CHAPTER IV

RESEARCH FINDINGS AND DISCUSSION

This chapter presents the result of the research and discussion about the data analyzed by using the statistical procedure. The contents of this chapter are the classis assumption testing, description of data, hypothesis testing, and discussion.

A. Classic Assumption Test

The model used to analyze the data in this research is Pearson product moment that included parametric statistic. Parametric statistics requires that many assumptions be met. The main assumption is that the data to be analyzed must be normally distributed as follows:[1]

1. Normality Test

Normality test aims to test whether in the regression model, confounding or residual variables have a normal distribution. This research uses Kolmogorov-Smirnov statistical analysis with the test criteria being that if the probability value is >0.05 then the data is normally distributed and if the probability value is <0.05 then the data is not normally distributed. The results of the normality test can be seen in the table following:

[1] Sugiyono, *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*, (Bandung: Alfabeta, 2013), 150.

Table 4.1

Normality Test Results

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		63
Normal Parameters [a.b]	Mean	.0000000
	Std. Deviation	1.67260609
	Absolute	.106
	Positive	.043
	Negative	-.106
Test Statistic		.106
Asymp. Sig. (2-tailed)		.075[c]

a. Test distribution is Normal
b. Calculated from data
c. Lilliefors Significance Correction

From Table 4.1, the significance score of Kolmogorov-Smirnov is 0.75 that showed higher then 0.05. It can be concluded that the data is normally distributed. After normality testing, it also indicated that this data can be used Pearson product moment as the data analysis.

B. Data Description

The total population taken from all the fifth semester students of English Teaching Learning Program is 63 students that as well become the whole sample.

Table 4.2

Table of Respondent Data of the Gender

Gender	Total
Male	16
Female	47
Total	63 Respondents

1. **Correlation between Knowledge of Phonetic Symbol on Vowel and Diphthong with Pronunciation Ability**

The result of data between the X variable (Knowledge of phonetic symbol on vowel and diphthong) and Y variable (Pronunciation Ability) as attached as below:

Table 4.3

Table of Score of Knowledge on Vowel and Diphthong with Pronunciation Ability

No	Respondents	Knowledge of Phonetic Symbol on Vowel & Diphthong (X)	Pronunciation Ability (Y)
1	AAP	60	90
2	AZH	80	89
3	DA	65	90
4	AWS	65	90
5	ARJ	70	90
6	AMA	95	93
7	AZH	85	92
8	AF	95	91
9	AS	75	89
10	I	85	88
11	DH	100	91

12	AZAS	80	92
13	AJPL	45	89
14	AMR	70	90
15	ASR	75	89
16	ANM	50	89
17	MARH	90	91
18	MARH	85	92
19	FRI	90	91
20	IN	75	91
21	MDW	80	93
22	LR	75	91
23	M	70	88
24	DNANT	80	92
25	DSP	85	91
26	M	70	91
27	GF	85	94
28	I	85	93
29	MF	65	85
30	MAA	60	88
31	MKF	60	90
32	AY	80	85
33	MHH	70	91
34	AKN	80	90
35	NDM	95	88
36	NH	75	91
37	NE	75	90
38	RYW	90	90
39	RRE	85	88
40	NOS	40	88
41	RW	70	88
42	RU	90	90
43	SD	95	91
44	NP	60	91
45	NS	80	90
46	SH	90	92
47	WF	60	90
48	MSAA	75	93
49	MA	40	88
50	RA	70	90
51	SN	55	91
52	SATS	50	89

53	T	85	93
54	YNY	95	93
55	ZK	65	92
56	SYE	50	90
57	SN	50	89
58	TW	90	92
59	EPC	85	92
60	PSN	80	90
61	WS	65	90
62	SSW	65	92
63	K	60	88
TOTAL		**4665**	**5688**

After the researcher got the data between the X variable and Y variable, the researcher correlated both variables using SPSS application to get the statistical numerical data from the test score. The result of SPSS is presented as below:

Table 4.4

The SPSS Output of Pearson Product Moment Correlation

Correlations

		Knowledge of Phonetic Symbol on Vowel and Diphthong	Pronunciation Ability
Knowledge of Phonetic Symbol on Vowel and Diphthong	Pearson Correlation	1	,407**
	Sig. (2-tailed)		,001
	N	63	63
Pronunciation Ability	Pearson Correlation	,407**	1
	Sig. (2-tailed)	,001	
	N	63	63

**. Correlation is significant at the 0.01 level (2-tailed).

Based on table 4.2, the result of this research analyzed by statistical analysis of Pearson Product Moment shows a correlation between students' knowledge of phonetic symbol on vowel and diphthong with their` pronunciation ability at the fifth semester of English Teaching Learning Program at IAIN Madura, because the result of r_{count} is higher than r_{table}. It is proved by comparing the result of r_{count} with $r_{table.}$ The result of r_{count} is 0,407, and the value of r_{table} is 0,254.

When the researcher checked the table interpretation of 'r' Pearson product moment value, the value of r_{count} is 0,401, including the third interpretation is 0,40 - 0,599. The interpretation is the correlation between X variable and Y variable are sufficient. Therefore, the researcher concluded that students' knowledge of phonetic symbol on vowel and diphthong significantly correlate with their pronunciation ability.

However, to know whether the correlation between two variables is significant or not, the researcher applied hypothesis testing. The hypothesis testing will be discussed by the researcher later.

2. Validity

Validity is used to make sure that the test data is valid. The kind of validity used by the researcher is Pearson product moment validity. The researcher applied SPSS to make measuring the test's validity easier. The validity result between students' knowledge of phonetic symbol on

vowel and diphthong with their pronunciation ability tests are explained in appendix VI and VIII

The item's validity is appointed by analyzing the r_{count} and $r_{table.}$ If the value of r_{count} is bigger than $r_{table,}$ the test item is valid. If the value of r_{count} is lower than $r_{table,}$ the test item is not valid. The way to get the value of r_{table} can be seen in a book.[2] By determining the amount of N and the signification of the table is 5%. In this research, N is 63, and the value of r_{table} is 0,254 in 5% signification specifically.

a. Vowel and Diphthong Test

Based on the validity result in appendix VI all the Vowel and diphthong knowledge test questions are valid because the value of r_{count} is bigger than $r_{table,}$ as attached in appendix VII

b. Pronunciation Ability Test

In the pronunciation test, based on the validity result in appendix VIII, there are 17 test questions are valid because the value of r_{count} is bigger than r_{table} and 3 questions are invalid, as attached in appendix IX.

Therefore, all vowel and diphthong with pronunciation test questions are valid. Then, the researcher can use the data for the next steps, that is, testing the reliability of the data.

[2] Sugiyono, *Metode Penelitian Kuantitatif* (Bandung: Alfabeta, 2019), 530.

3. Reliability

Reliability is used to ensure whether the obtained data is reliable. The researcher uses the Cronbach's alpha technique by SPSS application. In this technique, the instrument will be reliable since the score of alpha Cronbach > 0,60.[3]

a. Vowel and Diphthong Test

The calculation result from the SPSS application is presented in the following table:

Table 4.5

The SPSS Output of Vowel and Diphthong Cronbach's Alpha

Reliability Statistics

Cronbach's Alpha	N of Items
,685	20

b. Pronunciation Ability Test

The calculation result from the SPSS application is presentedd in the following table:

Table 4.6

The SPSS Output of Pronunciation Ability Cronbach's Alpha

Reliability Statistics

Cronbach's Alpha	N of Items
,645	17

[3] Siregar, *Statistik Parametrik untuk Penelitian Kuantitatif; Dilengkapi dengan Perhitungan Manual dan Aplikasi SPSS Versi 17*, (Jakarta: PT Bumi Aksara, 2013), 90.

C. Hypothesis Testing

From the SPSS result of Pearson product moment in the previous pages, the researcher knows that the significant value between knowledge of phonetic symbol on vowel and diphthong with pronunciation ability is 0,001. The criteria of the correlation significance between the two variables are as follow:

1. If the result of significant value > 0.05, there is no significant correlation between students' knowledge of phonetic symbol on vowel and diphthong with their pronunciation ability. The alternative hypothesis is rejected, and the null hypothesis is accepted.
2. If the result of significant value <0.05, it means that there is a significant correlation between students' knowledge of phonetic symbol on vowel and diphthong with their pronunciation ability. The alternative hypothesis is accepted, and the null hypothesis is rejected.

Therefore, based on the criteria of the correlation significant above, the result of the significant value is significant because it is less than 0.05. Then, the researcher can conclude that the value of statictical significance is 0,001< 0,05. It means the alternative hypothesis is accepted, and the null hypothesis is rejected. Hence, the researcher finds out that there is a sufficient significant correlation between students' knowledge of phonetic symbol on vowel and diphthong with their pronunciation ability in the fifth semester of English Teaching Learning Program at IAIN Madura.

D. Discussion

The result of this research reveals that there is a positive correlation between students' knowledge of phonetic symbol on vowel and diphthong with their pronunciation ability in the fifth semester of English Teaching Learning Program at IAIN Madura and it is proved by the result of r_{count} is higher than r_{table} that is 0.407>0,254.

From several previous studies, it turns out that there is previous study that has higher r_{count} than this research. The research conducted by Muslifah.[4] Her research showed that the r_{count} 0.639 was also higher than r_{table} 0.506. In addition, from the comparison between the result of r_{count} and $r_{table,}$ the researcher could conclude that the pronunciation of Arabic consonant has correlation with English consonant pronunciation. This previous study had the same research design but different data analysis, namely using Rank spearman while this research uses Pearson product moment.

It is different from other quantitative research conducted by Mohammad Nurman.[5] The results showed there is correlation between phonological knowledge and pronunciation ability of the students. Based on the calculation that is obtained, r_{xy} value from variable X and Y is 0.223. It is categorized as a low correlation. Whereas the result of the

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[4] Muslifah, *The Correlation between Arabic Consonant Sound and English Consonant Sound Pronunciation of English Department Students of State Islamic Institute of Madura* (Pamekasan: IAIN Madura, 2022).

[5] Mohammad Nurman, "The Correlation Between Phonological Knowledge and Pronunciation Ability", Journal of English Education and Teaching, no. 2 (2020): 290, https://doi.org/10.33369/jeet.5.2.290-320

calculation use t_{count} formula. The t_{count} value is 1.002. It means that there is no a significant correlation between both of variables. Nurman's research had same research design and same data analysis namely correlational research design and pearson product moment data analysis.

While the next study had been conducted by Katarzyna.[6] This results of the study indicated that students of English, who on average use pronunciation learning strategies rather occasionally, should receive some strategy-based instruction as there exists a significant relationship between the investigated phenomena, especially between the use of pronunciation learning strategies and the production of English monophthongs and diphthongs. Katarzyna's research had different data analysis with this research.

In this research, phonological knowledge (vowel and diphthong) is in relation to the pronunciation ability. Students need to have this in order to help them in doing pronunciation. However, based on the finding of this research, there was a sufficient correlation between knowledge of phonetic symbol on vowel and diphthong with the students' pronunciation ability. In addition, if students have good knowledge of them, hence it is in line with their pronunciation ability. Also, having knowledge in Phonology could lead the students to have good pronunciation if they practice.[7]

In this case, the research finding showed same result. After students got pronunciation test, and questions about vowel and diphthong,

[6] Katarzyna Rokoszewska, "The Influence of Pronunciation Learning Strategies on Mastering English Vowels", Studies in Second Language Learning and Teaching 2, no.3 (2012): 391.
[7] George Yule, *The Study of Language*, Third Edi (Cambridge University Press, 2006), 46-47.

the result was based on expectation. Most of them pronounced as correct as possible deal with the phonetic symbol. But there were some students who still pronunced uncorrectly, namely in word "Sow, pair, and sure" that have phonetic symbol /saʊ/, /peə:/, and /ʊə/. It may be caused by the students who were not in really practicing the pronunciation at classroom or at their home. If students were seldom to practice and repeat the lesson from the lecturer, it can be caused to poor pronunciation.

In the other hand, it may be caused by the majority of students are Madurese and most of them graduated from Islamic boarding school. This phenomenon occurs because of the interference of their mother tongue (especially) local or regional languages) that is Madurese language. The interference of the mother tongue has come into main consideration since language transfer plays an important role. In this case, the English students have to face that one factor which provides difficulty in acquiring English language as their second or foreign language is the students' first language (L1). In producing speech, they use L1 pattern or rule that leads to inappropriate from in the target language.

Madurese has 6 vowels and 3 diphthongs.[8] The vowels, like English vowels, arrange them according to their place of articulation in the mouth. Front, central, back, high, mid, and low represent the position of the jaw. Vowels in Madura namely: /a/, /i/, /u/, /ɛ/, /ə/, and /ɔ/, while for English vowels are /i:/, /ɪ/, /ʊ:/, /u:/, /e/, /Ə/, /ɛ:/, /ɔ:/, /æ/, /ʌ/, /ɑ:/, and /ɒ/.

[8] Akhmad Sofyan, "Fonologi Bahasa Madura", Humaniora 22, no. 2 (2010): 207, https://doi.org/10.22146/jh.1337.

Both are mostly similar but in English vowels are more kinds than Madurese vowels. Based on the test given by the researcher to the respondent, some of them cannot pronounce /a/ and /ɔ/ of the word “Sow” and “Hot”. They did not know how to differentiate between of them and they supposed that the phonetic transcription of them are same even. Whereas, sow is /sau/ and hot is /hɔt/. It may be caused by their regional dialect that the written is surely same with the spoken one.

For diphthong, Madurese has 3 diphthongs namely /ay/, /oy/, and /uy/. While for English diphthongs are /ei/, /ai/, /ɔɪ/, /ɪə/, /eə/, /ʊə/, /aʊ/, and /əʊ/. Respondents of this research were able to pronounce as well but in word of “Pair” and “Sure”, some of them still mispronunciation. The phonetic transcripton of them are /peə:/ and /ʃuə/. Diphtong of /eə/ and /ʊə/ do not exist in Madurese diphthong, so that they still confused how to spell both of words.