

## CHAPTER IV

### DATA PRESENTATION AND DISCUSSION

This chapter present presentation of data that are collected, the validity and reliability of the research instrument, hypotheses testing, and analyzing data.

#### A. Data Presentation

The researcher presents the data that are collected from each instrument the researcher used. As explained in the previous chapter, the researcher uses test to collecting the data related to X variable (students' grammar mastery) and take examination's score for Y variable (students' speaking skill).

The test is given to forty students of SMA Tahfidh Putri Al-Amien as sample of population of this study, and takes their examination's score. The data that have get from each instrument will be analyze and become the result of this study.

##### 1. Data Presentation of Test

To collect the data related to X variable (students' grammar mastery), the researcher use test as explained in the previous chapter. The researcher carries out the test to the students at the eleventh grade of SMA Tahfidh Putri Al-Amien. So the researcher starts collecting the data at 12nd April 2021.

Indicator of the test has same score in every questions which the materials contain of passive voice and cause and effect that has given

to students in the class. The researcher makes the questions with use RPP that the English teacher has been shared. Score of every question is 2 because there are 50 questions to measure students' grammar mastery in this study. This point for the right answer. And for the wrong answer is 0.

The test is given twice to students with the same questions which the first test as try out (see appendix VII). After accepting the responds of the sample or respondent of the test, the researcher interprets it to numerical data use SPSS. Then the researcher accounts the score of each respondent.

Based on the test at the eleventh grade of SMA Tahfidh Putri Al-Amien, the result can be seen in table as follow:

**Table 4.1 The Result of X variable (students' grammar mastery)**

<b>NO</b>	<b>Subject</b>	<b>Score</b>
1.	Adinda Rahmah Sekararum Firdausi	70
2.	Aisyah	60
3.	Aisyaturrodiyah	50
4.	Alifatin Nafida	50
5.	Aliya Dania Putri	60
6.	Angelique Nurul Istifadah	64
7.	Aslahiyah Arini Agustin	50
8.	Alya Rahmandani	52
9.	Chyndie Rafika Dewi	72
10.	Devina Putri Oktavia	70
11.	Dhorivatun Nuraisyah	76
12.	Dina Arina	70
13.	Dzata Inasah Bil Humaydah	70
14.	Fatimatuz Zahroh	74
15.	Fatthumah Nur Izzah	70
16.	Ferinda Intan Febriani	70
17.	Fitriya Nuril Hasanah	50

18.	Fiyna Mauliyyah Aysiyyah Bakti	60
19.	Iftah Rizki Fatimah Yasmin	70
20.	Lu'luul Maknunah	50
21.	Nabila Amalia Putri	62
22.	Nadira	60
23.	Nazela Ayusa Chamela	60
24.	Nofi Noer Holishoh	64
25.	Nur Aini Rahman	70
26.	Nur Badriyah	70
27.	Nur Lailatul Istiana	68
28.	Nuril Aflah Annida	56
29.	Nurus Sa'adah	70
30.	Rafika Eltsani	68
31.	Rizhki Sabyla Kusnadi Putri	72
32.	Robiatul Adawiyah	60
33.	Selma Azara	60
34.	Shelma Ainun Narita	76
35.	Shindyovita Ramadhona	66
36.	Syafida Samuri	60
37.	Unva Nurmala	68
38.	Zahratul Wardah	72
39.	Zakiyah Khoirunnisa'	60
40.	Zonariyah Najwa	56
<b>TOTAL</b>		<b>2558</b>

Based on the table above, the researcher claims that the students who is selected in this test are 40 students (N=40). These scores from 40 students have responded the test as test 1 in table 1. The total score of test's respond related to X variable (students' grammar mastery) is 2558. The highest score of test's respond score is 76. The lowest score of test's respond score is 50.

Then to collect the data related to Y variable (students' speaking skill), the researcher asks oral examination score for English learning to

academic's supervisor in this boarding school. The researcher takes the same respondents with X variable's respondents.

**Table 4.2 The Result of Y variable (students' speaking skill)**

<b>NO</b>	<b>Subject</b>	<b>Score</b>
1.	Adinda Rahmah Sekararum Firdausi	85
2.	Aisyah	60
3.	Aisyaturrodiyah	52
4.	Alifatin Nafida	52
5.	Aliya Dania Putri	61
6.	Angelique Nurul Istifadah	70
7.	Aslahiyah Arini Agustin	45
8.	Alya Rahmandani	60
9.	Chyndie Rafika Dewi	91
10.	Devina Putri Oktavia	80
11.	Dhorivatun Nuraisyah	97
12.	Dina Arina	75
13.	Dzata Inasah Bil Humaydah	75
14.	Fatimatuz Zahroh	96
15.	Fatthumah Nur Izzah	81
16.	Ferinda Intan Febriani	97
17.	Fitriya Nuril Hasanah	55
18.	Fiyna Mauliyyah Aysiyyah Bakti	80
19.	Iftah Rizki Fatimah Yasmin	69
20.	Lu'luul Maknunah	50
21.	Nabila Amalia Putri	89
22.	Nadira	74
23.	Nazela Ayusa Chamela	45
24.	Nofi Noer Holishoh	93
25.	Nur Aini Rahman	70
26.	Nur Badriyah	84
27.	Nur Lailatul Istiana	70
28.	Nuril Aflah Annida	64
29.	Nurus Sa'adah	75
30.	Rafika Eltsani	87

31.	Rizhki Sabyla Kurnadi Putri	93
32.	Robiatul Adawiyah	66
33.	Selma Azara	70
34.	Shelma Ainun Narita	95
35.	Shindyovita Ramadhona	50
36.	Syafida Samuri	70
37.	Unva Nurmala	60
38.	Zahratul Wardah	89
39.	Zakiyah Khoirunnisa'	88
40.	Zonariyah Najwa	75
<b>TOTAL</b>		<b>2938</b>

Based on the table above, the researcher claims that the students who is selected are 40 students (N=40). This score from 40 students which has score in oral examination for English learning. The total score related to Y variable (students' speaking skill) is 2938. The highest score is 97. The lowest score is 45.

The English teacher measures students' speaking skill by using oral test. It is done to know the extent students' speaking skill because in the boarding school has English program that obligate the students to talk English language during one week and will continue at the next week after Arabic week. It is also to increase students' speaking skill and of course to take the students' speaking skill score for the school examination which is the value of the score is real based on students' skill. Therefore, the English teacher is strict in measuring students' speaking skill.

## 2. Validity and Reliability of the Research Instruments

### a. Validity and Reliability of the Test

#### 1) Validity of the Test

To checking the validity of instruments is used to make sure that the data which was got is valid. In this case, the researcher uses test consists of 50 questions for X variable (students' grammar mastery) that must answer with the respondent. This test consists of content validity that the materials of this test were given by the teacher before. And for Y variable (students' speaking skill) was sure valid because its scores taken by the English teacher itself. The researcher used SPSS to help the researcher knows the validity of the grammar test. The test has done twice, the first test as try out.

**Table 4.3 Validity of The Grammar Test 1 and The Grammar Test 2**

**Correlations**

		Test Grammar 1	Test Grammar 2
Test Grammar 1	Pearson Correlation	1	.815 <sup>**</sup>
	Sig. (2-tailed)		.000
	N	40	40
Test Grammar 2	Pearson Correlation	.815 <sup>**</sup>	1
	Sig. (2-tailed)	.000	
	N	40	40

<sup>\*\*</sup>. Correlation is significant at the 0.01 level (2-tailed).

From the table above, the grammar test 1 and the grammar test 2 is valid.

The grammar test =  $0,815 > 0,304$

If r-value  $>$  r-table = the test is valid.

If r-value  $<$  r-table = the test is not valid.

## 2) Reliability of the Test

After the validity is approvable checked, the researcher should check the reliability of the test. For checking whether this test is reliable or not, the researcher uses Spearman Brown Formula using SPSS in order to make the researcher easier in counting the reliability of it. As follow:

**Table 4.4 Reliability of The Grammar Test**

### Case Processing Summary

		N	%
Cases	Valid	40	100.0
	Excluded <sup>a</sup>	0	.0
	Total	40	100.0

a. Listwise deletion based on all variables in the procedure.

### Reliability Statistics

Cronbach's Alpha	Part 1	Value	1.000
		N of Items	1 <sup>a</sup>
	Part 2	Value	1.000
		N of Items	1 <sup>b</sup>
Total N of Items			2
Correlation Between Forms			.815
Spearman-Brown Coefficient	Equal Length		.898
	Unequal Length		.898
Guttman Split-Half Coefficient			.896

a. The items are: Test Grammar 1

b. The items are: Test Grammar 2

### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
Test Grammar 1	63.9500	58.356	.815	.
Test Grammar 2	62.1500	71.669	.815	.

From the result above the test of this research is 0,898 based on Spearman-Brown formula. To decide whether the reliability of the test is acceptable or not, the researcher consults the  $\alpha$  value above with r-table.

If  $r - value > r\text{-table}$ ;  $\alpha\text{-value} > r\text{-table}$  : the test is reliable

If  $r - value < r\text{-table}$ ;  $\alpha\text{-value} < r\text{-table}$  : the test is not reliable



The number of students as respondent of questionnaire is 40 students. Considering  $N = 40$ , then r-table by significance 5% = 0,304 and r-table by significance 1% is 0,393.

Considering the r-table above, whether by significance 5% or 1 %, the output (0, 898) shows that it is significantly higher than r-table ( $0,898 > 0,304 > 0,393$ ). Therefore, the test used by the researcher in order to collect data related to X variable (students' grammar mastery) is reliable. And for Y variable (students' speaking skill) was reliable because its scores taken by the English teacher itself.

### 3) Analyzing the Data

After the final scores of both variables have been calculated, the next step is to calculate the r-value interprets correlation between X variable and Y variable in statistical data. Then it is correlated by using formula of r-test. In this case, the researcher uses Product Moment formula to measure whether there is correlation between X variable and Y variable of this study or not. The researcher also uses SPSS.

**Table 4.5 The Correlation between X variable and Y variable**

		Test Grammar	Test Speaking
Test Grammar	Pearson Correlation	1	.716 <sup>**</sup>

	Sig. (2-tailed)		.000
	N	40	40
Test Speaking	Pearson Correlation	.716**	1
	Sig. (2-tailed)	.000	
	N	40	40

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

**Table 4.6 The Calculations of X variable (students' grammar mastery) and Y variable (students' speaking skill)**

Subject	X	Y	XY	X <sup>2</sup>	Y <sup>2</sup>
1.	70	85	5950	4900	7225
2.	60	60	3600	3600	3600
3.	50	52	2600	2500	2704
4.	50	52	2808	2916	2704
5.	60	61	3660	3600	3721
6.	64	70	4480	4096	4900
7.	50	45	2250	2500	2025
8.	52	60	3120	2704	3600
9.	72	91	6552	5184	8281
10.	70	80	5600	4900	6400
11.	76	97	7372	5776	9409
12.	70	75	5250	4900	5625
13.	70	75	5250	4900	5625
14.	74	96	7104	5476	9216
15.	70	81	5670	4900	6561
16.	70	97	6596	4624	9409
17.	50	55	2750	2500	3025
18.	60	80	4800	3600	6400
19.	70	69	4830	4900	4761
20.	50	50	2500	2500	2500
21.	62	89	5518	3844	7921
22.	60	74	4440	3600	5476
23.	60	45	2700	3600	2025
24.	64	93	5952	4096	8649
25.	70	70	4900	4900	4900

26.	70	84	5880	4900	7056
27.	68	70	4760	4624	4900
28.	56	64	3584	3136	4096
29.	70	75	5250	4900	5625
30.	68	87	5916	4624	7569
31.	72	93	6696	5184	8649
32.	60	66	3960	3600	4356
33.	60	70	4200	3600	4900
34.	76	95	7220	5776	9025
35.	66	50	3300	4356	2500
36.	60	70	4200	3600	4900
37.	68	60	4080	4624	3600
38.	72	89	6408	5184	7921
39.	60	88	5280	3600	7744
40.	56	75	4200	3136	5625
TOTAL	2558	2938	191186	165860	225128

From the table above, the researcher determines that the number of subject of this study is 40 ( $N = 40$ ). The X column interprets the score of X variable (students' grammar mastery) the Y column interprets the score of Y variable (students' speaking skill), and the XY column interprets the multiplication between X and Y. While the X<sup>2</sup> and Y<sup>2</sup> interprets the result of quadratic score of each Item (X and Y). All of data above is used to measure of this study by using Product Moment formula. Here is the formula as follows:

$$r_{xy} = \frac{N \sum XY - (\sum X) (\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

$r_{xy}$  = Correlation coefficient between X and Y

$\sum XY$  = Sum of cross products of deviation scores for X  
and Y

$\sum X$  = Total score of X

$\sum Y$  = Total score of Y

N = Number of cases

$$r_{xy} = \frac{N \sum XY - (\sum X) (\sum Y)}{\sqrt{[N \sum X^2 - (\sum X)^2][N \sum Y^2 - (\sum Y)^2]}}$$

$$r_{xy} = \frac{40 \times 191186 - (2558) (2938)}{\sqrt{[40 \times 165860 - (2558)^2][40 \times 225128 - (2938)^2]}}$$

$$r_{xy} = \frac{7647440 - 7515404}{\sqrt{[6634400 - 6543364][9005120 - 8631844]}}$$

$$r_{xy} = \frac{132036}{\sqrt{91036 \times 373276}}$$

$$r_{xy} = \frac{132036}{\sqrt{33981553936}}$$

$$r_{xy} = \frac{132036}{184341}$$

$$r_{xy} = 0,716$$

From the calculation above, the researcher has *r - value* that is 0,716. Therefore, the researcher should compare it with the *r - table* that will be explained in the hypothesis testing below:

## B. Hypothesis Testing

The result of analysis data above is 0,716. It shows that the more students' understand the grammar the better the speaking skill. It also shows that there is significant correlation between X variable and Y variable in this study. To further examine, the researcher should compare the result of r-value with r-table. So the researcher can know whether there is significant correlation between X variable and Y variable of this research or not.

Because this study is education research, the researcher compares the r-value with the r-table by significance level 5%. By using the level of significance 5% or 1%, the hypothesis can be accepted or rejected if:

r-value > r-table: the Null Hypothesis (Ho) is rejected and the Alternative Hypothesis (Ha) is accepted.

r-value < r-table: the Null Hypothesis (Ho) is accepted and the Alternative Hypothesis (Ha) is rejected.<sup>1</sup>

Initially, to know the critical, the researcher should determine the degree of freedom (df) of this study. Since the number of sample of this study is 40 (N = 40), so the  $df = N - 2 = 40 - 2 = 38$

**Table 4.7 The Interpretation of Coefficient Correlation “r” Product Moment of Pearson for various df.**

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<sup>1</sup> Anas Sudijono, *Pengantar Statistik Pendidikan* (Jakarta: PT. Raja Grafindo Persada, 2014), 195

df. (degrees of freedom) db. (derajat bebas)	Many variables are correlated	
	2	
	Value "r" to degree of significance	
	5%	1%
1	0,977	1,000
2	0,950	0,990
3	0,878	0,959
4	0,811	0,917
5	0,754	0,874
6	0,707	0,834
7	0,666	0,798
8	0,632	0,765
9	0,602	0,735
10	0,576	0,708
11	0,553	0,684
12	0,532	0,661
13	0,514	0,641
14	0,497	0,623
15	0,482	0,606
16	0,468	0,590
17	0,456	0,575
18	0,444	0,561
19	0,433	0,549
20	0,423	0,537
21	0,413	0,526
22	0,404	0,515
23	0,396	0,505
24	0,388	0,496
25	0,381	0,487
26	0,374	0,478
27	0,367	0,470
28	0,361	0,463
29	0,355	0,456
30	0,349	0,449
35	0,325	0,418
40	0,304	0,393
45	0,288	0,372
50	0,273	0,354
60	0,250	0,325
70	0,232	0,302
80	0,217	0,283
90	0,205	0,267
100	0,195	0,254
125	0,174	0,228

150	0,159	0,208
200	0,138	0,181
300	0,113	0,148
400	0,098	0,128
500	0,088	0,115
1000	0,062	0,081

Based on r-table, it is found that the critical value of r-table by significance level 5% for  $df = 38$  is 0,304. By comparing the r-table and r-value of this study, it is found that the result of data analysis of this study is the more students' understand the grammar the better the speaking skill and there is significant correlation between X variable and Y variable ( $0,716 > 0,304$ ) by using significance level 5%. Therefore, the Null hypothesis ( $H_0$ ) is rejected in which the more students' understand the grammar is not the better the speaking skill and the relationship between X variable (students' grammar mastery) and Y variable (their speaking skill) is not significant correlation. On the other hand, the Alternative hypothesis is accepted in which the more students' understand the grammar the better the speaking skill and there is a significant correlation between X variable (students' grammar mastery) and Y variable (their speaking skill).

Finally, from the result of data analysis and hypothesis state the more students' understand the grammar the better the speaking skill and there is significant correlation between students' grammar mastery and students' speaking skill at The Eleventh Grade of SMA Tahfidh Putri Al-Amien Prenduan Sumenep.

### **C. Discussion**

The purpose in this research are to know do the more students' understand the grammar the better the speaking skill and how is the significant correlation between students' grammar mastery and their speaking skill at the eleventh grade of SMA Tahfidh Putri Al-Amien Prenduan Sumenep. The several information of this research was obtained by the researcher using SPSS program to analyze the data that has been collected of the study. The grammar mastery test has done by give 50 multiple choice questions to students. Indicator of the test has same score in every question which the materials contain of passive voice and cause and effect. Score of every question is 2 for the right answer and 0 for the wrong answer. Then for speaking skill the researcher ask to academic's supervisor in the boarding school based on the English teacher permission. The English teacher measures students' speaking skill by using oral test that became school examination. The students who are selected in this test are 40 students of 140 students. Grammar mastery test which given by the researcher as try out (in appendix VII) get total score 2486. Based on the table 4.1 the total score of grammar mastery is 2558. The highest score of test's respond score is 76 and the lowest score of test's respond is 50. Then in the table 4.2 the total score of speaking skill is 2938. The highest score of test's respond score is 97 and the lowest score of test's respond is 45. Based on the table 4.3, the table showed that the questions for grammar mastery test are valid.  $0,815 > 0,304$ . . In the table showed r-value of the questions is higher than r-table. The r-table in this research is 0, 304 with the level significant is 15%. In table 4.4, the result of the reliability test is



0,898 which used Spearman-Brown formula. The test is reliable with the numerical statistical  $0,898 > 0,304$ . Then for speaking skill score, it was valid and reliable because the score has gotten from the English teacher directly. Based on the table 4.5, it showed that there is correlation between students' grammar mastery and students' speaking skill that used SPSS program. It is the same result with product moment formula that the researcher used. The result is 0,716. It means that r-value of the questions is higher than r-table. It is  $0,716 > 0,304$ . By using level of significance 5%, since this study is education research. After comparing the r-value with the r-table (with  $df = 38$ ). The calculation of students' grammar mastery and students' speaking skill is; the total score of X variable (students' grammar mastery) is 2558 and the score total of Y variable (students' speaking skill) is 2938 as previous explanation. Then the total score of XY that interpret the multiplication is 191186, the total score of X<sup>2</sup> that interpret the result of quadratic score of students' grammar mastery is 165860, the score total of Y<sup>2</sup> that interpret the result of quadratic score of students' speaking skill is 225128. The last result showed that there is high / strong correlation between students' grammar mastery and students' speaking skill. It is significant correlation as checking r-product moment (table 3.1). Based on the statistical analysis, the more students' understand the grammar the better the speaking skill and there is the significant correlation between students' grammar mastery and students' speaking skill at the eleventh grade of SMA Tahfidh Putri Al-Amien Prenduan Sumenep. Therefore, the Null hypothesis (H<sub>0</sub>) is rejected

in which the more students' understand the grammar (X variable) is not the better the speaking skill (Y variable). On the other hand, the Alternative hypothesis is accepted in which the more students' understand the grammar (X variable) the better the speaking skill(Y variable).

In short, this research answers the question of; does the more students' understand the grammar the better the speaking skill at the eleventh grade of SMA Tahfidh Putri Al-Amien Prenduan Sumenep? And how is the significant correlation between students' grammar mastery and students' speaking skill at the eleventh grade of SMA Tahfidh Putri Al-Amien Prenduan Sumenep. This question is developed from the title of this research "*The Correlaton between Students' Grammar mastery and Students' Speaking Skill at The Eleventh Grade of SMA Tahfidh Pitri Al-Amien Prenduan Sumenep 2020/2021*".