

CHAPTER IV

RESEARCH METHOD

A. Findings

1. Validity of the Phonemic Awareness on Reading Comprehension Test

The validity test was conducted on fifth-semester students who have finished phonology subject in English Department. The test used application support by Excel IOS 2021 to check the validity of the data. The validity test aims to determine whether the questionnaire could be valid or invalid depending on qualification and the sub-total of answers. This test used Pearson Product Moment correlation with a significance level (α) = 0.05, which is commonly used and the number of samples (n) = 44 respondents, and the stable is 0.243. The result of the Validity Test is as follows:

Table 4.1 The Result of Validity Test

Questionnaire Item	Rcount	Rtable	Conclusion
1	0,48	0,243	Valid
2	0,432	0,243	Valid
3	0,364	0,243	Valid
4	0,3	0,243	Valid
5	0,331	0,243	Valid
6	0,388	0,243	Valid
7	0,363	0,243	Valid
8	0,315	0,243	Valid
9	0,358	0,243	Valid
10	0,34	0,243	Valid
11	0,314	0,243	Valid
12	0,307	0,243	Valid
13	0,397	0,243	Valid

14	0,371	0,243	Valid
15	0,312	0,243	Valid
16	0,28	0,243	Valid
17	0,437	0,243	Valid
18	0,26	0,243	Valid
19	0,422	0,243	Valid
20	0,321	0,243	Valid
21	0,334	0,243	Valid
22	0,353	0,243	Valid
23	0,314	0,243	Valid
24	0,48	0,243	Valid
25	0,373	0,243	Valid
26	0,425	0,243	Valid
27	0,249	0,243	Valid
28	0,28	0,243	Valid
29	0,256	0,243	Valid
30	0,366	0,243	Valid
31	0,287	0,243	Valid
32	0,293	0,243	Valid
33	0,372	0,243	Valid
34	0,337	0,243	Valid
35	0,353	0,243	Valid
36	0,377	0,243	Valid
37	0,269	0,243	Valid
38	0,354	0,243	Valid
39	0,363	0,243	Valid
40	0,38	0,243	Valid
41	0,353	0,243	Valid
42	0,474	0,243	Valid
43	0,363	0,243	Valid
44	0,473	0,243	Valid
45	0,469	0,243	Valid
46	0,421	0,243	Valid
47	0,600	0,243	Valid
48	0,466	0,243	Valid
49	0,669	0,243	Valid
50	0,724	0,243	Valid
51	0,551	0,243	Valid
52	0,528	0,243	Valid

Based on the table 4.1, three items have invalid status with correlation Pearson Product Moment. The r-count must exceed the value of the existing r-table to determine which one is valid. Could be seen items with valid status is as follows:

Table 4.2 The Results Validity of Statements

Conclusion	Number of Question	Total Items of Question
Valid	1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52	52
Invalid	0	0
	Total	52

Based on table 4.2, the researcher found 0 items with invalid statuses from 52 items on the test. Items with valid status are 52 items of item question. Therefore, the researcher used 52 items of question for the research instrument.

2. Reliability of the Phonemic Awareness on Reading Comprehension Test

Reliability test instrument with valid status items from validity test with a consistency measurement. The test used the formula from Cronbach Alpha's statistical test. The application that supports this reliability is SPSS 16 version. The details of reliability of phonemic awareness is as follow:

Table 4.3 The Result of Phonemic Awareness Reliability Test

Cronbach's Alpha	N of Item
0.730218	29

The reliability test result from the test of fifth semester English Department is 0.73 that means high reliability status from the phonemic awareness. The value of test > 0.6 and it means that the questionnaire reliable from the table of criteria. Therefore, reliability test for this research is high reliable.

Table 4.4 The Results of reading Comprehension Reliability Test

Cronbach's Alpha	N of Item
0,759372	24

The reliability test result from the test of fifth semester English Department is 0.75 that means high reliability status from the reading comprehension. The value of test > 0.6 and it means that the questionnaire reliable from the table of criteria. Therefore, reliability test for this research is high reliable.

3. Phonemic Awareness Questionnaire Analysis

The results of the data's phonemic awareness will describe with the tabulation from the respondent's answers. The data will represent the score of the students who correctly answer the item. The answer accuracy value ranged from 0 - 100. Phonemic awareness score described the result of students' performance as follows:

Table 4.5 Phonemic Awareness Results

No	Name	Proper Correct	Interpretation
1	KHRNNS	61	Developing
2	MNFDLLH	82	Proficient
3	MRBDLH	50	Beginning
4	NRLHMRH	39	Beginning
5	TSYWVL	50	Beginning
6	RNSLSBL	100	Proficient
7	RNNRZZHR	86	Proficient
8	FTMTZZHR	86	Proficient
9	RM	96	Proficient
10	LLTRND	61	Developing
11	ADLPTR	86	Proficient
12	SF	89	Proficient
13	MNWRH	82	Proficient
14	ZRD	89	Proficient
15	KTVN	96	Proficient
16	YNRSYVN	86	Proficient
17	MVPLSLM	96	Proficient
18	RPH	86	Proficient
19	HNFMN	86	Proficient
20	SLTHNM	86	Proficient
21	YNDFBRYT	89	Proficient
22	RHMWT	79	Developing
23	LFRDZZKRNN	96	Proficient
24	LKMNHKM	96	Proficient
25	MFDL	93	Proficient
26	STHMRH	86	Proficient
27	WNDHLSN	96	Proficient
28	LFNZZH	61	Developing
29	MNBLWLWF	100	Proficient
30	MNHSHLHH	93	Proficient
31	MDWHYN	96	Proficient
32	ASRYN	86	Proficient
33	JKRHP	86	Proficient
34	RJNRZZH	93	Proficient
35	MLHBB	86	Proficient
36	MBDLLH	93	Proficient

37	ZLFKHLSN	71	Developing
38	LMZZHR	79	Developing
39	MMNLLH	93	Proficient
40	DNZZH	96	Proficient
41	STNRSYFH	96	Proficient
42	NNSLKTSR	96	Proficient
43	NRHYT	96	Proficient
44	YSFLDFTR	82	Proficient
45	STMRHMH	93	Proficient

Based on the table 4.4, the researcher finds out the category of interval class, as follows:

$$i = R/K$$

K is the class length, to find the value of K is as follows:

$$K = 1 + 3.3 \log N$$

$$K = 1 + 3.3 \log 45$$

$$K = 1 + 3.3 \times 1.65$$

$$K = 1 + 5.445$$

$$K = 6.445, \text{ and rounded to } 6$$

R is the class range, to find the values of R is as follows:

$$R = \text{Largest data} - \text{Smallest data}$$

$$R = 100 - 31$$

$$R = 69$$

The Value of interval is as follows:

$$i = R/K$$

$$i = 69/6$$

$$i = 11.5, \text{ rounded to } 12$$

The results of interval value is 12, thus the researcher can create a data table as follows:

Table 4.6 Phonemic Awareness Result of Mean

Score	Frequency (N)	Class Limit	The Mid Point (X)	NX
31 - 42	2	30.5 – 42.5	36.5	73
43 - 54	1	42.5 – 54.5	48.5	48.5
55 - 66	3	54.5 – 66.5	60.5	108.5
67 - 78	0	66.5 – 78.5	72.5	0
79 - 90	24	78.5 – 90.5	84.5	2028
91 - 102	15	90.5 – 102.5	96.5	1447.5
	45		399	3778.5

The average value (mean) for the Phonemic awareness performance is as follows:

$$\text{Mean} = \sum NX / \sum X$$

$$\text{Mean} = 3778.5 / 45$$

$$\text{Mean} = 83.96, \text{ rounded to } 84.$$

Based on the results above, the mean value from phonemic awareness is 84, and the performance of the student's phonemic awareness is proficient. Moreover, the classification of this phonemic awareness compared to the result form the table 4.4. The performance students proficient 80% of 36 participant, developing 13% of 6 participant, and beginning 7% of 3 participant. In other word, students on the average have a performance proficient.

4. Correlation Analysis

There are several methods of test in correlation analysis. It conducts three tests: the normality test, linearity, and variable analysis.

a. Normality Test

The researcher used the normality test for this study from the Kolmogorov-Smirnov test. The significance value from Kolmogorov-Smirnov is > 0.05 . The good regression of residual is that have normal values of residual. Independent and dependent variable data has a normal distribution or not for normality determined by the results. The application that supports the data is SPSS 16 version. The result of normality is as follows:

Table 4.7 The Result of the Normality Test
One-Sample Kolmogorov-Smirnov Test

One Sample Kolmogorov-Smirnov Test			Unstandardized Residual
N			45
Normal Parameters ^a	Mean		.0000000
	Std. Deviation		3.83971341
Most Extreme Differences	Absolute		.163
	Positive		.091
	Negative		-.163
Kolmogorov-Smirnov Z			1.093
Asymp. Sig. (2-tailed)			.183
Monte Carlo Sig. (2-tailed)	Sig.		.175 ^c
	99% Confidence Interval	Lower Bound	.165
		Upper Bound	.184
a. Test distribution is Normal.			

c. Based on 10000 sampled tables with starting seed 926214481.

Based on table 4.7, the result for this test linearity from Kolmogorov-Smirnov Z is 0.183 and the Monte Carlo is 0.175. the researcher used Kolmogorov-Smirnov results to compared the significance value. The significance value < 0.05 concluded that there is a linear relationship between each variable between reading

comprehension and phonemic awareness. Thus, the correlation of the two variables in this study has a linear relationship.

b. Linearity Test

The linearity test determines whether two or more variables tested have a significant linear relationship. This significance value for the linearity test is < 0.05 from the result with a relationship or correlation. However, if the results > 0.05 , the two variables are not linear. The application that supports data processing is IBM SPSS version 16. The result of linearity is as follows:

Table 4.8 The Results of Linearity

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	180.090	1	180.090	11.937	.001 ^a
	Residual	648.710	43	15.086		
	Total	828.800	44			
a. Predictors: (Constant), Reading						
b. Dependent Variable: Phonemic						

Based on table 4.7, the result for this test linearity is 0.001. The significance value < 0.05 concluded that there is a linear relationship between each variable between reading comprehension and phonemic awareness. Thus, the correlation of the two variables in this study has a linear relationship.

c. Variable Analysis

The results of data analysis in reading compression and phonemic awareness will be concluded in the next table. Variable with a range, minimum, maximum, and variance. The results of reading comprehension and phonemic awareness are as follows:

Table 4.9 The variable Analysis of Reading Comprehension and Phonemic Awareness

Descriptive Statistics							
	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Reading	45	11.00	13.00	24.00	19.9111	2.54792	6.492
Phonemic	45	11.00	17.00	28.00	24.3111	2.38196	5.674
Valid N (listwise)	45						

1) Reading Comprehension

Based on table 4.8, the data analysis of reading comprehension used descriptive statistics. The standard deviation of reading comprehension is 2.54792, and the mean for this is 19.9111. This means the standard deviation value is $2.54792 < 19.9111$. Reading comprehension has a low variance. The minimum value is 13.00, and the maximum value is 17.00.

2) Phonemic Awareness

Based on table 4.8, the data analysis of phonemic awareness used descriptive statistics. The standard deviation of phonemic awareness is 2.38296, and the mean for this is 24.3111. This means the value of standard deviation $2.38296 < 24.3111$, phonemic awareness has a low variance. The minimum value is 13.00, and the maximum value is 17.00.

d. Correlation Analysis

The Analysis method of correlation used the Pearson correlation test with non-parametric analysis. Based on the results of the Kolmogorov-Smirnov test, one sample test showed that data

were normal distribution. The application that supports data processing is SPSS version 16. The interval table of significant value compared to the result is as follows:

Table 4.10 Correlation Coefficient Table

Correlation Coefficient (r)	Interpretation
0.00- 0.20	Very low correlation
0.21-0.40	Low correlation
0.41-0.70	Moderate correlation
0.71-0.90	High correlation
0.91-1.00	Very high correlation

The value of the interval table is the coefficient of Pearson that table 4.9 compared to find the result value of relationship criteria. The Pearson correlation would be represented correlation between two variables. The result of the Pearson correlation test is as follows:

Table 4.11 The Results of Correlation Phonemic Awareness and Reading Comprehension

Correlations			
		Reading	Phonemic
Reading	Pearson Correlation	1	.519**
	Sig. (2-tailed)		.000
	N	45	45
Phonemic	Pearson Correlation	.519**	1
	Sig. (2-tailed)	.000	
	N	45	45

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

Table 4.10 shows that the correlation between reading comprehension and phonemic awareness is 0.519. The results from this research, compared to table 4.9, represents a moderate correlation between reading comprehension and phonemic awareness. A moderate correlation between these two variables is that students' phonemic awareness influences reading comprehension in the average medium. Based on hypothesis (H0)

was rejected, and the research hypothesis ($H\alpha$) was accepted that phonemic awareness correlates with reading comprehension have a high correlation.

B. Discussion

The researcher uses two sections of analyzed the data collection. The students' phonemic awareness in the fifth-semester English Department in UIN Antasari and the influence of phonemic awareness on reading comprehension. The research used random sampling data from 80 students in the fifth semester and used Slovin's formula that calculates 45 students. The result of the data analysis by the researcher are as follows:

1. Phonemic Awareness

Phonemic awareness refers to the spoken words that could be categorized into syllables, smaller speech segments, the ability to divide words, and the ability to unite smaller speech segments into sounds or syllables. According to Treiman, Tincoff, & Rodriguez (2008), phonemic is a skill that includes words, syllables, and the smallest unit of the phoneme. The most appropriate reading phoneme is the phonemic awareness level. Moreover, from the results of data conducted at the English Department UIN Antasari Banjarmasin, the fifth semester's phonemic awareness findings concluded that the Proficient performance in the level category with a mean score of 84. In addition, the researcher used random sampling to obtain the data and

used questions that evaluated their ability by the indicator of phonemic awareness.

The first indicator of phonemic awareness recognizes rhymes. There, 86% of students answered the correct answer of recognizing rhyme. This means that students have a good investigating to recognize the rhyme. The second indicator is generating rhyme, students Who answered the correct answer are 77% of respondents. This means that students understand some sound levels, similar words, and preceding the stressed vowel. The third indicator is identifying phonemes answered correctly by 85% of respondents. This means that students distinguished between the different sounds on the smallest unit in a word's beginning, middle, and final. The fourth indicator is phonemes isolation, students who answered the correct answer are 84% of respondents. This means students are able to separate the word into beginning, middle, and final. The fifth indicator is substitution phonemes who answered the correct answer are 84% of respondents. This means students can find a word by replacing the alphabetic word. The average student's correct answer for all indicators of phonemic awareness is 85%. Therefore, students have a high awareness of phonemic awareness.

Several performance levels of students participate in phonemic awareness tests, which are beginning, middle, and proficient. Students that have beginning performance levels are 7%. In the developing

performance level, there are 13% of students. However, at the proficient level, there are 80% of students. Thus, students in the fifth semester have a proficient performance level.

2. Correlation between Students' Phonemic Awareness and Reading Comprehension as EFL Learners

Reading comprehension is the ability to process the text's meaning and structure. According to Kendeou & O'Brien (2017), readers are expected to understand all the context in reading comprehension spontaneity. However, several factors affect reading comprehension, such as interpretation reader, memory, conclusion, and phonology by identifying the words (Perfetti & Hart, 2001).

The researcher used measurement by Pearson of Correlation Coefficient formula to compare for this research. The students' reading comprehension correlation to phonemic awareness had a moderate correlation. The result is 0.519 with Pearson's formula. The result indicate that an interval of 0.14-0.70 means moderate correlation. In addition, it concluded that phonemic awareness influences reading comprehension in the medium average of correlation formula by Pearson.

According to Brown (2004), Micro-skills in reading comprehension expect the readers to analyze the pattern, rules, system, and grammatical word classes. In other words, micro components influence reading comprehension and phonemic awareness, such as

phonemes, morphemes, phrases, words, and sentences to understand the more specific parts of the text into general information.

According to Lystiarini (2022), the results of this study are about the influence of phonemic awareness on reading comprehension conducted research in the Faculty of Cultural Studies, Universitas Brawijaya. The result of finding is 0.352, meaning these variables have a low correlation of relationship criteria. Moreover, the interval of the result is 0.21-0.40 from the Correlation Coefficient Table. Students with fundamental language skills in phonemic awareness can challenge Indonesian learners.

To understand the whole text, the learners must have good language and literacy skills, especially as an English foreign language that uses English as a second language. To have fundamental language skills, learners must develop language systems. The result of this research has a moderate correlation analysis, showing a significant correlation between these two variables. Phonemic awareness of reading comprehension should begin with comprehension into micro skill comprehension. And then, the comprehension could level up to conceptualize word patterns. The ability to acquire the meaning of the context is understanding the word's meaning. According to Taibah & Haynes (2011), the vital of reading activities is memory, and phonological awareness has an orthography form and linguistic

element. Therefore, learners to comprehend the word meaning included cognitive and metacognitive skills in this process.