CHAPTER IV

RESEARCH FINDINGS

This chapter presents the research findings and discussion. It provides the data found from the research. In addition, it discuses data description and presentation, analyze the data of the level of intelligibility from the native speaker's perspective; analyze the score transcription data, and the correlation between the level of intelligibility and the transcription score.

A. **Findings**

The data were collected through voice recording, rating scale, and test that have been explored in chapter III. To obtain the objective of the research, the data was collected and analyzed systematically using the instrument mentioned. In this case, the data was analyzed to know the level of intelligibility, the competence of transcription, and the correlation between level of intelligibility and the competence of transcription.

The researcher conducted the research on June 12th – June 20th 2014. The research was done four times for taking the data. Besides, the place for conducting the research was in UIN Sunan Ample Surabaya and in office of *El Victor FM* Surabaya. From the research conducted, it was obtained the data. There are two kinds of data sources which were obtained; the data of level

intelligibility and the transcription score that show the competence of transcription.

On the part of findings the researcher reports the data based on the topic of the research question. The research questions are "What is the students' level intelligibility of speech production in the fourth semester of English Teacher Education Department based on native speakers' perception?", "How is the students' competence of transcription?", and "Is there any correlation between the student's level of intelligibility and the student's competence of transcription?". The explanation of the data findings is presented bellow.

1. **The student's level of intelligibility of speech production**

The data of the student's level of intelligibility was derived from the instruments of voice recording and rating scale. The voice recording was needed for getting the data of the student's speeches. The speeches were got from the students in the speaking class 4. There were 20 students, thus there were 20 voice recordings of student's speech. Then, for knowing the level of intelligibility, the researcher used rating scale from native speakers. Then, the researcher found the mean of the rating scale from 5 native speakers. Finally, the mean reflected the student's level of intelligibility.

The result of the student's level of intelligibility is presented in the table below.

Table 4.1
The data of students' level of intelligibility

No.	Student's Name	Level
1	Student 1	3
2	Student 2	4
3	Student 3	3
4	Student 4	4
5	Student 5	3
6	Student 6	3
7	Student 7	4
8	Student 8	3
9	Student 9	3
10	Student 10	2
11	Student 11	5
12	Student 12	4
13	Student 13	4
14	Student 14	4
15	Student 15	4
16	Student 16	4
17	Student 17	4
18	Student 18	5
19	Student 19	3
20	Student 20	5

From the table presented above, it can be seen the level of intelligibility of 20 students in speaking 4. The description of the detail frequent of each level of intelligibility are presented in the table below,

Table 4.2
The detail data of level of intelligibility

Level	Frequent	Percentage
1	-	-
2	1	5%
3	7	35%
4	9	45%
5	3	15%
6	-	-

From the table above, it shows six level of intelligibility in percentage. Firstly, there is no student who is on level 1. Secondly, there is one student who is on level 2, or it can be said that only 5% from 20 students are on level 2. Thirdly, there are 7 students who are on level 3, or it can be said that there are 35% from 20 students are level 3. Fourthly, there are 9 students who are on level 4, or it can be said that there are 45% from 20 students are on level 4. Fifthly, there are 3 students who are on level 5, or it can be said that there are 15% from 20 students are on level 5. Finally, there is no student who is on level 6.

2. **The competence of transcription**

The data of the transcription score was derived from two kinds of instruments, voice recording and test. The type of test was listening test which the students had to listen to the recorder to do the cloze-test. The test consisted of 70 items in type of filling the blank. The result of transcription score was derived from the formula that had been written in chapter III. However, the researcher

used *Microsoft Excel* to count the transcription score. The data of transcription

score is described in the table as follows.

Table 4.3
Transcription Score

No.	Student's Name	Score
1	Student 1	50
2	Student 2	33
3	Student 3	63
4	Student 4	43
5	Student 5	51
6	Student 6	50
7	Student 7	27
8	Student 8	41
9	Student 9	53
10	Student 10	17
11	Student 11	57
12	Student 12	43
13	Student 13	20
14	Student 14	50
15	Student 15	39
16	Student 16	70
17	Student 17	30
18	Student 18	63
19	Student 19	27
20	Student 20	50

To know the student's competence in transcribing the native's speech, it

is provided the detail description of data as follows.

Table 4.4
The student's competence in Transcription

Quality	Score	Frequent	Percentage
Very bad	10 – 27	4	20%
Bad	28 – 45	6	30%
Average	46 – 63	9	45%
Good	64 – 81	1	5%
Very good	82 – 99	-	-

The table above describes that there are different quality from 20 students of the competence of transcription. Firstly, there are 4 students or 20% from 20 students are in the very bad quality because the score is approximately 10 to 27. They are 17, 20, 27, and 27. Secondly, there are 6 students or 30% from 20 students are in the bad quality because the score is approximately 28 to 45. They are 30, 33, 39, 41, 43, and 43. Thirdly, there are 9 students or 45% from 20 students are in the average quality because the score is approximately 46 to 63. They are 50, 50, 50, 50, 51, 53, 57, 63, and 63. Fifthly, there is 1 student or 5% from 20 students are in the good quality because the score is approximately 64 to 81. It is 70. Finally, there is no student is in the very good quality.

3. **The correlation between the students' level of intelligibility and the students' competence of transcription**

In order to be able to know the correlation between the student's level of intelligibility and the student's competence of transcription, it is required some steps. The steps are test of normality, test of linierity, correlation product-

moment analysis. The description and result of these steps are described as follows.

a. Test of Normality

Normality test is needed to know the distribution of the data. If the data has normal distribution, so the correlation product-moment can be used. It uses *SPSS 20* to conduct the test of normality. In this case, it uses *Shapiro-Wilk* test. To know whether the data normal or not, it is required to see the significance of *Shapiro-Wilk.* If the ρ-value is greater than 0,05, the data is normal. Otherwise, if ρ-value is less than 0,05, the data is not normal.

Table 4.5
The Result of Test of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Level of Intelligibility	,114	20	,200[*]	,952	20	,396
Competence of Transcription	,163	20	,173	,968	20	,709

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

The result from the test shows that ρ-value of 'level of intelligibility is 0,396 and ρ-value of 'competence of transcription' is 0,709. Both shows that ρ-value is greater than 0, 05. ρ-value of 'level of intelligibility' is (0,396 >

0,05), and ρ-value of 'competence of transcription' is (0,709 > 0,05). Consequently, the data is normally distributed. Hence, the correlation product-moment analysis can be used.

b. **Scatter-plot Graph**

Scatter-plot graph is needed for knowing the data whether linear or not. If the data is linear, thus the correlation product-moment analysis can be conducted. It is also required to know the types of relationship, whether positive relationship, negative relationship, or no relationship (zero correlation). The scatter-plot is presented such in the graph as follows.
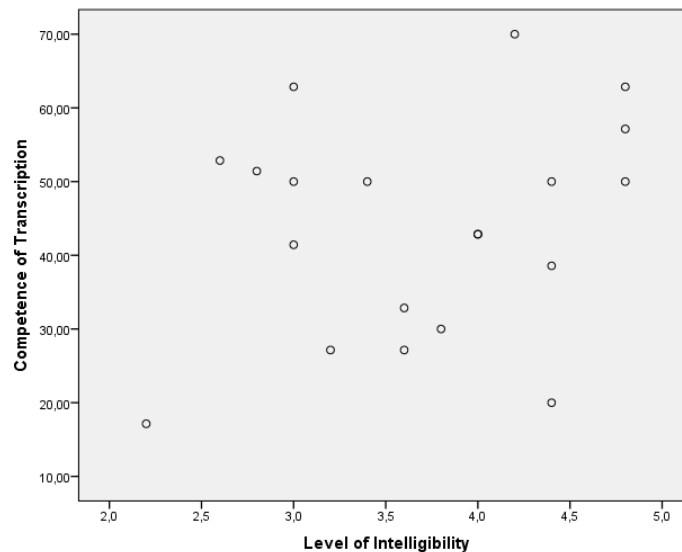

Figure 4.1
The relationship between level of Intelligibility and competence of intelligibility

The scatter-plot graph above shows that the data is linear. The type is positive relationship. It is showed by the dots which form positive slope. The relationship seems very weak because line is not straight precisely, it is able to see the dots which form line form bottom-left to top right. The dots show that one variable increases in value; the other variable tends to increases in value. Consequently, it is required to conduct correlation analysis to see the probability value and the significant level.

c. **Correlation between level of intelligibility and competence of transcription**

The correlation analysis used is *pearson* correlation using *SPSS 20*. This analysis is able to be used because the data are normally distributed and have linier relationship. Both tests have been explained in previous sub-section. The result of pearson correlation is presented in the table as follows.

Table 4. 4
Correlation between Level of Intelligibility and Transcription Score

		Level of Intelligibility	Competence of Transcription
Level of Intelligibility	Pearson Correlation	1	,248
	Sig. (2-tailed)		,291
	N	20	20
Competence of Transcription	Pearson Correlation	,248	1
	Sig. (2-tailed)	,291	
	N	20	20

Here is the result of pearson correlation from table above. First, the pearson correlation of level of intelligibility and competence of transcription show number 1. It means that both variables are perfectly positively correlated since the correlation coefficient must be between +1 and -1. Second, the correlation coefficient is both the same between level of intelligibility and competence of transcription. The correlation coefficient (r value) is 0,284. To know the strength of correlation, it is required to check the criteria. The r value shows the weak correlation. Consequently, there is weak correlation between level of intelligibility and competence of transcription. Third, Sig. (2-tailed) is 0,291. This means that ρ-value is 0,291. In this research the significance (α) uses 0,05. ρ-value is greater than 0,05 (0,291 > 0,05). This means that the relationship between speech intelligibility is not significant. Consequently, it is not be able to be generated to the population.

The alternative hypothesis (H_1) says that the level of speech intelligibility of the students in speaking 4 has correlation to their competence in transcribing the native's speech. Otherwise, the null hypothesis of this research (H_0) says that the level of speech intelligibility of the students in speaking 4 doe not has correlation to their competence in transcribing the native's speech. Hence, from the result above, it can be concluded that H_1 is accepted and H_0 is rejected.

B. **Discussion**

From the findings it is able to create discussion of this research. The aim of this research was to examine the level of speech intelligibility of the students in the fourth semester of English Teacher Education Department by using the native speakers' judgment in the form of rating scale, to examine the competence of transcription of the students in the fourth semester of English Teacher Education Department by finding the transcription score, to know the correlation between the level of speech intelligibility and the competence of transcription of the students in the fourth semester of English Teacher Education Department. The detail description is presented in the following subsection.

1. **The students' level of intelligibility of speech production**

Based on the result of the findings, it is derived the data.

a) Firstly, there is no student who is on level 1. It means no student has the speech that is unintelligible, only occasional word or phrase can be recognized. In this case, there is no student whom speech produced very badly because they sometimes produce unrecognizable word or phrase which is categorized as unintelligible.

b) Secondly, there is one student who is on level 2, or it can be said that only 5% from 20 students are on level 2. It means that 1 student has speech which is unintelligible and great listener effort is required, constant repetition and verification is required. In this case, the speech

is unintelligible because the listener needs to listen more times in order to be able to recognize the words produced by speaker.

c) Thirdly, there are 7 students who are on level 3, or it can be said that there are 35% from 20 students are level 3. It means that 7 students have speech which is reasonably intelligible, but significant listener effort is required because of the speaker's pronunciation or grammatical errors, which impedes communication and distract the listener, there is an ongoing need for repetition and verification. In this case, the speech is intelligible although the listeners need to listen more times because there is ungrammatical sentence produced.

d) Fourthly, there are 9 students who are on level 4, or it can be said that there are 45% from 20 students are on level 4. It means that 9 students have speech is largely intelligible, although sound and prosodic variances from Native Speaker norm are obvious, listeners can understand if they concentrate on the message. In this case, the speech is intelligible if the listeners not only focus on the words produced but also they are more focus on the message.

e) Fifthly, there are 3 students who are on level 5, or it can be said that there are 15% from 20 students are on level 5. It means that 3 students have speech which is fully intelligible; occasional sound and prosodic variances from the Native Speaker norm are present but not seriously distracting to the listener. In this case, the speech is categorized as

intelligible although the prosodic features appear in speech and create ambiguity, but it is not disturb the listener in rating the speech.

f) Finally, there is no student who is on level 6. That means no student has speech that is near-native; only minimal features of divergence from native speaker speech can be detected; near native sound and prosodic patterning. In this case, there is no student whom the speech is very intelligible because the speech is near native, and the listener can recognize the speech easily. Consequently, it is derived the conclusion that from 20 students, the most students get level 4 in term of speech intelligibility based on native speakers' perception. That means that the speech is not fully intelligible, and the listeners can understand the speech if they are focus on the message. It is appropriate for speakers to produce each word more clearly. Hence, the listeners can recognize the speech not only focus on the message but also focus on each word uttered.

According to Hongyan in his dissertation says that "the subjective measurement is getting from opinion which is taken by rating scale, and the native speakers are the excellent and reliable raters in measuring intelligibility of speech utterance".[101] This theory is used as foundation to answer the first research question. The result shows that most of the students are on the level 4 which means speech is largely intelligible, although sound and prosodic

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[101] Wang Hongyan, Doctoral Dissertation: "*English as……*, 25

variances from Native Speaker norm are obvious, listeners can understand if they concentrate on the message. However, this research only used 5 raters. The total raters should be in the odd number since it can reduce the bias. On the other hand, the result may be different when it is used more than 5 raters since every native speakers have own perception toward non-native speaker's speech.

2. The competence of transcription

The result derived is based on the theory of scoring system and class interval as explained in chapter III. It is said that if the score is approximately 10 to 27, it is categorized as very bad quality in competence of transcription. Then, if the score is approximately 28 to 45, it is categorized as bad quality in competence of transcription. Next, if the score is approximately 46 to 63, it is categorized as average quality in competence of transcription. In addition, if the score is approximately 64 to 81, it is categorized as good quality in competence of transcription. Finally, if the score is approximately 82 to 99, it is categorized as very good quality in competence of transcription.

The data below is based on the result of the findings.

a. Firstly, there are 4 students or 20% from 20 students are in the very bad quality. In this case, it is because their transcription score is approximately 10 to 27. Hence, their competence of transcription is categorized as very bad quality.

b. Secondly, there are 6 students or 30% from 20 students are in the bad quality. In this case, it is because their transcription score is

approximately 28 to 45. Hence, their competence of transcription is categorized as bad quality.

c. Thirdly, there are 9 students or 45% from 20 students are in the average quality. In this case, it is because their transcription score is approximately 46 to 63. Hence, their competence of transcription is categorized as average quality.

d. Fourthly, there is 1 student or 5% from 20 students are in the good quality. In this case, it is because their transcription score is approximately 64 to 81. Hence, their competence of transcription is categorized as good quality.

e. Finally, there is no student is in the very good quality. In this case, it is because there is no student who gets transcription score that is approximately 82 to 99. In conclusion, most of the students have average quality in the competence of transcription since their transcription score is approximately 46 to 63. Therefore, the most students are 9 students, and they have average level in competence of transcription.

This type of transcription was orthographic transcription which is done through listening test. However, the researcher did not conduct in one time test because the available time of the respondent. In the contrary, the result may be different when the respondent can do in one time test.

3. **The correlation between the students' level of intelligibility and the students' competence of transcription**

These are the result of the findings.

a) First, the pearson correlation of level of intelligibility and competence of transcription show number 1. This means that both variables are perfectly positively correlated since the correlation coefficient must be between +1 and -1.

b) Second, the correlation coefficient is both the same between level of intelligibility and competence of transcription. The correlation coefficient (*r* value) is 0,284. To know the strength of correlation, it is required to check the criteria. The *r* value shows the weak correlation. Consequently, there is weak correlation between level of intelligibility and competence of transcription. It means that the one value in one variable cannot be used to predict one value in another variable.

c) Third, Sig. (2-tailed) is 0,291. This means that ρ-value is 0,291. In this research the significance (α) uses 0,05. ρ-value is greater than 0,05 (0,291 > 0,05). This means that the relationship between speech intelligibility is not significant. Consequently, it is not be able to be generated to the population.

Based on hypothesis developed in chapter I and chapter III. The alternative hypothesis (H$_1$) says that the level of speech intelligibility of the students in speaking 4 has correlation to their competence of transcription. Otherwise, the

null hypothesis of this research (H_0) says that the level of speech intelligibility of the students in speaking 4 does not has correlation to their competence of transcription. The result of findings shows that ρ-value is 0,291. This means that ρ-value is greater than 0,05 (0,291 > 0,05) because the significance (α) used in this research is 0,05. In addition, the correlation coefficient (*r* value) is 0,284, so that that the correlation is weak since r value shows the strength. In conclusion, from the result above, it can be concluded that H_1 is accepted and H_0 is rejected. This means the level of speech intelligibility of the students in speaking 4 has correlation to the competence of transcription. However, it is only able to be applied in the sample selected because the significance value is greater than 0,05. In addition, the weak correlation means the value on one variable cannot be used to predict the value on another value. Afterward, it cannot be generated to the population. Hence, the correlation between level of intelligibility and the competence of transcription is only applied for the 20 students taken as sample of this research.

Brodkey stated that for measuring intelligibility a now-common technique used, the dictée task, in which listeners heard sentence-length samples and wrote them out in standard orthography, and then the data are scored in terms of words correctly transcribed.[102] The result of the findings showed that level of intelligibility which was evaluate by native speakers as a rater had correlation with the competence of transcription. However, it was showed the weak

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[102] Jette G. Hansen Edwards and Mary L. Zampini, *Phonology and*...... 201.

correlation. Hence, this test could not be conducted to measure the intelligibility in English Teacher Education Department UIN Sunan Ampel Surabaya because the high level of speech intelligibility did not always associate to the very good competence of transcription. It was happen because the researcher only took small sample size. It is better to take large sample size to provide better result. In addition, it may be better to conduct others measurement that may be able to show stronger about the information of intelligibility especially in English Teacher Education Department.