Correlation between English education Students' Reading Comprehension and Their Writing Skills

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Abstract

This study was aimed at finding out whether or not there was a correlation between reading comprehension and writing achievement of English Education Study Program Students of the State University of Makassar. The population of the study is all of the fifth semester students while the sample is 38 students using a random sampling technique. The data in this study were collected through two research instruments; a multiple-choice reading comprehension test and a writing test. Pearson product-moment correlation was applied in order to find out the correlation between the variables. The findings of the study showed there was a significant correlation among variables (r_{xy}= .68 > r-table=0.304). Interesting findings in the study indicate some potential variables that could help explain the nature of the reading and writing relationship.

Keywords: *Correlation, reading, comprehension, writing, skill.*

1. Introduction

In Indonesia, English is considered a foreign language albeit being one of the most important languages in the world. It plays a significant role as universal language which is used for numerous worldwide events. It consists of four fundamental domains, namely: listening, speaking, reading and writing. Both speaking and writing are the productive skills, meanwhile reading and listening are the receptive skills. People ought to understand these basic skills in order to be able to communicate, interact and socialize well using English. In this era of globalization, general public are required to at least understand the basic of English language.

The narrow access of English in Indonesia, however, renders the people, especially students, to face some problems in learning the language. While this is clearly making a sweeping statement about a vast, diverse nation, there do seem to be joint difficulties, mostly resulting from the intrusion of their mother tongues and from the education system which they have been through (Raba'ah,2005:15). It does seem that the gist of a great deal of Indonesian schools' English language curriculum is centred on the teaching of theoretical knowledge as opposed to developing functional, communicative language skills. Often this means that the Indonesian English as Second Language (ESL) student is able to produce complex grammatical forms, but has little awareness of the actual meaning of the language they are producing. Upon prompting, a student would be able to create a correct sentence using, for instance, the present perfect continuous tense, but once probed as to the real practice and the implication of the grammatical form, many

high school students are most likely to be puzzled.

Many studies suggest learning from context is the most recommended way to language learning in terms of amount and speed learning such as; Nation (1982), Paivio and Desrocher (1981), and Pressley et all (1982). As literacy skills, reading and writing engage in guiding students to effective language learning, especially in studying foreign language. These two skills are excellent ways to encourage both content and grammatical aspects of the language being learned but in a kind of incidental way. This is due to the process of literacy often provides excellent context and enables the focus on meaning-making while also providing grammatical practice (and vocabulary practice) in the process of the meaning-making. Thus, by learning both reading comprehension and writing students can extend their knowledge in English.

Growing up in Indonesia, the researcher notices that reading culture can be considered insufficient. This is in line with the results of the Research Program for International Student Assessment (PISA) release of the Organization for Economic Co-Operation and Development (OECD) in 2015, in which Indonesia is ranked 62 out of 70 countries surveyed. This is an unfortunate finding especially for students at university level, since being deprived of extensive reading will have an effect on the academic performance of college students (Mokhtari, Reichard, & Gardner, 2009) After all; reading takes on a central role as part of approach to learning. Reading independently and effectively is very vital for learning significant portions of the course.

And that's how the researcher is interested to know the correlation between the reading comprehension and writing skill of students of English Education Program at State University of Makassar (Henceforth 'English Education Students').

2. Literature Review

2. 1. Description of Reading Comprehension

Reading comprehension is defined in a variety of ways. According to popular belief, comprehension is a type of reading in which the reader actively generates meaning internally by interacting with the content being read (Alexander, 1977: 160). Reading comprehension, as defined by Westwood (2008:30), is an activity of reading a text fully comprehended using the reader's prior experience, general knowledge, vocabulary, syntactical awareness, and word identification skills. Another definition by Khoiriyah in 2010, reading comprehension is the act of connecting information in a paragraph with prior knowledge to generate meaning. Reading comprehension can also be characterized as a mental process in which readers become aware of an idea, grasp it in terms of their own experiences, and interpret it in light of their own needs and goals.

Based on those above definitions, the researcher concludes that Reading comprehension is a process of simultaneously extracting and constructing meaning through interaction and involvement of readers' prior knowledge with written language.

2. 2. Description of Writing Skill

Writing is also an important skill in guiding pupils to effective language learning since it is an act of communication. According to Raymond (1980), writing is more than just a mode of communication. It implies that writing may be used for more than simply communication; it can also be used to convey thoughts and feelings. Meanwhile, Oshima and Hogue (1999) claim in their book that writing takes study and practice to grow as a talent. Simply said, writing is about process, not the final item. As a result, writing becomes a continuous activity. It indicates that when individuals compose for the very first time, they've already planned out what they'll say and how they'll say it. It is a written act in which an idea, thinking, or sentiment is expressed. Furthermore, according to Jeremy Harmer (2007:112), "writing is utilized as an aide-memoire or practice tool to assist students exercise and interact with language they have

been learning." In other words, the process of writing is a crucial talent that requires the ability to articulate thoughts, think, feel, experience, and then interpret them in written form.

2. 3. The Relationship between Reading Comprehension and Writing Skill

Numerous study endeavours have widely recognized the tight association between reading and writing abilities, for instance Berninger, Abbott, Abbott, Graham, & Richards, 2002; Fitzgerald & Shanahan, 2000; (Shanahan, T., & Beck, I. L., 2006). The major problem in these studies has been whether reading or reading development has a weight on writing or writing development, or whether there are bidirectional impacts. (Abbott, Berninger, & Fayol, 2010; Ahmed, Wagner, & Lopez, 2014; Shanahan & Lomax, 1988). In other words, reading and writing are regarded literacy abilities that play complimentary functions. However, from a theoretical standpoint, it is most likely that both reading and writing employ some of the same cognitive, linguistic, and discourse resources that a language user possesses. When we consider these literacy models, we might expect that such a building blocks or constituent components play the same role in the cognitive processes of reading and writing. Although reading and writing are both regarded to be cognitively challenging abilities, there are also notable distinctions. We can presume that reading and writing inequalities are driven by individual variances in these basic processes. (See; Schoonen, R., (2019)), As a result, the association between reading and writing may be driven, at least in part, by individual variances in these resources. Whether it be their vocabulary mastery, fluency or even motivation that intervene the liaison which might separate the ability of each individual. These have serious implications for learners whose competency may not necessarily correspond to their grade levels or whose writing ability may have been comparatively undeveloped compared to other language abilities as a result of the lack of learning

activities, which in this case includes reading. According to Langer and Flihan (2000), superior writers tend to be better readers (of their own writing as well as other reading material), superior writers read more than inferior writers, and superior readers generate more syntactically mature writing than inferior readers.

Therefore, it's allegedly assumed that reading and writing is related to one another. A learner gains knowledge of reading and writing simultaneously where both skills are developed in early childhood. Children usually will learn the foundation of reading and writing all together. At the onset of recognizing the letters, they also begin to pick up on how to write it.

3. Research Methodology

3. 1. Research Design

This study is a correlational research with two variables, namely reading comprehension and writing skill (see chapter II, p.8). According to Arikunto (2010), correlational research is a study undertaken by a researcher to determine the amount of connection between two or more variables investigated without making any modifications, additions, or manipulations to the collected data.

Simple Random Sampling is the sample technique that the researcher utilized in this study. This method, according to Elfil, M., & Negida, A. (2017), is exercised when the whole population is accessible and the researchers have a list of all subjects in target population. The mentioned list of all subjects in this population is called the "sampling frame".

To acquire the data, the researcher prepared two instruments. First instrument is about reading comprehension test and the second is about writing test. For reading test, the researcher gave 25 questions with index of difficulty as stated in the table 1 below and as for writing test the researcher will give 6 varied

topics based on the reading comprehension test. The test subject will be asked to choose one of the available topics and write an essay minimum of 250 words. The researcher will analyse the writing test of the subjects in each aspect of writing as stated in the table 2.

3. 2. Procedures of Collecting Data

To get reading comprehension outcome, the researcher's first proposal was that the students were given a reading comprehension test. The kind of reading test the researcher gave was a reading multiple choice question. The respondents were then asked to choose the most correct answer from the given options. The total amount of the questions is 25 items, with 125 optional answers based on 6 different topics of passage. After the reading test concluded, the researcher would collect their answer sheets and tried to find out mean score, standard deviation and reliability of the reading comprehension test.

To get the real writing score of sampled students, they would have been given a writing test. The test would ask the students to write down one of the topics that they have read before in reading comprehension test using their own words. The writing test has the following topics to choose from: a) Public Announcement b) City Description c) Folktales Story d) Technology & Network e) Historical Information f) Animal Report. The essay created by the student's has to contain at least 250 words. After collecting the data, the writing sheets would be scored. There are five aspects of writing; they are grammar, vocabulary, mechanics, organization and fluency.

However, due to the on-going limitations caused by Covid-19 crises, the researcher prepared an alternative plan. This alternative plan differed to the prior proposal in a way that it required less physical contact. The researcher planned to organize an online based test created on Google Form which was accessible for a limited amount of time to warrant the credibility of the tests should the first proposal was deemed to be impossible to be put on motion since it involved direct and face to face interaction between the researcher and the test subjects that called for the implementation of health protocol set by the government. The content of the reading comprehension test and writing test remained unchanged.

Table 1. Distribution Table of Reading Comprehension Test.

No.	Level of Reading Comprehension	Description	Question Level C2/C3/C4	Items
1	Literal comprehension	It is the simple understanding of the words and ideas of author.	C2	2, 3, 4, 10, 11, 15
2	Interpretive comprehension	Involves an effort to grasp relationship, compare facts with personal experiences, understanding sequence. See cause and effect relationship, and generally interpret the message.	C3	1, 5, 6, 13, 14, 17, 19, 23, 25
3	Applied comprehension	evaluate the author's ideas, either accepting or rejecting them or applying then to some new situation	C3	7, 12, 16, 18, 21, 24
4	Critical comprehension	analyses, evaluates and personally reacts to information presented in a passage	C4	8, 9, 20, 22

Table 2. Writing Aspects

No.	Writing Aspects	Level
1	Contents	1. Excellent
2	Organization	2. Good
3	Grammar	3. Fair
4	Vocabulary	4. Mediocre
5	Mechanics	5. Very Poor

3. 3. Technique of Data Analysis

In analyzing the data of this research, the researcher used descriptive and verification approaches. Descriptive approach was used to describe or analyse a research result but without intending to make more conclusions broad (Sugiyono, 2013: 29). Descriptive method used in this study was to answer the first and second problem statement, which to find out students' level of reading comprehension and their competence in writing. Multiple choice examinations for reading comprehension have traditionally been assessed using the traditional number right (NR) scoring technique (Bereby-Meyer et al., 2002). In this study, accurate answers received a positive value of four, whereas erroneous responses and absent or omitted answers received a penalty value of zero. The test score is the total of the right response scores. The researcher adapted Brown's (2007) writing grading methodology for the writing test. See table 3.

Their ability was sorted based on the score they get in their tests. See table 4. The verification approach aims to determine the relationship between two or more variables (Sugiyono, 2013: 55). This method was used to test the truth of a hypothesis under study. The verification method was used here to find out whether there was a significant correlation between reading comprehension and writing skill. The researcher used the coefficient correlation's formula by Sudjono.

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

Where:

N = the number of respondent

X = the students' score in reading comprehension test

Y = the students' score in writing test

$\sum X$ = the sum of reading comprehension test's scores

$\sum Y$ = the sum of writing test's scores

After finding out the result of the coefficient of correlation, the researcher interpreted it whether it was very low, low, moderate, high or very high. To know whether the hypothesis of this research is accepted or rejected, it could be found by comparing the value of rxy with the value in the r table of Pearson Product Moment Correlation. Before doing that step, the value of the degree of freedom had been found first by using the formula of degree of freedom by Sudjono.

After determining the degree of freedom, the final step was to compare the value of the degree of freedom to the Pearson Product Moment table with a level of significance of 5% (0.05), indicating that there are only five potential mistakes in the case observed. Sudjono (2004:195) states that if the value of r xy or the value of the r table of Pearson Product Moment is greater than zero, the Null hypothesis is rejected and the Alternative hypothesis is accepted, and vice versa.

Table 3. Brown's writing test grading methodology

Aspect	Score	Performance Description	Weighting
Contents (30%) -Topics -Details	4	The topic is complete and clear and the details are relating to the topic	3x
	3	The topic is complete and clear but the details are almost relating to the topic	
	2	The topic is complete and clear but the details are not relating to the topic	
	1	The topic is not clear and the details are not relating to the topic	
Organization (20%) -Identification -Description	4	Identification is complete and descriptions are arranged with proper connectives	2x
	3	Identification is almost complete and descriptions are arranged with almost proper connectives	
	2	Identification is not complete and descriptions are arranged with few misuse of connectives	
	1	Identification is not complete and descriptions are arranged with misuse of connectives	
Grammar (20%) – Use present tense - Agreement	4	Very few grammatical or agreement inaccuracies	2x
	3	Few grammatical or agreement inaccuracies but no effect on meaning	
	2	Numerous grammatical or agreement inaccuracies	
	1	Frequent grammatical or agreement inaccuracies	
Vocabulary (15%)	4	Effective choice of words and word forms	1.5x
	3	Few misuse of vocabulary, word forms but not change the meaning	
	2	Limited range of confusing words and word forms	
	1	Very poor knowledge of words, word forms and not understandable	
Mechanics (15%)	4	It uses correct spelling, punctuation and capitalisation	1.5x

-Spelling -Punctuation -Capitalisation	3	It has occasional errors of spelling, punctuation and capitalisation	
	2	It has frequent errors of spelling, punctuation and capitalisation	
	1	It is dominated by errors of spelling, punctuation and capitalisation	

Table 4. Score Interpretation

No.	Test Scores	Description
1	91 – 100	Excellent
2	71 – 90	Good
3	51 – 70	Fair
4	31 – 50	Mediocre
5	1 – 30	Very Poor

4. Findings and Discussions

After conducting a study in accordance to the alternative plan (see Procedure of Collecting Data in ch.3) in 2021, the researcher got the following results to the assigned tests. These findings were calculated in efforts to attest research questions.

4. 1. Reading Comprehension

In order to answer to the first research question in regards to the level of English Education students' reading comprehension, the researcher, based on the result of English Education students' reading comprehension test, calculated the data and discovered that the mean score is around 18.6 with standard deviation of 3.53 which resulted in test reliability score of 0.7. After that the researcher graded these data prior to sort them out from lowest to highest.

As depicted in Figure 1, the researcher learnt that the lowest score these students got is 24 while the highest score is 88. Four out of 38 students managed to reach the highest score.

Twenty-five other students had scores ranging from 69 to 84, while six students received scores ranging from 54 to 69. One student fell short of the 39-54 score range. For the remainder of English Education students, both unfortunately were unable to score as high as others thus in the lowest score.

To find out the average of these English Education students' level of reading comprehension, the researcher categorized their achievements to the following table 5.

As stated in table 5, it is found that most (76%) of 38 English Education students got a good reading comprehension within the score of 71 – 90. There is 18% of them managed to get in the score range of 51 – 70, which is considered fair reading comprehension. While none of these English Education students got an excellent & mediocre reading comprehension, there is about 5% of them in the score range of 1 – 30, which is unfortunately in very low reading comprehension. The average score of their reading comprehension test is 74.42 which means they have a good reading comprehension.
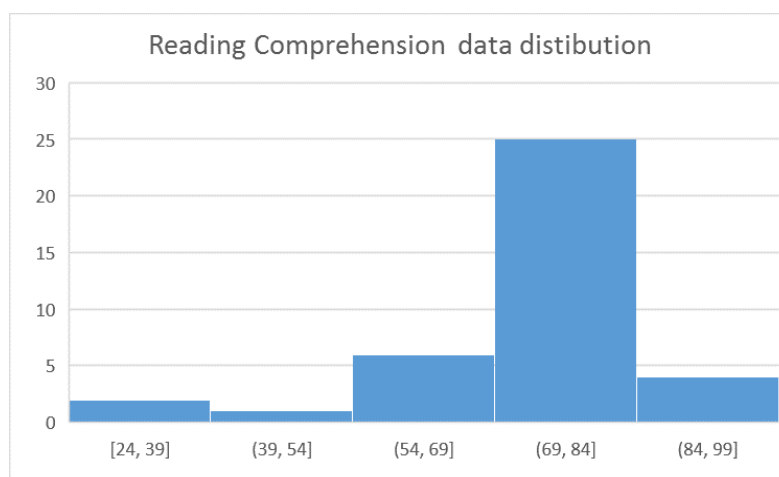
Figure 1. Reading Comprehension Test Data Distribution

Table 5. Reading Comprehension Score Distribution

Classification	Range	Frequency	Percentage	Average
Excellent	91 – 100	0	0%	
Good	71 – 90	29	76%	
Fair	51 – 70	7	18%	74.42
Mediocre	31 – 50	0	0%	
Very Poor	1 – 30	2	18%	
	∑	38	100%	

4. 2. Writing Skill

Answering to the second research question about the level of English Education students' writing skills, the researcher ranked their scores to the following figure 2.

Figure 2 illustrated the distribution of data that the researcher discovered that the bottom score of English Education students is 0 owing to faulty written products which caused invalidity hence the score. There are 3 students whose writings unfortunately got similar score. The top score in this test is 95 which was attained by 5 students. Additional 3 students managed to get in to the score range of 90 – 100. The other 18 students were able to get score between 70-80 and 80-90. There are 2 students are in the range score of 60-70 and the rest 7 students only managed to get into the range of 50-60.

After that, the researcher categorized these data to the following table 6. As written in the table 5 below, only 21% of English Education students whose scores are considered excellent. While most students, 47% of them, got good scores, another 24% only managed to get fair scores. For the rest 8% whose works are invalid, the researcher had to give them very low scores for it. The average score after being calculated is 71.87 which can be interpreted that English Education students have good writing skill.
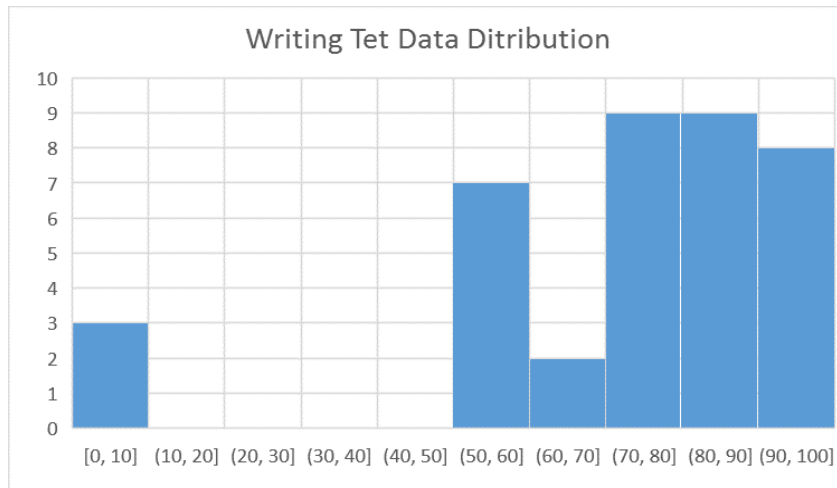
Figure 2. Writing Test Data Distribution

Table 6. Writing Score Distribution

Classification	Range	Frequency	Percentage	Average
Excellent	91 – 100	8	21%	
Good	71 – 90	18	47%	
Fair	51 – 70	9	24%	71.87
Mediocre	31 – 50	0	0%	
Very Poor	1 – 30	3	8%	
	∑	38	100%	

4. 3. Correlation between Reading Comprehension (X) and Writing Skill (Y)

Now for the last research question concerning the correlation between reading comprehension and writing skill, the researcher calculated both reading comprehension and writing scores after obtaining them. The Pearson product-moment correlation formula was used to examine the correlation between the two. Prior to calculating the score with the Pearson product-moment correlation formula, the researcher obtained the following values in table 7.

The researcher calculated the scores in table 7 after the total score in students' reading comprehension and the total score in students' writing were obtained. After calculating the data, the writer used the Pearson product moment correlation formula to calculate the correlation value, which was $r_{xy}=0.68$. Finally, the value r_{xy} of this research (0.68) was determined to be greater than the value of r table product moment (0.304), indicating that H0 was rejected and Ha was approved. It signifies that there is a link between reading comprehension and writing skill in the research findings. See the following figure 3.

Table 7. Data Calculation of X and Y

N	∑ X	∑ Y	∑ X2	∑ Y2	∑ X. Y
38	2828	2731.25	218064	218826.5625	212175

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

$$= \frac{338675}{\sqrt{[288848][855682.8125]}}$$

$$r_{XY} = \frac{38\,212175 - (2828)(2731.25)}{\sqrt{38\,218064 - (2828)^2][38\,218826.5625 - (2731.25)^2]}}$$

$$\frac{338675}{\sqrt{2.47162E + 11}}$$

$$\frac{338675}{497154.1703}$$

$$\frac{8062650 - 7723975}{\sqrt{8286432 - 7997584][8315409.375 - 7459726.563]}}$$

$$= 0.681227314$$

Figure 3. Coefficient Correlation Calculation

5. Conclusion

From the result of the given test, it shows that the highest score of students' reading comprehension ability was 88 while the lowest score was 24 and with an average score of 74.42, it means that English Education students have good reading comprehension. Meanwhile for writing skill, the highest score was 95 and the lowest score, unfortunately, was 0. They still managed to get an average score of 71.87 which means they also have good writing skill in general. The Pearson Product Moment correlation method revealed that rxy is 0.68. Because the value is positive, there was a positive relationship between the two variables. The counted value is between 0.60-0.80, what is more, based on the table interpretation of the value "r." it suggests that the association between reading comprehension and writing skill in the fifth semester of State University of Makassar was substantial, and the alternative hypothesis (Ha) is confirmed.

Since the correlation between reading and writing has been proven in this study, it is only natural to further consider how to take advantage of this significant relationship in order to gain the most benefit out of it. One that the researcher thinks is the most plausible action is to integrate these literacy skills in one combined lesson after of course confirming the impacts it causes to each other on further experimental study. The researcher also believes factors such as proficiency and motivation that could disturb this substantial relationship need to be understood thoroughly.

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