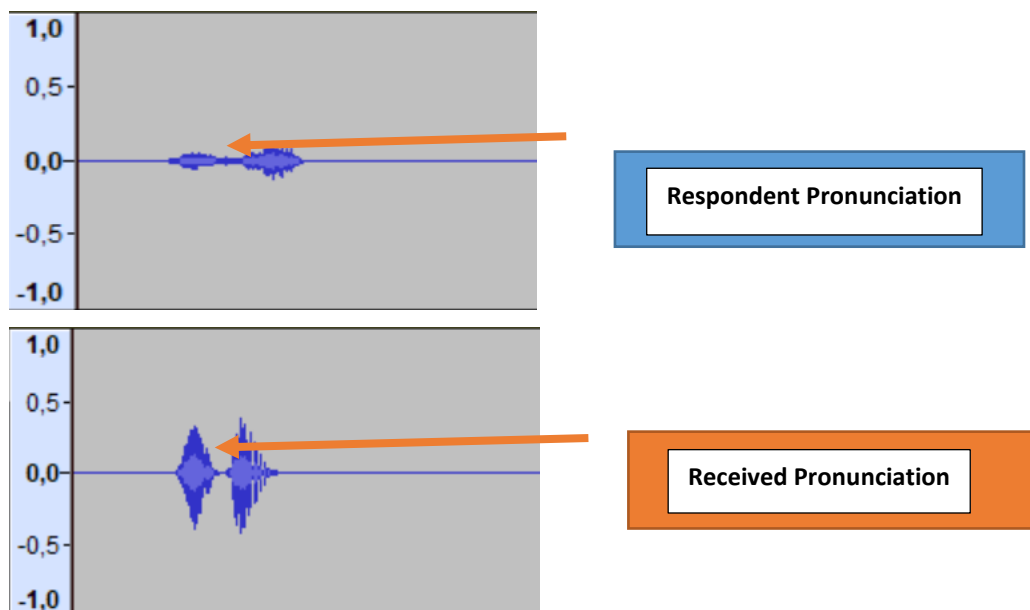
Findings and Discussion,

Findings

This study presents the students' ability to pronounce words containing diphthongs /eɪ/, /aɪ/ and /ɔɪ/ by students of the English Education Study. Data is collected through recordings. The researcher also used Audacity to check students' pronunciation. This study indicates that 80.87% of fourth-semester students of English education study program pronounce words that contain diphthongs incorrectly.

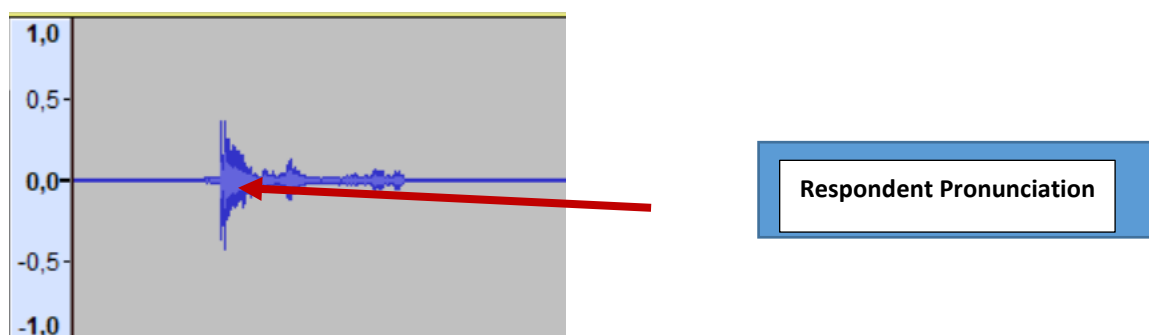
The main objective of this study was to determine the students' ability to pronounce English words diphthongs spoken by students of the English study program. The results of this study indicate that most English students mispronounce English diphthongs. Facts prove that 30 English diphthong words are mispronounced by more than 80% of students. For example, the English diphthong words "Paper", most students pronounce it with "Pepər ", but actually, the correct pronunciation is "peɪpər ", in the word " Isle " they pronounce it " Isli " but the correct pronunciation is " aɪl ". Researchers used Audacity to get more valid data to see pronunciation errors made by students. Below are some examples of analysis using Audacity for the word.

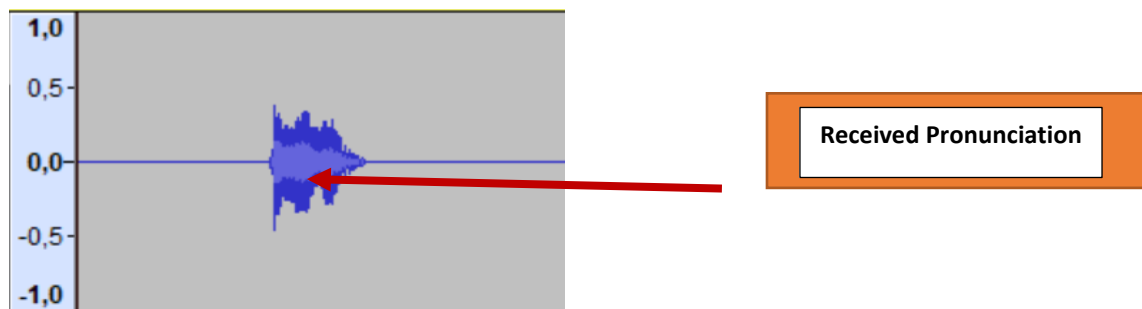
Figure 1: Comparison of the pronunciation diphthong /eɪ/ of the word "paper" between Received Pronunciation and Respondent



In Figure 1, there is a comparison between native speakers and students who pronounce diphthongs /eɪ/ in the middle of the word "paper". Supposedly in pronouncing the word "paper", The position of the Lips is open so that it becomes "peɪpər". But students pronounce the word "Pepər" instead of "peɪpər". The sound substitution made by the student from "Peɪ" to "Pe" caused the pronunciation not to be accepted.

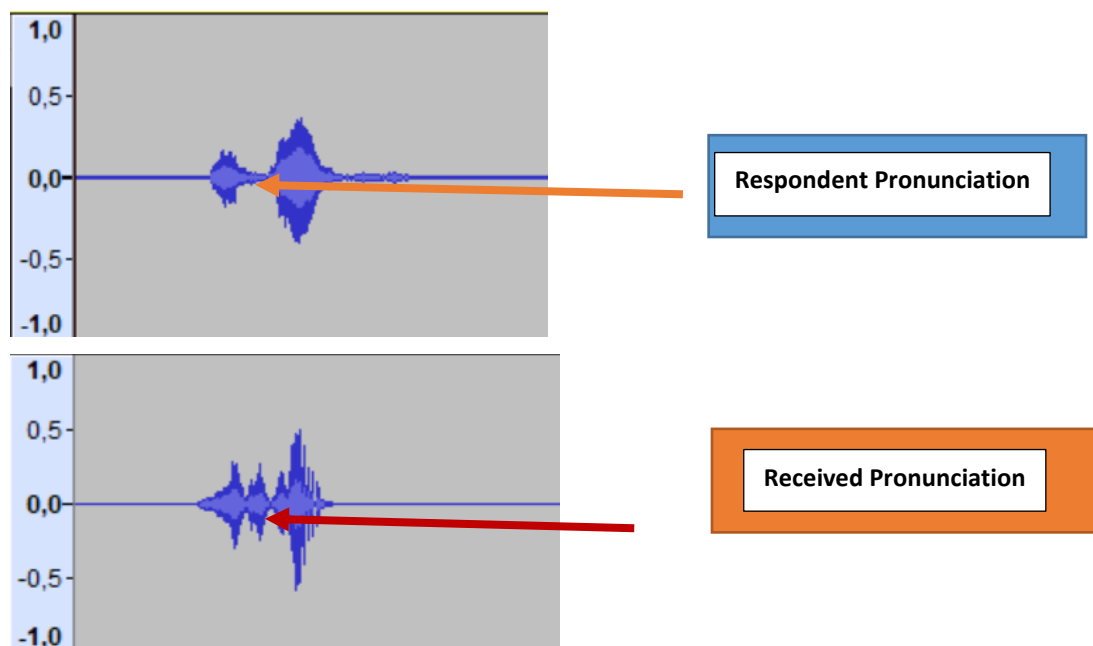
Figure 2: Comparison of the pronunciation Diphthong /aɪ/ of the word "Isle" between Received Pronunciation and Respondent





In figure 2, the picture above compares the pronunciation of Diphthong /aɪ/ in the middle of a word between students and native speakers. Supposedly in pronouncing the word "Isle", the position of the Lips move from neutral to saggy so that it becomes " aɪl ". However, students have difficulty pronouncing the sound and replacing it with " aisli ".

Figure 3: Comparison of the pronunciation Diphthong /ɔɪ/ of the word "Moisture."



The picture above shows the difference in pronunciation of Diphthong /ɔɪ/ in the middle of a word between a student and a native speaker. In pronouncing the word "Moisture", the results of the picture conclude that students change the sound " mɔɪs " , to /Mos/ and the respondent also changes the sound "tʃər" to " CHer ". The sound substitution made by the student causes the pronunciation to be not accepted.

Based on the data analysis above, the researcher found students' errors in pronouncing English words containing diphthong sounds. The errors made by the student are divided into three types. The percentages are shown in the following table:

Table 2: Percentage of students' pronunciation errors in diphthongs / eɪ /

No	Words with diphthong / eɪ /	Percentage (%)	
		Correct	Incorrect
1	Escape	3.33	96.67
2	Great	23.33	76.67
3	Stain	26.66	73.34
4	Nature	13.33	86.67
5	Paper	16.66	83.34
6	Rain	66.66	33.34
7	Date	13.33	86.67
8	Bake	3.33	96.67
9	Data	10.00	90.00
10	Train	30.00	70.00
Total		16.31	83.69

Table 2 shows the diphthongs /eɪ/ from the table above; it can be seen that the words "Escape" and "bake" only one respondent answered correctly, which if the percentage error reached 96.67%. In calculating the pronunciation errors made by students for diphthongs /eɪ/ reached 83.69%. This makes it fall into the "poor" category.

Table 3: Percentage of students' pronunciation errors in diphthongs / aɪ /

No	Words with diphthong / aɪ /	Percentage (%)	
		Correct	Incorrect
1	Price	43.33	56.67
2	Dye	23.33	76.67
3	Wight	10.00	90.00
4	Cycle	53.33	46.67
5	Climb	40.00	60.00

6	Tie	26.66	73.34
7	Title	63.33	36.67
8	Isle	13.33	86.67
9	Ride	30.00	70.00
10	Sign	23.33	76.67
Total		25.79	74.21

Table 3 shows the diphthongs /aɪ/ from the table above; it can be seen that the word "Wight" only three respondents answered correctly, which if the percentage error reached 90.00%. In calculating the pronunciation errors made by students for diphthongs /aɪ/ reached 74.21%. This makes it fall into the "Fair" category.

Table 4: Percentage of students' pronunciation errors in diphthongs /ɔɪ/.

No	Words with diphthong /ɔɪ/	Percentage (%)	
		Correct	Incorrect
1	Royal	23.33	76.67
2	Moisture	20.00	80.00
3	Noise	3.33	96.67
4	Soil	53.33	46.67
5	Employ	26.66	73.34
6	Boil	10.00	90.00
7	Oil	23.33	76.67
8	Appointment	10.00	80.00
9	Join	3.33	96.67
10	Choice	13.33	86.67
Total		15.27	84.73

Table 4 shows the diphthongs /ɔɪ/ from the table above; it can be seen that the words "Noise" and "join" only one respondent answered correctly, which if the percentage error reached 96.67%. In calculating the pronunciation errors made by students for diphthongs /ɔɪ/ reached 84.73%. This makes it fall into the "poor" category.

Furthermore, the percentage of students' errors in the diphthongs consisting of three types is attached in tabular form. This table is the overall result of the

diphthongs of the fourth-semester students of the English Education Study Program. The data from the table is used to find the percentage of mispronunciation that is higher than the other sounds.

Table 5: The 4th-semester students' percentage of pronunciation error of diphthong

Types of Diphthong	Words	Respondents	Total Pronunciation	Pronunciation Correct	Pronunciation Incorrect	Percentage Error
Diphthong / eɪ /	10	38	380	62	318	83.69%
Diphthong / aɪ /	10	38	380	98	282	74.21%
Diphthong / oɪ /	10	38	380	58	322	84.73%
Total			1140	218	922	80.87%

Based on the percentages in the table above, it can be concluded that the percentage value of 3 types of diphthongs for correct answers and incorrect answers for each sound is different. It can be seen that the 4th-semester students of the English Education Study Program obtained the highest score of errors was at /oɪ/ with 84.73%. Then/ eɪ / with 83.69%, and finally / aɪ / with 74.21%.

Discussion

Based on the mastery level used in the Tinambunan criteria, the error criteria divided into; Excellent (0% - 25%) , Good (26% - 50%) , Fair (51% - 75%) and Poor (76% - 100%). The data show that in table 4.4 the student's ability to pronounce / aɪ / sounds with an accumulative percentage of 74.21% and were in " Fair " level of ability, And the students' ability to pronounce / eɪ / and /oɪ / were in "Poor" level is classified as a high error with an accumulative percentage of 83.59% and 84.73%. In addition, the number of errors made by fifth semester students in the three diphthongs which reached 80.87% was included in the " Poor " level.

Based on the results, most English students pronounce English words containing diphthongs is bad pronunciation; the three diphthongs got more than half of the students' mispronunciations. By looking at the phenomenon above, the researcher concludes that several reasons are related to the problem. This happened because, first, students could not pronounce English diphthongs correctly. They did not understand how to pronounce them. Second, the student's lack of knowledge about English diphthong sound. The sound system between Indonesian and English is different. In Indonesia, letters or words tend to have similarities with their sounds. For example "join", "boil", "oil", and others. These are related to data from AGPS (1986) that there are three diphthongs in Indonesian, namely [ɔɪ], [eɪ] and [əʊ].

Third, As the previous research by Rasaki (2018) said that inconsistent pronunciation occurs when students try to pronounce the correct pronunciation but find it difficult to imitate the correct pronunciation. This can happen because of the influence of the mother tongue. In line with Donal (2016), the factors affecting pronunciation ability are lack of speaking practice, ignorance of words, and first language disorders. On the other hand, This research was supported by Saadah & Ardi (2020) as a previous study that conducted research on the same topic, namely knowing the ability of students to pronounce English diphthongs conducted by students of the English Study Program. The difference is that previous research which conducted in the different place, English Language Program at Universitas Negeri Padang. Furthermore, Saadah & Ardi's study focused on 8 types of diphthongs in English, /ɪə/, /ɛə/, /ʊə/, /eɪ/, /aɪ/, /aʊ/, /ɔɪ/, and /əʊ/. However, the results found remain at the conclusion that English students have not been able to get a good predicate and still have high errors in diphthongs.

Based on the data above, it can be concluded that; even though students of the English Education Study Program have studied phonetics and phonology, students can still make mistakes in pronouncing diphthongs. It seems that the students don't pay much attention to pronunciation either. They face difficulties in pronouncing certain words with correct pronunciation and phonologically correct words. They know pronouncing words well based on their familiarity. Their background knowledge about diphthongs themselves can influence their understanding of how to pronounce diphthongs correctly.

The effect of online learning due to the COVID-19 pandemic also seems to cause them not to understand how to pronounce correctly, because when online learning takes place, students can ignore learning, such as only following virtual forums without listening and understanding in the teaching and learning process. Online learning also creates a lack of communication between lecturers and students, because English lecturers also have a greater responsibility in the teaching and learning process (Prasetyo et al., 2021). The habit of students to hear the correct pronunciation of words can be one way to understand the correct pronunciation of words, especially diphthongs.

Conclusion and Suggestion

Conclusion

This study aims to find out ability in pronouncing English words containing diphthong sounds /eɪ/, /aɪ/ and /ɔɪ/. Based on data analysis, the diphthong sounds /eɪ/, /aɪ/ and /ɔɪ/ were found that the correct pronunciation of the respondents was less than half, namely 19.13% of the total pronunciation of the diphthong sounds /eɪ/, /aɪ/ and /ɔɪ/ tested. The average proportion of incorrect pronunciation is 80.87%. Based on the level of mastery of the Tinanbunan Criteria, this showed that the ability of the respondents to pronounce the diphthong sounds /aɪ/, /eɪ/, and /ɔɪ/ was poor.

And also, from the three diphthongs, namely /eɪ/, /aɪ/ and /ɔɪ/ described in this study, there was one diphthong that the respondent dominantly mispronounces. The dominant respondent's pronunciation error was diphthong /ɔɪ/, with a percentage of error 84.73%. As shown in Table 4.4, the table showed that the percentage of correctness for diphthongs /ɔɪ/ was the lowest compared to diphthongs /eɪ/ which has a percentage of 16.31% and /aɪ/ which has a percentage of 25.79%. Therefore, the dominant pronunciation error among the three diphthongs was diphthong /ɔɪ/.

Suggestion

Based on the research that has been done, the researcher would like to propose some suggestions. First, the students were advised to improve their pronunciation further to be better, especially diphthong pronunciation. Students can learn pronunciation using many learning media, such as using a dictionary with

phonetic symbols or by listening to native speaker audio media. Second, lecturers are advised to pay more attention to students' pronunciation and use more effective ways to handle pronunciation. What they have done so far is good but is expected to be even better. For future researchers, it is recommended to continue this research by investigating the problems of English students from all types of English diphthongs with a larger sample and investigating the causal factors.

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