

## **CHAPTER IV**

### **RESULT OF RESEARCH AND DISCUSSION**

This chapter explains about research finding. Research finding here will present about the data that gotten by researcher especially based on the instrument that is test. The items that will be presented in this chapter are presentation of data, research instrument validity and reliability, hypothesis testing and finding discussion.

#### **A. Presentation of Data**

After researcher collecting data, the next step that must be done by researcher is presented about the result of research that has been gotten by the researcher during the process of teaching learning at Al-Falah English Centre (AFEC). So, in this chapter the researcher will discuss about the result of the data. The data is test as the instrument in collecting data that has been given by the subject before it and the data related to dependent variable (students' speaking accuracy) and independent variable (students' grammar mastery).

##### **1. The Result of Grammar Mastery Test**

As stated in the previous chapter (chapter III), Test is the first primary instrument that used to collect the data related to the variable X that is the using of Grammar Mastery. Then the result or finding of test data will be analyzed into hypothesis testing.

The population of this research is members of AFEC that consist of four classes. The researcher took all of the class that consists of 33

students to be the sample in this study because researcher has chosen all of them.

To get the result of test data, the researcher give to all of members of AFEC that consist of 33 students. The list of test are 20 questions with four alternative answers (multiple choice) which are A, B, C, and D. The alternative that used by researcher is to change the data quantitative into numerical data. The alternative scoring will be explained in the following formula:

**Table 4.1**

**Table of Alternative Scoring of Questionnaire**

<b>Score</b>	<b>Note</b>
5	True answer
0	Wrong answer

For the population of this research contain of member AFEC (Al-Falah English Centre) Dempo-Barat Pasean. In order to make researcher easy to get accurate data, the researcher takes all of the members of AFEC. So, the sample of the students consists of 33 students and the researcher takes on 5% errors.

**a. The Result of Data**

In this research, the researcher carried out the research at Al-Falah English Centre (AFEC) Dempo Barat Pasean and given the test. The researcher only needs one meeting in spreading out the test, it was

held on the 30<sup>th</sup> November 2020 at 07.00 until 08.30. The meeting covered four stages of activities, they are:

1. Entering the class and checking the students' name list
2. Spreading out the test sheet
3. Giving the clear instruction about the test
4. Collecting the answer of test.

In this case, the data which are obtained from the test will be analyzed by using statistical method. Actually, the data that were obtained from the test is not in numerical form. So, the researcher changed the data into numerical form by giving score of each test's items. The score of the students' test it can be seen in the table as follow:

**Table 4.2**  
**Test Answer Score Related to variable X (Grammar Mastery)**

NO	Number Items of Grammar Mastery Test																				SUM
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0	5	5	95
2	5	5	5	5	5	5	5	0	5	5	5	5	0	5	5	5	5	5	0	5	85
3	5	5	5	5	5	5	5	0	5	5	0	5	0	5	5	5	5	5	0	5	80
4	5	5	5	5	5	5	5	0	5	5	5	5	0	5	5	5	5	5	0	5	85
5	5	5	5	5	5	5	5	0	5	5	5	5	0	5	5	5	5	5	0	5	85
6	5	5	5	5	5	5	5	0	5	5	5	5	0	5	5	5	5	5	0	5	85
7	5	5	5	0	5	5	5	0	5	5	5	5	0	5	0	5	0	5	0	0	65
8	5	5	0	5	5	5	5	0	5	5	0	5	0	5	5	5	5	5	0	5	75
9	5	5	5	5	5	5	5	0	5	5	5	5	0	5	5	5	5	5	0	5	85
10	5	5	0	5	5	5	5	0	5	5	0	5	0	5	5	5	5	5	0	5	75
11	5	5	5	5	5	5	5	0	5	5	5	5	0	5	5	0	5	0	5	5	80
12	5	5	0	5	5	5	5	0	5	5	0	5	0	5	5	5	5	5	0	5	75
13	5	5	5	5	5	5	5	5	5	5	5	5	0	0	5	5	0	5	5	0	80
14	5	5	5	0	0	0	5	0	5	0	0	5	0	0	0	0	0	5	5	0	40

15	5	0	0	0	5	5	5	0	0	5	5	5	0	5	0	5	0	0	5	0	50
16	5	5	5	5	5	5	5	0	5	5	0	5	0	0	5	5	5	5	5	5	80
17	5	5	5	5	5	5	5	0	5	5	5	5	5	5	5	5	5	5	5	5	95
18	5	5	5	5	5	5	5	5	5	5	5	5	0	0	5	5	0	5	5	5	85
19	0	5	5	0	5	0	5	0	5	5	5	5	0	0	5	5	0	0	5	5	60
20	0	5	5	0	5	0	5	0	5	5	5	5	0	0	5	5	0	0	5	5	60
21	5	5	5	0	5	5	5	0	5	5	5	5	0	5	5	5	5	5	0	0	75
22	5	5	5	0	5	5	5	0	5	5	5	5	5	5	5	5	5	0	0	5	80
23	5	5	5	5	5	5	5	0	5	5	5	0	0	0	5	5	5	5	5	0	75
24	5	5	5	5	5	5	5	0	5	5	5	5	0	5	5	5	5	5	0	5	85
25	5	5	5	5	5	5	5	0	5	5	0	5	0	5	5	5	5	5	0	5	80
26	5	0	0	5	5	5	0	0	5	5	0	0	0	0	5	5	5	5	5	5	60
27	5	5	5	0	5	5	5	0	5	5	0	0	5	0	5	5	0	0	5	0	60
28	5	5	0	0	5	0	5	0	0	5	0	0	0	5	5	5	0	0	0	0	40
29	5	0	0	0	5	5	5	0	0	5	5	0	0	5	0	0	5	0	5	0	45
30	5	0	5	0	5	0	5	0	0	5	0	0	0	0	0	5	0	0	0	5	35
31	5	0	0	0	5	5	0	0	0	0	5	0	0	0	0	5	0	0	0	0	25
32	0	5	5	5	5	0	5	0	0	0	5	0	5	0	5	5	0	0	5	5	60
33	5	5	5	0	5	5	5	0	5	5	5	0	5	0	5	5	5	5	0	5	70
<b>Total Score</b>																				<b>2310</b>	

Based on the table above, the researcher knows that the number of students who joined test are 33 students ( $N = 33$ ) and total of the test are 2310. In this case, there are various score of students' test score. The highest score is 95 and lowest score is 25 of total of students are 33 students.

## **b. Validity and Reliability of Questionnaire**

### **1) Validity of test**

The validity is use to make sure that the obtained data above is valid or not. For this research the researcher uses content validity to know whether the test is valid or not because

content validity is focus on evaluating or measuring achievement test.<sup>1</sup> So in this case the researcher uses content validity to make the instrument related with the phenomenon like the question about the grammar mastery.

The result of the test is not numerical score, so the researcher use scale likert to give score to each item of the test. Before testing the validity of test, the researcher will present the table coefficient value of correlation “r” product moment, as follow:<sup>2</sup>

**Table 4.3**

**Table of Coefficient Value of Correlation “R” Product Moment**

	<b>The distribution value <math>r_{table}</math></b>
<b>Significance</b>	5%
<b>N</b>	33
<b><math>r_{table}</math></b>	0,344

To test to validity of test, the researcher uses SPSS 25, while the steps are as follow:

- a) Click SPSS
- b) Click *data view* on Spss and input the result of questionnaires

---

<sup>1</sup> Donald Ary et al., *Introduction to Research in Education*, 8th ed (Belmont, CA: Wadsworth, 2010), 225.

<sup>2</sup> Arikunto, *Prosedur Penelitian Suatu Pendekatan Praktik*, 402.

c) Click *Variable view* in the bottom left corner to change the name column of *VAR0001* to *Variable X*

d) Back to *Data View* in the bottom left corner

e) To calculate the validity of the questionnaires, click

*Analyze, Select Correlate to Bivariate*

f) It shows *Bivariate Correlation* column, next *Select all item*

Then paste to the *Column of Variable*

g) Make sure the column of *Pearson* has been selected then click OK

**Table 4.4**

**Testing of Validity of test**

		Correlations					
		X01	X02	X03	X04	X05	X06
X01	Pearson Correlation	1	-.134	-.179	.177	-.056	.671**
	Sig. (2-tailed)		.458	.319	.326	.757	.000
	N	33	33	33	33	33	33
X02	Pearson Correlation	-.134	1	.550**	.351*	-.075	.020
	Sig. (2-tailed)	.458		.001	.045	.679	.912
	N	33	33	33	33	33	33
X03	Pearson Correlation	-.179	.550**	1	.123	-.100	-.083
	Sig. (2-tailed)	.319	.001		.496	.580	.645

	N	33	33	33	33	33	33
X04	Pearson Correlation	.177	.351*	.123	1	.219	.424*
	Sig. (2-tailed)	.326	.045	.496		.220	.014
	N	33	33	33	33	33	33
X05	Pearson Correlation	-.056	-.075	-.100	.219	1	.375*
	Sig. (2-tailed)	.757	.679	.580	.220		.032
	N	33	33	33	33	33	33
X06	Pearson Correlation	.671**	.020	-.083	.424*	.375*	1
	Sig. (2-tailed)	.000	.912	.645	.014	.032	
	N	33	33	33	33	33	33
X07	Pearson Correlation	-.080	.601**	.449**	.055	-.045	-.120
	Sig. (2-tailed)	.657	.000	.009	.761	.804	.507
	N	33	33	33	33	33	33
X08	Pearson Correlation	.100	.134	.179	.255	.056	.149
	Sig. (2-tailed)	.580	.458	.319	.152	.757	.408
	N	33	33	33	33	33	33
X09	Pearson Correlation	.124	.677**	.467**	.424*	-.083	.389*
	Sig. (2-tailed)	.491	.000	.006	.014	.645	.025
	N	33	33	33	33	33	33
X10	Pearson Correlation	.267	.160	.067	.177	.559**	.398*
	Sig. (2-tailed)	.134	.373	.711	.326	.001	.022

	N	33	33	33	33	33	33
X11	Pearson Correlation	-.224	.060	.350*	-.044	.250	.167
	Sig. (2-tailed)	.211	.741	.046	.809	.161	.354

Correlations							
		X07	X08	X09	X10	X11	X12
X01	Pearson Correlation	-.080	.100	.124	.267	-.224	.043**
	Sig. (2-tailed)	.657	.580	.491	.134	.211	.812
	N	33	33	33	33	33	33
X02	Pearson Correlation	.601	.134	.677**	.160*	.060	.500
	Sig. (2-tailed)	.000	.458	.000	.373	.741	.003
	N	33	33	33	33	33	33
X03	Pearson Correlation	.449	.179**	.467	.067	.350	.289
	Sig. (2-tailed)	.009	.319	.006	.711	.046	.103
	N	33	33	33	33	33	33
X04	Pearson Correlation	.055	.255*	.424	.177	-.044	.342*
	Sig. (2-tailed)	.761	.152	.014	.326	.809	.052
	N	33	33	33	33	33	33
X05	Pearson Correlation	-.045	.056	-.083	.559	.250	-.108*
	Sig. (2-tailed)	.804	.757	.645	.001	.161	.549
	N	33	33	33	33	33	33



X06	Pearson Correlation	-.120**	.149	.389	.398*	.167*	.241
	Sig. (2-tailed)	.507	.408	.025	.022	.354	.177
	N	33	33	33	33	33	33
X07	Pearson Correlation	1	.080**	.210**	.361	.090	.415
	Sig. (2-tailed)		.657	.242	.039	.619	.016
	N	33	33	33	33	33	33
X08	Pearson Correlation	.080	1	.149	.100	.224	.194
	Sig. (2-tailed)	.657		.408	.580	.211	.280
	N	33	33	33	33	33	33
X09	Pearson Correlation	.210	.149**	1**	.398*	.000	.593*
	Sig. (2-tailed)	.242	.408		.022	1.000	.000
	N	33	33	33	33	33	33
X10	Pearson Correlation	.361	.100	.398	1	.000**	.280*
	Sig. (2-tailed)	.039	.580	.022		1.000	.115
	N	33	33	33	33	33	33
X11	Pearson Correlation	.090	.224	.000*	.000	1	.144
	Sig. (2-tailed)	.619	.211	1.000	1.000		.423

Correlations							
		X13	X14	X15	X16	X17	X18
X01	Pearson Correlation	-.124	.392	-.149	-.100	.418	.418**

	Sig. (2-tailed)	.491	.024	.408	.580	.015	.015
	N	33	33	33	33	33	33
X02	Pearson Correlation	.199	.178	.677**	.160*	.208	.383
	Sig. (2-tailed)	.266	.321	.000	.373	.246	.028
	N	33	33	33	33	33	33
X03	Pearson Correlation	.267	-.167**	.283	.067	.013	.160
	Sig. (2-tailed)	.134	.354	.110	.711	.941	.373
	N	33	33	33	33	33	33
X04	Pearson Correlation	-.102	.238*	.585	.177	.551	.551*
	Sig. (2-tailed)	.571	.181	.000	.326	.001	.001
	N	33	33	33	33	33	33
X05	Pearson Correlation	.083	.219	.375	.559	.234	-.134*
	Sig. (2-tailed)	.645	.220	.032	.001	.190	.458
	N	33	33	33	33	33	33
X06	Pearson Correlation	.019**	.424	.185	.124*	.624*	.460
	Sig. (2-tailed)	.919	.014	.302	.491	.000	.007
	N	33	33	33	33	33	33
X07	Pearson Correlation	.120	.315**	.210**	-.080	.072	.072
	Sig. (2-tailed)	.507	.074	.242	.657	.690	.690
	N	33	33	33	33	33	33
X08	Pearson Correlation	.124	-.177	.149	.100	-.199	.020

	Sig. (2-tailed)	.491	.326	.408	.580	.266	.912
	N	33	33	33	33	33	33
X09	Pearson Correlation	.019	.102**	.593**	.124*	.460	.624*
	Sig. (2-tailed)	.919	.571	.000	.491	.007	.000
	N	33	33	33	33	33	33
X10	Pearson Correlation	-.124	.392	.398	.267	.418**	.199*
	Sig. (2-tailed)	.491	.024	.022	.134	.015	.266
	N	33	33	33	33	33	33
X11	Pearson Correlation	.167	.088	.000*	.000	.000	-.134
	Sig. (2-tailed)	.354	.627	1.000	1.000	1.000	.458

Correlations				
		X19	X20	TOTAL
X01	Pearson Correlation	-.346	.000	.180
	Sig. (2-tailed)	.048	1.000	.315
	N	33	33	33
X02	Pearson Correlation	-.123	.139	.651**
	Sig. (2-tailed)	.494	.441	.000
	N	33	33	33
X03	Pearson Correlation	.090	.155**	.464
	Sig. (2-tailed)	.617	.389	.007
	N	33	33	33
X04	Pearson Correlation	-.011	.272*	.725

	Sig. (2-tailed)	.950	.126	.000
	N	33	33	33
X05	Pearson Correlation	-.194	.097	.302
	Sig. (2-tailed)	.280	.592	.087
	N	33	33	33
X06	Pearson Correlation	-.201**	.086	.560
	Sig. (2-tailed)	.262	.634	.001
	N	33	33	33
X07	Pearson Correlation	-.023	.070**	.398**
	Sig. (2-tailed)	.898	.700	.022
	N	33	33	33
X08	Pearson Correlation	.346	.520	.301
	Sig. (2-tailed)	.048	.002	.089
	N	33	33	33
X09	Pearson Correlation	-.043	.172**	.739**
	Sig. (2-tailed)	.812	.338	.000
	N	33	33	33
X10	Pearson Correlation	-.135	.115	.511
	Sig. (2-tailed)	.455	.522	.002
	N	33	33	33
X11	Pearson Correlation	.129	.106	.257*
	Sig. (2-tailed)	.474	.559	.149

Correlations						
	X01	X02	X03	X04	X05	X06

X11	N	33	33	33	33	33	33**
X12	Pearson Correlation	.043	.500	.289	.342	-.108	.241
	Sig. (2-tailed)	.812	.003	.103	.052	.549	.177
	N	33	33	33**	33*	33	33
X13	Pearson Correlation	-.124	.199	.267	-.102	.083	.019
	Sig. (2-tailed)	.491	.266	.134	.571	.645	.919
	N	33	33**	33	33	33	33
X14	Pearson Correlation	.392	.178	-.167	.238	.219	.424
	Sig. (2-tailed)	.024	.321	.354	.181	.220	.014
	N	33	33*	33	33	33	33*
X15	Pearson Correlation	-.149	.677	.283	.585	.375	.185
	Sig. (2-tailed)	.408	.000	.110	.000	.032	.302
	N	33	33	33	33	33	33*
X16	Pearson Correlation	-.100	.160	.067	.177	.559	.124
	Sig. (2-tailed)	.580	.373	.711	.326	.001	.491
	N	33**	33	33	33*	33*	33
X17	Pearson Correlation	.418	.208	.013	.551	.234	.624
	Sig. (2-tailed)	.015	.246	.941	.001	.190	.000
	N	33	33**	33**	33	33	33
X18	Pearson Correlation	.418	.383	.160	.551	-.134	.460
	Sig. (2-tailed)	.015	.028	.373	.001	.458	.007

	N	33	33	33	33	33	33
X19	Pearson Correlation	-.346	-.123	.090	-.011	-.194	-.201
	Sig. (2-tailed)	.048	.494	.617	.950	.280	.262
	N	33	33**	33**	33*	33	33*
X20	Pearson Correlation	.000	.139	.155	.272	.097	.086
	Sig. (2-tailed)	1.000	.441	.389	.126	.592	.634
	N	33	33	33	33	33**	33*
TOTAL	Pearson Correlation	.180	.651	.464	.725	.302	.560
	Sig. (2-tailed)	.315	.000	.007	.000	.087	.001
	N	33	33	33*	33	33	33

Correlations							
		X07	X08	X09	X10	X11	X12
X11	N	33	33	33	33	33	33**
X12	Pearson Correlation	.415	.194	.593	.280	.144	1
	Sig. (2-tailed)	.016	.280	.000	.115	.423	
	N	33	33	33**	33*	33	33
X13	Pearson Correlation	.120	.124	.019	-.124	.167	-.241
	Sig. (2-tailed)	.507	.491	.919	.491	.354	.177
	N	33	33**	33	33	33	33
X14	Pearson Correlation	.315	-.177	.102	.392	.088	.481

	Sig. (2-tailed)	.074	.326	.571	.024	.627	.005
	N	33	33*	33	33	33	33*
X15	Pearson Correlation	.210	.149	.593	.398	.000	.241
	Sig. (2-tailed)	.242	.408	.000	.022	1.000	.177
	N	33	33	33	33	33	33*
X16	Pearson Correlation	-.080	.100	.124	.267	.000	.043
	Sig. (2-tailed)	.657	.580	.491	.134	1.000	.812
	N	33**	33	33	33*	33*	33
X17	Pearson Correlation	.072	-.199	.460	.418	.000	.244
	Sig. (2-tailed)	.690	.266	.007	.015	1.000	.171
	N	33	33**	33**	33	33	33
X18	Pearson Correlation	.072	.020	.624	.199	-.134	.386
	Sig. (2-tailed)	.690	.912	.000	.266	.458	.027
	N	33	33	33	33	33	33
X19	Pearson Correlation	-.023	.346	-.043	-.135	.129	-.124
	Sig. (2-tailed)	.898	.048	.812	.455	.474	.491
	N	33	33**	33**	33*	33	33*
X20	Pearson Correlation	.070	.520	.172	.115	.106	.186
	Sig. (2-tailed)	.700	.002	.338	.522	.559	.299
	N	33	33	33	33	33**	33*
TOTAL	Pearson Correlation	.398	.301	.739	.511	.257	.621

	Sig. (2-tailed)	.022	.089	.000	.002	.149	.000
	N	33	33	33*	33	33	33

Correlations							
		X13	X14	X15	X16	X17	X18
X11	N	33	33	33	33	33	33**
X12	Pearson Correlation	-.241	.481	.241	.043	.244	.386
	Sig. (2-tailed)	.177	.005	.177	.812	.171	.027
	N	33	33	33**	33*	33	33
X13	Pearson Correlation	1	-.102	.222	.149	.030	-.297
	Sig. (2-tailed)		.571	.214	.408	.870	.093
	N	33	33**	33	33	33	33
X14	Pearson Correlation	-.102	1	.102	-.039	.551	.164
	Sig. (2-tailed)	.571		.571	.828	.001	.362
	N	33	33*	33	33	33	33*
X15	Pearson Correlation	.222	.102	1	.398	.460	.297
	Sig. (2-tailed)	.214	.571		.022	.007	.093
	N	33	33	33	33	33	33*
X16	Pearson Correlation	.149	-.039	.398	1	-.020	.199
	Sig. (2-tailed)	.408	.828	.022		.912	.266
	N	33**	33	33	33*	33*	33



X17	Pearson Correlation	.030	.551	.460	-.020	1	.476
	Sig. (2-tailed)	.870	.001	.007	.912		.005
	N	33	33**	33**	33	33	33
X18	Pearson Correlation	-.297	.164	.297	.199	.476	1
	Sig. (2-tailed)	.093	.362	.093	.266	.005	
	N	33	33	33	33	33	33
X19	Pearson Correlation	.201	-.510	-.043	-.346	-.322	-.322
	Sig. (2-tailed)	.262	.002	.812	.048	.068	.068
	N	33	33**	33**	33*	33	33*
X20	Pearson Correlation	.387	.170	.215	.115	.242	-.173
	Sig. (2-tailed)	.026	.345	.229	.522	.176	.337
	N	33	33	33	33	33**	33*
TOTAL	Pearson Correlation	.179	.424	.717	.270	.647	.539
	Sig. (2-tailed)	.318	.014	.000	.128	.000	.001
	N	33	33	33*	33	33	33

Correlations				
		X19	X20	TOTAL
X11	N	33	33	33
X12	Pearson Correlation	-.124	.186	.621
	Sig. (2-tailed)	.491	.299	.000
	N	33	33	33**

X13	Pearson Correlation	.201	.387	.179
	Sig. (2-tailed)	.262	.026	.318
	N	33	33**	33
X14	Pearson Correlation	-.510	.170	.424
	Sig. (2-tailed)	.002	.345	.014
	N	33	33*	33
X15	Pearson Correlation	-.043	.215	.717
	Sig. (2-tailed)	.812	.229	.000
	N	33	33	33
X16	Pearson Correlation	-.346	.115	.270
	Sig. (2-tailed)	.048	.522	.128
	N	33**	33	33
X17	Pearson Correlation	-.322	.242	.647
	Sig. (2-tailed)	.068	.176	.000
	N	33	33**	33**
X18	Pearson Correlation	-.322	-.173	.539
	Sig. (2-tailed)	.068	.337	.001
	N	33	33	33
X19	Pearson Correlation	1	.133	-.087
	Sig. (2-tailed)		.459	.631
	N	33	33**	33**
X20	Pearson Correlation	.133	1	.374
	Sig. (2-tailed)	.459		.032
	N	33	33	33
TOTAL	Pearson Correlation	-.087	.374	1

	Sig. (2-tailed)	.631	.032	
	N	33	33	34*
**. Correlation is significant at the 0.01 level (2-tailed).				
*. Correlation is significant at the 0.05 level (2-tailed).				

To know which item of the test is valid or not, it must see the  $r_{table}$ . In this case the total of member at AFEC is 33 members, and all members are the participant of this research so total of participants are 33 members. In this research, the researcher uses 5% and the  $r_{table}$  is 0,344.

Based on the data above, there are seven items of questionnaires which not valid that are item 1, 5, 8, 11, 13, 16, and 19. This is the explanation why the item 3 and 5 are not valid:

1. Item 1 is not valid because the value of Pearson correlation is  $0,180 < r_{table} 0,344$ .
2. Item 5 is not valid because the value of Pearson correlation is  $0,302 < r_{table} 0,344$ .
3. Item 8 is not valid because the value of Pearson correlation is  $0,301 < r_{table} 0,344$ .
4. Item 11 is not valid because the value of Pearson correlation is  $0,257 < r_{table} 0,344$ .
5. Item 13 is not valid because the value of Pearson correlation is  $0,179 < r_{table} 0,344$ .

6. Item 16 is not valid because the value of Pearson correlation is  $0,270 < r_{table} 0,344$ .

7. Item 19 is not valid because the value of Pearson correlation is  $0,087 < r_{table} 0,344$ .

After testing the validity of the test, there are seven items of test which are not valid because the value of Pearson correlation is lower than  $r_{table}$  and there are 13 items of test which are valid because the value of the Pearson correlation is higher than  $r_{table}$ .

**2) Reliability of Test**

The reliability is used to make sure that the obtained data above is reliable. In this research, to know the reliability of the test, the researcher uses internal consistency reliability and calculates the grammar mastery using coefficient alpha. In order to help the researcher in counting the reliability of test, so the researcher makes a table of test items analysis of students' test scores. This table is used to find out the reliability of test which used to find out the grammar mastery data such as follow:

**Table 4.5**

**Table of Test Items Analysis of Students' Test Scores**

NO	NUMBER OF ITEMS																				TOTAL	TOTAL (2)
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
1	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	0	5	55	95	90 25
2	5	5	5	5	5	5	5	0	5	5	5	5	0	5	5	5	5	5	0	5	85	72 25

3	5	5	5	5	5	5	5	0	5	5	0	5	0	5	5	5	5	5	0	5	80	64 00
4	5	5	5	5	5	5	5	0	5	5	5	5	0	5	5	5	5	5	0	5	85	72 25
5	5	5	5	5	5	5	5	0	5	5	5	5	0	5	5	5	5	5	0	5	85	72 25
6	5	5	5	5	5	5	5	0	5	5	5	5	0	5	5	5	5	5	0	5	85	72 25
7	5	5	5	0	5	5	5	0	5	5	5	5	0	5	0	5	0	5	0	0	65	42 25
8	5	5	0	5	5	5	5	0	5	5	0	5	0	5	5	5	5	5	0	5	75	56 25
9	5	5	5	5	5	5	5	0	5	5	5	5	0	5	5	5	5	5	0	5	85	72 25
10	5	5	0	5	5	5	5	0	5	5	0	5	0	5	5	5	5	5	0	5	75	56 25
11	5	5	5	5	5	5	5	0	5	5	5	5	0	5	5	0	5	0	5	5	80	64 00
12	5	5	0	5	5	5	5	0	5	5	0	5	0	5	5	5	5	5	0	5	75	56 25
13	5	5	5	5	5	5	5	5	5	5	5	5	0	0	5	5	0	5	5	0	80	64 00
14	5	5	5	0	0	0	5	0	5	0	0	5	0	0	0	0	0	5	5	0	40	16 00
15	5	0	0	0	5	5	5	0	0	5	5	5	0	5	0	5	0	0	5	0	50	25 00
16	5	5	5	5	5	5	5	0	5	5	0	5	0	0	5	5	5	5	5	5	80	64 00
17	5	5	5	5	5	5	5	0	5	5	5	5	5	5	5	5	5	5	5	5	95	90 25
18	5	5	5	5	5	5	5	5	5	5	5	5	0	0	5	5	0	5	5	5	85	72 25
19	0	5	5	0	5	0	5	0	5	5	5	5	0	0	5	5	0	0	5	5	60	36 00
20	0	5	5	0	5	0	5	0	5	5	5	5	0	0	5	5	0	0	5	5	60	36 00
21	5	5	5	0	5	5	5	0	5	5	5	5	0	5	5	5	5	5	0	0	75	56 25
22	5	5	5	0	5	5	5	0	5	5	5	5	5	5	5	5	5	0	0	5	80	64 00
23	5	5	5	5	5	5	5	0	5	5	5	0	0	0	5	5	5	5	5	0	75	56 25
24	5	5	5	5	5	5	5	0	5	5	5	5	0	5	5	5	5	5	0	5	85	72 25
25	5	5	5	5	5	5	5	0	5	5	0	5	0	5	5	5	5	5	0	5	80	64 00
26	5	0	0	5	5	5	0	0	5	5	0	0	0	0	5	5	5	5	5	5	60	36 00
27	5	5	5	0	5	5	5	0	5	5	0	0	5	0	5	5	0	0	5	0	60	36 00
28	5	5	0	0	5	0	5	0	0	5	0	0	0	5	5	5	0	0	0	0	40	16 00
29	5	0	0	0	5	5	5	0	0	5	5	0	0	5	0	0	5	0	5	0	45	20 25
30	5	0	5	0	5	0	5	0	0	5	0	0	0	0	0	5	0	0	0	5	35	12 25
31	5	0	0	0	5	5	0	0	0	0	5	0	0	0	0	5	0	0	0	0	25	62 5
32	0	5	5	5	5	0	5	0	0	0	5	0	5	0	5	5	0	0	5	5	60	36 00
33	5	5	5	0	5	5	5	0	5	5	5	0	5	0	5	5	5	5	0	5	70	49 00
<b>SU M</b>	<b>15 0</b>	<b>14 0</b>	<b>12 5</b>	<b>10 0</b>	<b>16 0</b>	<b>13 5</b>	<b>15 5</b>	<b>10</b>	<b>13 5</b>	<b>16 0</b>	<b>95</b>	<b>13 0</b>	<b>20</b>	<b>11 0</b>	<b>13 5</b>	<b>15 0</b>	<b>10 5</b>	<b>11 0</b>	<b>75</b>	<b>11 5</b>	<b>23 10</b>	<b>16 94 50</b>

Su	22	19	15	10	25	18	24		18	25		16		12	18	22	11	12		13	53		
m	50	60	62	00	60	22	02	10	22	60	90	90	40	10	22	50	02	10	56	22	36		
(2)	0	0	5	0	0	5	5	0	5	0	25	0	0	0	5	0	5	0	25	5	10	0	

After the researcher know about the data above, the researcher accounts the data use the formula of Alpha

$$r_{11} = \left( \frac{K}{K-1} \right) \left( 1 - \frac{\sum S_i^2}{S_t^2} \right)$$

To get the sum of items total variance ( $\sum S_i^2$ ), the researcher calculates the variance of each item, as follow:

$$S_{(1)}^2 = \frac{22500 \frac{150^2}{33}}{33} = \frac{22500 - 681,81}{33} = \frac{21818}{33} = \mathbf{661,15}$$

$$S_{(2)}^2 = \frac{19600 \frac{140^2}{33}}{33} = \frac{19600 - 593,9}{33} = \frac{19006}{33} = \mathbf{575,9}$$

$$S_{(3)}^2 = \frac{15625 \frac{125^2}{33}}{33} = \frac{15625 - 473,5}{33} = \frac{15151,5}{33} = \mathbf{459,13}$$

$$S_{(4)}^2 = \frac{10000 \frac{100^2}{33}}{33} = \frac{10000 - 303,03}{33} = \frac{9696,9}{33} = \mathbf{293,8}$$

$$S_{(5)}^2 = \frac{25600 \frac{160^2}{33}}{33} = \frac{25600 - 775,7}{33} = \frac{24824,3}{33} = \mathbf{752,2}$$

$$S_{(6)}^2 = \frac{18225 \frac{135^2}{33}}{33} = \frac{18225 - 552,2}{33} = \frac{17672,8}{33} = \mathbf{535,5}$$

$$S_{(7)}^2 = \frac{24025 \frac{155^2}{33}}{33} = \frac{24025 - 728,03}{33} = \frac{23296,9}{33} = \mathbf{705,9}$$

$$S_{(8)}^2 = \frac{100 \frac{10^2}{33}}{33} = \frac{100 - 3,030}{33} = \frac{96,97}{33} = \mathbf{2,93}$$

$$s_{(9)}^2 = \frac{18225 \frac{135^2}{33}}{33} = \frac{18225 - 552,2}{33} = \frac{17672,8}{33} = \mathbf{535,5}$$

$$s_{(10)}^2 = \frac{25600 \frac{160^2}{33}}{33} = \frac{25600 - 775,7}{33} = \frac{24824,3}{33} = \mathbf{752,2}$$

$$s_{(11)}^2 = \frac{9025 \frac{95^2}{33}}{33} = \frac{9025 - 273,4}{33} = \frac{8751,6}{33} = \mathbf{265,2}$$

$$s_{(12)}^2 = \frac{16900 \frac{130^2}{33}}{33} = \frac{16900 - 512,12}{33} = \frac{16387,8}{33} = \mathbf{496,6}$$

$$s_{(13)}^2 = \frac{400 \frac{20^2}{33}}{33} = \frac{400 - 12,12}{33} = \frac{387,8}{33} = \mathbf{11,75}$$

$$s_{(14)}^2 = \frac{12100 \frac{110^2}{33}}{33} = \frac{12100 - 366,6}{33} = \frac{11733,4}{33} = \mathbf{355,5}$$

$$s_{(15)}^2 = \frac{18225 \frac{135^2}{33}}{33} = \frac{18225 - 552,2}{33} = \frac{17672,8}{33} = \mathbf{535,5}$$

$$s_{(16)}^2 = \frac{22500 \frac{150^2}{33}}{33} = \frac{22500 - 681,81}{33} = \frac{21818}{33} = \mathbf{661,15}$$

$$s_{(17)}^2 = \frac{11025 \frac{105^2}{33}}{33} = \frac{11025 - 334,09}{33} = \frac{0690,9}{33} = \mathbf{323,9}$$

$$s_{(18)}^2 = \frac{12100 \frac{110^2}{33}}{33} = \frac{12100 - 366,6}{33} = \frac{11733,4}{33} = \mathbf{355,5}$$

$$s_{(19)}^2 = \frac{5625 \frac{75^2}{33}}{33} = \frac{5625 - 170,4}{33} = \frac{5454,6}{33} = \mathbf{165,3}$$

$$s_{(20)}^2 = \frac{13225 \frac{115^2}{33}}{33} = \frac{13225 - 400,7}{33} = \frac{12824,3}{33} = \mathbf{388,6}$$

$$\begin{aligned} \sum S_i^2 &= s_{(1)}^2 + s_2^2 + s_{(3)}^2 + s_4^2 + s_{(5)}^2 + s_{(6)}^2 + s_{(7)}^2 + s_{(8)}^2 \\ &\quad + s_{(9)}^2 + s_{(10)}^2 + s_{(11)}^2 + s_{(12)}^2 + s_{(13)}^2 + s_{(14)}^2 \\ &\quad + s_{(15)}^2 + s_{(16)}^2 + s_{(17)}^2 + s_{(18)}^2 + s_{(19)}^2 + s_{(20)}^2 \end{aligned}$$

$$\begin{aligned} \sum S_i^2 &= 661,15 + 575,9 + 459,13 + 293,8 + 752,2 + 535,5 \\ &\quad + 705,9 + 2,93 + 535,5 + 752,2 + 265,2 + 496,6 + 11,75 + 355,5 \\ &\quad + 535,5 + 661,15 + 323,9 + 355,5 + 165,3 + 388,6 = \mathbf{8833,53} \end{aligned}$$

From the result above, the Sum of Each item total variance are **8833,53**.

After calculate the sum of each item variance, the researcher calculate the total variance of the total score, as follow:

$$S_t^2 = \frac{169450 \frac{2310^2}{33}}{33} = \frac{169450 - 161700}{33} = \frac{7750}{33} = \mathbf{234,8}$$

From the result above, the Sum of total variance of the total score are **234,8**.

To know the test is reliable or not for the next step is used the reliability of Alpha Form as follow:

$$K = 20$$

$$\sum S_i^2 = 8833,53$$

$$S_t^2 = 234,8$$

$$r_{11} = \left( \frac{K}{K-1} \right) \left( 1 - \frac{\sum S_i^2}{S_t^2} \right)$$



$$r_{11} = \left( \frac{20}{20-1} \right) \left( 1 - \frac{8833,53}{234,8} \right)$$

$$r_{11} = \left( \frac{20}{19} \right) (1 - 37,6)$$

$$r_{11} = 1,05 \times 36,6$$

$$r_{11} = 38,43$$

So, from the result above, the value of  $r_{11}$  is **38,43**. After the researcher know about the value of  $r_{11}$  then, the researcher try to compare the result between  $r_{11}$  and  $r_{table}$  and If the value of  $r_{11}$  is higher than  $r_{table}$  so, the test is reliable. To measure the test is reliable or not, it must know the level of significance and  $r_{table}$ , as follow:

**Table 4.6**

**Table of Coefficient Value of Correlation “R” Product Moment**

	<b>The distribution value <math>r_{table}</math></b>
Significance	5%
N	33
$r_{table}$	0,344

After the researcher checks the value of  $r_{11}$  to  $r_{table}$ , the researcher known that the value of  $N=33$  is  $r_{11}$  (38,43) higher then  $r_{table}$  (0.344) in significant level of 5%. So, the test instrument that is used to get data Grammar Mastery is reliable

In another side, to measure the test reliability, the researcher uses SPSS 25 to make the researcher is easier and decimate misinterpretation. While the steps are as follow:

- a) SPSS that has been input the data
- b) To calculate the reliability of the test, click *Analyze*, next *Scale* then select *Reliability Analysis*
- c) It shows *Reliability Analysis* column. Next select *all item except Total Item* in the left column then *paste to the right column*
- d) After shows as picture above, then click *Statistics* in the top right corner, next click *Scale If Item Deleted* and *Continue*
- e) Make sure the model is *Alpha* has been selected, then click *OK*.

**Table 4.7**

<b>Case Processing Summary</b>			
		N	%
Cases	Valid	33	97.1
	Excluded <sup>a</sup>	1	2.9
	Total	34	100.0
a. Listwise deletion based on all variables in the procedure.			

**Table 4.8**

<b>Reliability Statistics</b>	
<b>Cronbach's Alpha</b>	<b>N of Items</b>
.695	20

**Table 4.9**

<b>Item-Total Statistics</b>				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
X01	66.9697	465.530	.129	.694
X02	67.2727	434.517	.500	.671
X03	67.7273	440.767	.331	.680
X04	68.4848	413.258	.559	.659
X05	66.6667	466.667	.222	.692
X06	67.4242	436.127	.438	.674
X07	66.8182	459.091	.293	.687
X08	71.0606	448.059	.414	.680
X09	67.4242	423.627	.599	.663
X10	66.9697	448.343	.409	.680
X11	68.1818	454.403	.153	.694
X12	67.8788	426.610	.471	.668
X13	70.6061	454.309	.211	.689
X14	68.4848	438.258	.302	.681
X15	67.4242	426.752	.558	.665
X16	66.9697	462.405	.179	.692
X17	68.3333	418.229	.516	.663
X18	68.3333	443.229	.258	.685
X19	69.2424	483.002	-.123	.716
X20	66.5152	282.008	.346	.773

Based on the data above, the result of Alpha is higher than  $r_{table}$  (0,344). So, all of the items of test are reliable.

## **2. The Result of Speaking Accuracy**

As stated in previous chapter (chapter III), speaking accuracy data is obtained by using speaking test. The test consists of 3 questions and the answer of the question is not numerical form, so that the researcher

uses rating scale of speaking to scoring the answer of the respondents.

The rating scale of the speaking accuracy as follow:

**Table 4.10**

**Table of assessment students' speaking Accuracy**

<b>Aspect</b>		<b>Score</b>	<b>Note</b>
<b>Accuracy</b>	<b>Vocabulary</b>	1	Speaking vocabulary inadequate to express anything but the most elementary needs.
		2	Has speaking vocabulary sufficient to express herself simply with some circumlocutions.
		3	Able to speak the language with sufficient vocabulary to participate effectively in most formal and informal conversations on practical, social and professional topics. Vocabulary is broad enough that he rarely has to grope for a word.
		4	Can understand and participate in any conversation within the range of his experience with a high degree of precision of vocabulary.
		5	Speech on all levels is fully accepted by educated native speakers in all its features including breadth of vocabulary and idioms, colloquialism and pertinent cultural references.
	<b>Grammar</b>	1	Errors in grammar are frequent, but speaker can be understood by a native speaker used to dealing with foreigner.
		2	Can usually handle elementary constructions quite accurately but does not have through or confident control of the grammar.

		3	Control of grammar is good. Able to speak the language with sufficient structural accuracy to participate effectively in most formal and informal conversations on practical, social and professional topics.
		4	Able to use the language accurately on all levels normally pertinent to professional needs. Errors in grammar are quite rare.
		5	Equivalent to that of an educated native speaker.
	<b>Pronunciation</b>	1	Errors in pronunciation are frequent but can be understood by a native speaker used to dealing with foreigners attempting to speak his language.
		2	Accent is intelligible though often quite fault.
		3	Errors never interfere with understanding and rarely disturb the native speaker. Accent may be obviously foreign.
		4	Errors in pronunciation are quite rare.
		5	Equivalent to and fully accepted by educated native speakers.

So, the answer from the respondents will be scored by the rating scale of speaking above and the data must be valid and reliable. To know the validity and reliability of the data, the researcher uses content validity and coefficient alpha.

The population of this research contains of member AFEC (Al-Falah English Centre) Dempo-Barat Pasean. In order to make researcher easy to get accurate data, the researcher uses simple random technique. The researcher takes all of the members of AFEC. So, the sample of the

students consists of 33 students and the researcher takes on error 5% distribution of  $r_{table}$  because this research is about education.

**a. The Result of Data**

In this research, the instrument that used to collect the data related to variable Y that is Speaking Accuracy. The researcher carried out the research at Al-Falah English Centre (AFEC) Dempo Barat Pasean and given test to the students. The researcher needs 3 meetings in the speaking test. it was held on the 30<sup>th</sup> November 2020 until 02<sup>nd</sup> December 2020 at 14.00 until 16.30. The meeting covered five stages of activities, they are:

- 8. Entering the class and checking the students' name list
- 9. Giving clear instruction of the test
- 10. Giving time to prepare the test
- 11. Testing of students one by one
- 12. Giving score of the test by rating scale of speaking

The score of speaking accuracy test can be seen in the table as follow:

**Table 4.11**

**Result of test score related to variable Y (Speaking Accuracy)**

No	Number of item of test speaking accuracy			SUM
	Vocabulary	Grammar	pronunciation	
1	5	5	5	60

2	4	4	5	52
3	4	5	4	52
4	5	5	4	56
5	5	5	4	56
6	5	5	5	60
7	3	4	4	44
8	4	4	5	52
9	3	5	4	48
10	4	3	4	44
11	3	5	4	48
12	3	4	4	44
13	5	5	4	56
14	4	5	5	56
15	4	3	3	40
16	5	4	4	52
17	4	4	3	44
18	3	4	3	40
19	4	5	4	52
20	5	4	4	52
21	5	3	4	48
22	5	3	4	48

23	4	3	3	40
24	3	3	3	36
25	4	3	3	40
26	3	4	3	40
27	5	4	3	48
28	4	5	4	52
29	3	2	3	32
30	2	3	3	32
31	4	3	3	40
32	4	4	4	48
33	3	4	3	40
<b>Total of score</b>				1552

After the researcher put score then, the researcher calculate the score more simply. The way to calculate the score as follow:

$$n: 25 \times 100 = 100$$

For example in the number one the total of the score is 15 after the researcher know the total of the score then the researcher calculate use pattern above 15:  $25 \times 100 = 60$

## **b. Validity and Reliability of the Test**

### **1) Validity of Test**



The validity is use to make sure that the obtained data above is valid or not. For this research the researcher uses content validity to know whether the test is valid or not because content validity is focus on evaluating or measuring achievement test.<sup>3</sup> So in this case the researcher uses content validity to make the instrument related with the phenomenon like the question about AFEC.

The result of the test is not numerical score, so the researcher uses rating scale of speaking to give score to each item of the test. Before testing the validity of test, the researcher will present the table coefficient value of correlation “r” product moment, as follow:<sup>4</sup>

**Table 4.12**

**Table of Coefficient Value of Correlation “R” Product Moment**

	<b>The distribution value <math>r_{table}</math></b>
<b>Significance</b>	5%
<b>N</b>	33
<b><math>r_{table}</math></b>	0,344

To test to validity of test, the researcher uses SPSS 25, while the steps are as follow:

- a) Click SPSS

<sup>3</sup> Ary et al., *Introduction to Research in Education*, 2010, 225.

<sup>4</sup> Arikunto, *Prosedur Penelitian Suatu Pendekatan Praktik*, 402.

- b) Click *Data View* on Spss and input the result of test
- c) Click *Variable View* in the bottom left corner to change the name column of *VAR0001* to *Variable Y*
- d) Back to *Data View* in the bottom left corner
- e) To calculate the validity of the Test, click *Analyze*, Select *Correlate* to *Bivariate*
- f) It shows *Bivariate Correlation* column, next *Select All Item* then *paste to the column of variable*
- g) Make sure the column of *Pearson* has been selected then click OK

**Table 4.13**

**Testing of Validity of Test**

<b>Correlations</b>					
		Y01	Y02	Y03	SUM
Y01	Pearson Correlation	1	.256	.413 <sup>*</sup>	.725 <sup>**</sup>
	Sig. (2-tailed)		.151	.017	.000
	N	33	33	33	33
Y02	Pearson Correlation	.256	1	.570 <sup>**</sup>	.791 <sup>**</sup>
	Sig. (2-tailed)	.151		.001	.000
	N	33	33	33	33
Y03	Pearson Correlation	.413 <sup>*</sup>	.570 <sup>**</sup>	1	.823 <sup>**</sup>
	Sig. (2-tailed)	.017	.001		.000
	N	33	33	33	33

SUM	Pearson Correlation	.725**	.791**	.823**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	33	33	33	33
*. Correlation is significant at the 0.05 level (2-tailed).					
**. Correlation is significant at the 0.01 level (2-tailed).					

To know which item of the test is valid or not, it must compare the  $r_{total}$  with  $r_{table}$ . In this research, the total of members at AFEC is 33 members and all the participant of the research. So that the total of participant are 33 members and the researcher uses significance 5% and the  $r_{table}$  is 0,344.

Based the data above, all of the item of test speaking accuracy is valid because the value of the  $r_{total}$  higher than  $r_{table}$ . Here the explanation:

2. Item 1 is valid because the  $r_{total}$  is 0,725 >  $r_{table}$  is 0,344.
3. Item 2 is valid because the  $r_{total}$  is 0,791 >  $r_{table}$  is 0,344.
4. Item 3 is valid because the  $r_{total}$  is 0,823 >  $r_{table}$  is 0,344.

## 2) Reliability Of The Test

The reliability is used to make sure that the obtained data above is reliable. In this research, to know the reliability of the test, the researcher uses internal consistency reliability and calculates the speaking accuracy using coefficient alpha. In order to help the researcher in counting the reliability of test, so the researcher makes a table of test items analysis of students'

test scores. This table is used to find out the reliability of test which used to find out the speaking accuracy data such as follow:

**Table 4.14**

**Table of Test Items Analysis of Students' Test Scores**

No	Number of Items			Total Score	Total Score Quadrate
	1	2	3		
1	5	5	5	60	3600
2	4	4	5	52	2704
3	4	5	4	52	2704
4	5	5	4	56	3136
5	5	5	4	56	3136
6	5	5	5	60	3600
7	3	4	4	44	1936
8	4	4	5	52	2704
9	3	5	4	48	2304
10	4	3	4	44	1936
11	3	5	4	48	2304
12	3	4	4	44	1936
13	5	5	4	56	3136
14	4	5	5	56	3136
15	4	3	3	40	1600
16	5	4	4	52	2704
17	4	4	3	44	1936
18	3	4	3	40	1600
19	4	5	4	52	2704
20	5	4	4	52	2704
21	5	3	4	48	2304
22	5	3	4	48	2304
23	4	3	3	40	1600
24	3	3	3	36	1296
25	4	3	3	40	1600
26	3	4	3	40	1600
27	5	4	3	48	2304
28	4	5	4	52	2704
29	3	2	3	32	1024
30	2	3	3	32	1024

<b>31</b>	4	3	3	40	1600
<b>32</b>	4	4	4	48	2304
<b>33</b>	3	4	3	40	1600
<b>Sum</b>	<b>131</b>	<b>132</b>	<b>125</b>	<b>1552</b>	<b>74784</b>
<b>Sum Quadrate</b>	<b>17161</b>	<b>17424</b>	<b>15625</b>	<b>2408704</b>	

After the researcher know about the data above, the researcher accounts the data use the formula of Alpha

$$r_{11} = \left( \frac{K}{K-1} \right) \left( 1 - \frac{\sum S_i^2}{S_t^2} \right)$$

To get the sum of items total variance ( $\sum S_i^2$ ), the researcher calculates the variance of each item, as follow:

$$s_{(1)}^2 = \frac{17161 \frac{131^2}{33}}{33} = \frac{17161 - 520,1}{33} = \frac{16640,9}{33} = 504,2$$

$$s_{(2)}^2 = \frac{17424 \frac{132^2}{33}}{33} = \frac{17424 - 528}{33} = \frac{16896}{33} = 512$$

$$s_{(3)}^2 = \frac{15625 \frac{125^2}{33}}{33} = \frac{15625 - 473,4}{33} = \frac{15151,6}{33} = 459,1$$

$$\sum S_i^2 = s_{(1)}^2 + s_{(2)}^2 + s_{(3)}^2$$

$$\sum S_i^2 = 504,2 + 512 + 459,1$$

$$\sum S_i^2 = 1475,3$$

From the result above, the Sum of Each item total variance are **1475,3**.

After calculate the sum of each item variance, the researcher calculate the total variance of the total score, as follow:

$$S_t^2 = \frac{74784 - \frac{1552^2}{33}}{33} = \frac{74784 - 72991,1}{33} = \frac{1792,9}{33} = 54,33$$

From the result above, the Sum of total variance of the total score are **54,33**.

To know the Test is reliable or not for the next step is used the reliability of Alpha Form as follow:

$$K = 3$$

$$\sum S_i^2 = 1475,3$$

$$S_t^2 = 54,33$$

$$r_{11} = \left( \frac{K}{K-1} \right) \left( 1 - \frac{\sum S_i^2}{S_t^2} \right)$$

$$r_{11} = \left( \frac{3}{3-1} \right) \left( 1 - \frac{1475,3}{54,33} \right)$$

$$r_{11} = \left( \frac{3}{2} \right) (1 - 27,1)$$

$$r_{11} = 1,5 \times 26,1$$

$$r_{11} = 39,15$$

So, from the result above, the value of  $r_{11}$  is **39,15**.

After the researcher know about the value of  $r_{11}$  then, the

researcher try to compare the result between  $r_{11}$  and  $r_{table}$  and If the value of  $r_{11}$  is higher than  $r_{table}$  so, the questionnaire is reliable. To measure the questionnaire is reliable or not, it must know the level of significance and  $r_{table}$ , as follow:

**Table 4.15**

**Table of Coefficient Value of Correlation “R” Product Moment**

	<b>The distribution value <math>r_{table}</math></b>
<b>Significance</b>	5%
<b>N</b>	33
<b><math>r_{table}</math></b>	0,344

After the researcher checks the value of  $r_{11}$  to “r” table, the researcher known that the value of  $N=33$  is  $r_{11}$  (39,15) higher then ‘r’ table (0.344) in significant level of 5%. So, the test instrument that is used to get data speaking accuracy is reliable

In another side, to measure the reliability of the test, the researcher uses SPSS 25 to make the researcher is easier and decimate misinterpretation. While the steps are As follow:

- a) SPSS that has been input the data
- b) To calculate the reliability of the test, click *Analyze*, next *Scale* then *select Reliability Analysis*

- c) It shows *Reliability Analysis* column. Next select *All Item Except Total Item* in the left column then *Paste To The Right Column*
- d) After shows as picture above, then click *Statistics* in the top right corner, next click *Scale If Item Deleted* and *Continue*
- e) Make sure the model is *Alpha* has been selected, then click *OK*.

**Table 4.16**

<b>Case Processing Summary</b>			
		N	%
Cases	Valid	33	100.0
	Excluded <sup>a</sup>	0	.0
	Total	33	100.0
a. Listwise deletion based on all variables in the procedure.			

**Table 4.17**

<b>Reliability Statistics</b>	
Cronbach's Alpha	N of Items
.664	3

**Table 4.18**



Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Y01	7.7879	1.922	.367	.715
Y02	7.7576	1.689	.472	.576
Y03	7.9697	1.843	.621	.407

Based on the data above, the result of Alpha is higher than  $r$  (0,344). So, all the item of test speaking accuracy is reliable.

### 3. Analyzing the Data of Grammar Mastery and Speaking Accuracy

After testing the validity and the reliability of both variables, grammar mastery and speaking accuracy, for the next section is analyzing the data of grammar mastery as variable X and speaking accuracy as variable Y. here the result both of variable as follow:

#### a. Entry the Result of Variable X and Y

**Table 4.19**

**The Result of Students' Grammar Mastery and Their Speaking Accuracy**

No	Variable	
	Grammar Mastery (X)	Speaking Accuracy (Y)
1	95	60
2	85	52

<b>3</b>	80	52
<b>4</b>	85	56
<b>5</b>	85	56
<b>6</b>	85	60
<b>7</b>	65	44
<b>8</b>	75	52
<b>9</b>	85	48
<b>10</b>	75	44
<b>11</b>	80	48
<b>12</b>	75	44
<b>13</b>	80	56
<b>14</b>	40	56
<b>15</b>	50	40
<b>16</b>	80	52
<b>17</b>	95	44
<b>18</b>	85	40
<b>19</b>	60	52
<b>20</b>	60	52
<b>21</b>	75	48
<b>22</b>	80	48
<b>23</b>	75	40
<b>24</b>	85	36
<b>25</b>	80	40
<b>26</b>	60	40
<b>27</b>	60	48

<b>28</b>	40	52
<b>29</b>	45	32
<b>30</b>	35	32
<b>31</b>	25	40
<b>32</b>	60	48
<b>33</b>	70	40
<b>TOTAL</b>	2310	1552

After the researcher gets the data the variable X as grammar mastery and variable Y as speaking accuracy, the researcher correlates both the variable by using formula product moment. To make the researcher easier to correlate the variables, the researcher will analyses using table below:

**Table 4.20**

**Table of Preparation to Find Out the Coefficient of Product**

No	Variable		X <sup>2</sup>	Y <sup>2</sup>	XY
	Grammar Mastery (X)	Speaking Accuracy (Y)			
<b>1</b>	95	60	9025	3600	5700
<b>2</b>	85	52	7225	2704	4420
<b>3</b>	80	52	6400	2704	4160
<b>4</b>	85	56	7225	3136	4760
<b>5</b>	85	56	7225	3136	4760
<b>6</b>	85	60	7225	3600	5100
<b>7</b>	65	44	4225	1936	2860

<b>8</b>	75	52	5625	2704	3900
<b>9</b>	85	48	7225	2304	4080
<b>10</b>	75	44	5625	1936	3300
<b>11</b>	80	48	6400	2304	3840
<b>12</b>	75	44	5625	1936	3300
<b>13</b>	80	56	6400	3136	4480
<b>14</b>	40	56	1600	3136	2240
<b>15</b>	50	40	2500	1600	2000
<b>16</b>	80	52	6400	2704	4160
<b>17</b>	95	44	9025	1936	4180
<b>18</b>	85	40	7225	1600	3400
<b>19</b>	60	52	3600	2704	3120
<b>20</b>	60	52	3600	2704	3120
<b>21</b>	75	48	5625	2304	3600
<b>22</b>	80	48	6400	2304	3840
<b>23</b>	75	40	5625	1600	3000
<b>24</b>	85	36	7225	1296	3060
<b>25</b>	80	40	6400	1600	3200
<b>26</b>	60	40	3600	1600	2400
<b>27</b>	60	48	3600	2304	2880
<b>28</b>	40	52	1600	2704	2080
<b>29</b>	45	32	2025	1024	1440
<b>30</b>	35	32	1225	1024	1120
<b>31</b>	25	40	625	1600	1000
<b>32</b>	60	48	3600	2304	2880
<b>33</b>	70	40	4900	1600	2800

<b>TOTAL</b>	<b>2310</b>	<b>1552</b>	<b>169450</b>	<b>74784</b>	<b>110180</b>
<b>L</b>					

**b. Analyzing the Data by Statistical Analysis**

Based on the data above, the researcher gets the data of two variables are grammar mastery and speaking accuracy as follow:

$$X = 2310 \qquad Y = 1552$$

$$X^2 = 169450 \qquad Y^2 = 74784$$

$$XY = 110180$$

After that, the researcher will count the point all of them by using correlation Pearson Product Moment, as follow:

$$r_{xy} = \frac{N(\sum xy) - (\sum x)(\sum y)}{\sqrt{[N(\sum x^2) - (\sum x)^2] [N(\sum y^2) - (\sum y)^2]}}$$

$$r_{xy} = \frac{33(\sum 110180) - (\sum 2310)(\sum 1552)}{\sqrt{[33(\sum 169450) - (\sum 2310)^2] [33(\sum 74784) - (\sum 1552)^2]}}$$

$$r_{xy} = \frac{(3635940) - (3585120)}{\sqrt{(5591850 - 5336100) (2467872 - 2408704)}}$$

$$r_{xy} = \frac{50820}{\sqrt{(255750) (59168)}}$$

$$r_{xy} = \frac{50820}{\sqrt{15132216000}}$$

$$r_{xy} = \frac{50820}{123013}$$

$$r_{xy} = 0,413$$

## B. Hypothesis Testing

According to Creswell, Hypothesis is statements in quantitative research in which the researcher makes a prediction or a conjecture about the outcome of a relationship among attributes or characteristics.<sup>5</sup> There are two hypotheses, Null hypothesis and Alternative hypothesis. Hypothesis is a crucial thing for the researcher because the researcher knows the result of the research and determines the hypothesis of this research either null hypothesis or alternative hypothesis.

Based on the result of data analyzing by statistical analysis above, there is known that the value of  $r_{xy} = 0,413$ . After the researcher knows about the value then, the last step is comparing the value of  $r_{xy}$  with  $r_{table}$ . If the  $r_{xy}$  is higher than  $r_{table}$ , means that there is relationship between two variables, but if the  $r_{xy}$  is lower than  $r_{table}$  means that there is no relationship between two variables.

Before determining the result hypothesis either null hypothesis or alternative hypothesis, the researcher must determine the value of df (*degree of freedom*) to know the value of  $r_{table}$ . The formula is:<sup>6</sup>

$$df = N - nr$$

df = degree of freedom

N = number of cases

---

<sup>5</sup> Creswell, *Educational Research*, 2012, 111.

<sup>6</sup> Sudijono, *Pengantar Statistik Pendidikan*, 194.

Nr = sum of variables (sum of variable X (grammar mastery) and Variable Y (speaking accuracy))

$$df = N - nr$$

$$df = 33 - 2$$

$$df = 31$$

It is known that the value of df is 31, while the value of  $r_{table}$  can be seen by the value of df. The value of df is 31 and the significance of  $r_{table}$  is 0,355.

**Table 4.21**

**Table of Coefficient Value of Correlation “r” Product Moment**

	<b>The distribution value <math>r_{table}</math></b>
Significance	5%
df	31
$r_{table}$	0.355
$r_{xy}$	0.413

Based on the table above, it is known that the value of  $r_{xy}$  is 0,413 and the value of  $r_{table}$  of coefficient value correlation product moment in significant error 5% is 0,355. The result shows that the value of  $r_{xy}$  is higher than  $r_{table}$ . So, Alternative hypothesis ( $H_a$ ) is accepted and the null hypothesis ( $H_o$ ) is rejected. It means that there is relationship between two

variables. So, the conclusion is there is correlation between students' speaking accuracy and their grammar mastery at AFEC.

In this case, the researcher does not only compare the value of  $r_{xy}$  with  $r_{table}$  to know how far the relationship between two variables but also will be interpreted by using the table of interpretation of  $r$  value product moment as follow:

**Table 4.22**

**Table of Interpretation of 'r' value product – moment**

No	'r' value product – moment	Interpretation
1	0,00 – 0,200	The correlation between variable X and Y is extremely low
2	0,200 – 0,400	The correlation between variable X and Y is low
3	0,400 – 0,700	The correlation between variable X and Y is enough
4	0,700 – 0,900	The correlation between variable X and Y high
5	0,900 – 1,00	The correlation between variable X and Y is strongly high



Based on the table above, the result of this research is 0,413 and from the table above, the result of this research includes to the third interpretation that is 0,400 – 0,700. It can be concluded that there is correlation between variable X and variable Y and the correlation of variable X and Y is enough correlation.

So, the researcher concludes that there is correlation between students' speaking accuracy and their grammar mastery at AFEC,

### **C. Discussion Finding**

In this research, there are two research problems that the researcher wants to research, as follow:

- 1. Is there correlation between students' speaking accuracy and their grammar mastery at Al-Falah English Centre (AFEC) Dempo-Barat Pasean?**

Based on the data above, the result of this research from the statistical analysis product moment shows that there is correlation between students' speaking accuracy and their grammar mastery. It is proven by comparing the result of  $r_{xy}$  with  $r_{table}$ . The result of  $r_{xy}$  is 0,413 and the value of  $r_{table}$  is 0,355. So, the result of  $r_{xy}$  is higher than  $r_{table}$  ( $0,413 > 0,355$ ). Based on the hypothesis testing, the alternative hypothesis is accepted and null hypothesis is rejected.

From the description above, the answer of this research problem is there is correlation between students' speaking accuracy and their grammar mastery at Al-Falah English Centre (AFEC) Dempo-Barat Pasean. It is suitable with W, Said and Waris' statement

that speaking accuracy is the goals of learners' ability to produce the correct sentence using correct grammar. It is related to the exact of being correct and without error especially the result from careful effort<sup>7</sup>. So, the students who learn about English they will speak English as goals of learning. When they have a good speaking accuracy may be influenced by mastering the grammar.

**2. How significant is correlation between students' speaking accuracy and their grammar mastery at Al-Falah English Centre (AFEC) Dempo-Barat Pasean?**

In this research, there is correlation between students' speaking accuracy and their grammar mastery at at Al-Falah English Centre (AFEC) Dempo-Barat Pasean. It is evidenced by the result of  $r_{xy}$  is 0,413 and the value of  $r_{table}$  is 0,355. So, the result of  $r_{xy}$  is higher than  $r_{table}$  ( $0,413 > 0,355$ ). When see from the table interpretation of "r" value product moment, the value of  $r_{xy} = 0,434$  include in the third interpretation that is 0,400 – 0,700 and the interpretation is correlation between variable X and variable Y is enough. Therefore, the researcher concludes that the students' who have master of grammar have enough significant level to their speaking accuracy.

So, Mastering grammar is one of the effects why the learners can speak English accurately, as Goold Brown state that grammar is the art of speaking the English language correctly. It implies, in the adept, such knowledge as enables him to avoid improprieties of

---

<sup>7</sup> W, Said, and Waris, "Developing Speaking Skill of Grade VIII Students Through Short Conversation," 2.

speech, to correct any errors that may occur in literary compositions and to parse, or explain grammatically<sup>8</sup>. It means that the students' who have master of grammar will be easier to speak English accurately.

---

<sup>8</sup> Brown, *The Grammar Of English Grammar*, 100.