The Correlation Between Students’ Translation Ability and Their Reading Comprehension

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<table>
<thead>
<tr>
<th>Keywords:</th>
<th>ABSTRACT</th>
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<tr>
<td>Correlation; Reading Comprehension; Translation Ability</td>
<td>The aim of this study was to examine the correlation between students’ translation ability and their reading comprehension among eleventh-grade mathematics and science students at SMAN 1 Wonomulyo. This study used a quantitative approach, employing a correlational research design. The sample consisted of 36 students selected through a simple random sampling technique from a total population of 212 students. The study employed translation and reading tests as its primary instruments. The data analysis using SPSS indicated a two-tailed significance value of 0.069, which was greater than the standard 0.05 threshold. Additionally, the result obtained using the multiple correlation formula showed a value of 0.329 with 34 degrees of freedom. The correlation coefficient (r-value) was -0.306, which fell below the calculated threshold of 0.329. A t-test was conducted, yielding a t-value of 1.8741724, which was less than the critical t-table value (2.03224) with 34 degrees of freedom at a 0.05 level of significance. Based on the data analysis, the study concluded that the research hypothesis (Ha) suggesting a significant correlation between students’ translation ability and reading comprehension was rejected, while the null hypothesis (H0) suggesting no significant correlation was accepted.</td>
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1. INTRODUCTION

The communication relationship of people all around the world has increased the ways in which people exchange messages. One of the most visible is in terms of using language. Along with the development of information and globalization, most people communicate with their friends from different countries using one of the internationally recognized languages, that is English (Isma et al., 2022; Isma & Baharuddin, 2022). English is considered the world’s first universal language and is widely used globally in various fields like trade, diplomacy, communication, science, and publishing (Isma, Hermansyah, et al., 2023; Isma, Rasmin, et al., 2023; Rao, 2019).

In the process of learning English, there are four essential skills to acquire: speaking, writing, reading, and listening. Among these, reading holds a significant place for English learners. Reading involves the interpretation of content from texts such as books, journals, newspapers, magazines, and more, with the aim of extracting information (Isma & Nur, 2023). Moreover, Pardo (2004) explained that reading comprehension is the process by which readers construct meaning from text, drawing on their prior knowledge, experiences, the information within the text, and their personal perspective on the content. Reading is indispensable in every academic subject, providing students with the vital information they require.
In addition to these four language skills, there is another crucial aspect of English education namely translation. Translation is the act of conveying information from one language to another in written form, ensuring that the meaning of a sentence from the source language (SL) is accurately conveyed to the target language (TL). Arafanti (2016) underscores that translation involves rendering, replacing, or paraphrasing text from the SL to the TL while maintaining the core ideas of the source language. Before commencing the translation process, it is essential for translators to thoroughly read and understand the text before rephrasing it into the target language, which may vary depending on the purpose and the translator's location (Lestari & Isma, 2019).

From the explanation that has been mentioned, students can see that, when translating something, they need to read the whole text first. Reading and translating will always be side by side considering that people can never translate without reading and vice versa. Based on research preliminary observation, students in SMAN 1 Wonomulyo are only given material that they really have to learn, and most of the assignments given are based on the guidebook given by the school's English teacher. During the provision of material in class, students often carry out activities related to the topic, and one of the activities they do is reading activities in front of the class. In this section, when students are asked to read a text that uses English, most of the students just read and after they finished reading the text, when asked about the meaning of the text they read, they did not know and understand the contents of the text and when they were ask to finish the assignment related to the text, students took longer time in doing it.

Previous research has investigated the connection between translation and reading comprehension. For example, a study conducted by Rahemi et al. (2013), titled "The Correlation Between Reading Comprehension and Translation Ability: A Correlational Study on Fourth Year Students at the English Department of UNP," aimed to uncover the relationship between reading comprehension and translation skills among fourth-year students in the English Department at UNP. This research employed a correlational approach, which involves gathering data to assess the strength of the relationship between two or more variables. The study's participants were fourth-year students enrolled in the translation course at the English Department of UNP. Data analysis was carried out using reading and translation tests, resulting in an r-value of 0.677, exceeding the critical r-value of 0.355. The research hypothesis, which posited a significant correlation between students' reading comprehension and their translation ability, was supported, as the t-observed (4.952) exceeded the t-table (1.699) with 29 degrees of freedom at a significance level of 0.05. In summary, the study confirmed the existence of a significant correlation between students' reading comprehension and their translation ability.

Furthermore, Safitri (2019) conducted a study titled "The Relationship Between Students' Reading Comprehension and Translation Ability" at the English Education Study Program at IAIN Palangka Raya. The research employed a correlational design with a quantitative approach, and the sample selection utilized purposive sampling. The primary goal of this study was to determine whether a connection existed between students' reading comprehension and their translation skills. Data analysis involved using the Pearson Correlation Product Moment, and the assessment instruments were sourced from the Longman TOEFL Test. The results indicated a negative correlation between students' reading comprehension and their translation ability within the English Education Study Program at IAIN Palangka Raya. However, this correlation was not statistically significant, with a value of -0.045, which was lower than the critical r-table value (-0.045 < 0.297), and a two-tailed significance level of 0.772, exceeding the 0.05 threshold. Consequently, the null hypothesis (Ho) was accepted.

Additionally, Adiarti (2018) undertook a similar investigation titled "The Correlation Between Students' Reading Interest and Students' Reading Comprehension Ability at The First Semester of the Eleventh Grade of SMA YP Unila Bandarlampung in Academic Year 2018/2019." This research utilized a correlational design and selected a sample of 30 students through simple random sampling. The
students completed questionnaires to assess their reading interest, and reading comprehension was evaluated through a test. The research's primary objective was to determine whether there exists a positive correlation between students’ reading interest and their reading comprehension. The analysis, employing the $r_{xy}$ distribution, revealed a correlation coefficient of 0.59, indicating a positive relationship between students’ reading interest and their reading comprehension.

Based on the explanation above, the researchers are motivated to explore the correlation between students’ translation ability and their reading comprehension at SMAN 1 Wonomulyo. To gather the necessary data, the researcher plans to administer a translation and reading test using narrative texts.

2. METHODS

This study follows a quantitative approach using a correlational research design. According to Creswell (2012), correlation analysis is a statistical method employed to identify consistent patterns or tendencies in the variations of two or more variables or data sets. A correlational design is suitable because it aims to establish a relationship between variables. In this case, the researchers seek to determine the correlation between students’ translation abilities and their reading comprehension. The research sample comprises eleventh-grade Mathematics and Science students, chosen through a simple random sampling method to ensure equal representation from the entire population. Six students from each of the six classes were selected, resulting in a total sample size of 36 students. In this study, students’ translation ability is considered the independent variable, while students’ reading comprehension serves as the dependent variable.

To assess students' translation ability, the researcher administered an English essay test containing a narrative text. Students were tasked with translating this text from English to Indonesian, and their translations were evaluated based on accuracy, equivalence, adherence to the target language culture, grammar, source text style, shifts, omissions, additions, and the creation of equivalents. The test was adapted from Fitriyani & Wennyta (2019). For reading comprehension, the sample was presented with a multiple-choice test featuring 25 questions, where one narrative text corresponded to 4-6 questions. Data analysis for students’ translation ability employed assessment models (Ilham, 2021).

3. FINDINGS AND DISCUSSION

3.1 Result of Translation Test

A translation test using a narrative text was used to assess the students' translation skills. The test included one narrative, and 36 students were selected as participants in this study. The outcomes of the students’ translation assessment are presented in the table.

<table>
<thead>
<tr>
<th>No</th>
<th>Score Interval</th>
<th>Category</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>86-90</td>
<td>The translation is almost perfect</td>
<td>14</td>
<td>39</td>
</tr>
<tr>
<td>2.</td>
<td>76-85</td>
<td>The translation is very good</td>
<td>22</td>
<td>61</td>
</tr>
<tr>
<td>3.</td>
<td>66-75</td>
<td>The Translation is good</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4.</td>
<td>46-65</td>
<td>The translation is enough</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5.</td>
<td>20-45</td>
<td>The translation is worse</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>36</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Table above showed the result of students’ translation test in narrative text, it showed that the highest score of the students was 89 and the lowest score was 78. The total translation score amounted to 3039 with a mean 84. After the scoring process, researchers predicate the several groups of the score number into percentage.

### 3.2 Result of Reading Test

The students’ reading comprehension was assessed using a reading comprehension test. The test consists of 25 items in narrative text and there are 36 students that were selected as a sample for this study and the result of reading comprehension test was scoring by using the formula:

\[ S = \frac{n}{N} \times 100 \]

Where:
- \( S \) = Students score
- \( n \) = The number of true answers
- \( N \) = Number of tests

In the table below, the table presents the outcomes of the students' reading comprehension test for a narrative text. It is evident that the highest score achieved by a student was 84, while the lowest score was 28. The total score for the reading comprehension test was 2032, with an average of 56.44. The distribution of students' reading comprehension categories is provided in the table below.

**Table 2. The Classification, Frequency and Percentage of Students Score in Reading Comprehension**

<table>
<thead>
<tr>
<th>Score Interval</th>
<th>Classification</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>81-100</td>
<td>Excellent</td>
<td>1</td>
<td>2.8</td>
</tr>
<tr>
<td>61-80</td>
<td>Good</td>
<td>17</td>
<td>47.2</td>
</tr>
<tr>
<td>41-60</td>
<td>Moderate</td>
<td>8</td>
<td>22.2</td>
</tr>
<tr>
<td>21-40</td>
<td>Poor</td>
<td>10</td>
<td>27.8</td>
</tr>
<tr>
<td>0-20</td>
<td>Very poor</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>36</strong></td>
<td><strong>100</strong></td>
<td></td>
</tr>
</tbody>
</table>

Table above indicates 1 (2.8%) student in excellent classification, 17 (47.2%) students in good classification, 8 (22.2%) students in moderate classification, 10 (27.8%) students in poor classification and 0 (0%) student in very poor classification.

### 3.3 Prerequisite Test

#### 3.3.1 Normality Test

The data distribution's normality was assessed using a One-Sample Kolmogorov-Smirnov test. The result can be presented as follows:
Table 3. One-Sample Kolmogorov-Smirnov Test

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Residual</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>36</td>
</tr>
<tr>
<td>Normal Parametersa,b</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>0.0000000</td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>15.91629871</td>
</tr>
<tr>
<td>Absolute</td>
<td>0.123</td>
</tr>
<tr>
<td>Most Extreme Differences</td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>0.108</td>
</tr>
<tr>
<td>Negative</td>
<td>-0.123</td>
</tr>
<tr>
<td>Test Statistic</td>
<td>0.123</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>0.183c</td>
</tr>
</tbody>
</table>

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

According to the analysis conducted using the SPSS 25 program, the obtained significance level is 0.183, which is higher than the alpha value of 0.05. Therefore, we can conclude that the data for this research variable follows a normal distribution.

3.3.2 Linearity Test

Table 4. ANOVA Table

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading * Translate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>(Combined)</td>
<td>11</td>
<td>447.316</td>
<td>2.207</td>
<td>.051</td>
</tr>
<tr>
<td></td>
<td>Linearity</td>
<td>1</td>
<td>418.389</td>
<td>4.531</td>
<td>.044</td>
</tr>
<tr>
<td></td>
<td>Deviation from</td>
<td>10</td>
<td>400.209</td>
<td>1.975</td>
<td>.084</td>
</tr>
<tr>
<td></td>
<td>Linearity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within Groups</td>
<td>4864.412</td>
<td>24</td>
<td>202.684</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9784.889</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The table above displays the results of the linearity test. If the deviation from linearity test yields a value higher than 0.05, it indicates that the two variables are linear. In this case, the result indicates that the deviation from linearity between translation ability and reading comprehension was 0.084. Since 0.084 is greater than 0.05, we can conclude that translation ability and reading comprehension are linearly related.

3.4 Hypothesis Testing Result

3.4.1 SPSS 25 Version

This section focused to answer ‘Is there any correlation between students’ translation ability and their reading comprehension at the eleventh grade of SMAN 1 Wonomulyo by analyzing the result of translation test and reading comprehension. To find out the correlation between students’ translation ability and their reading comprehension of SMAN 1 Wonomulyo, the researcher used SPSS 25 version and Karl Pearson formula to measure translation ability and reading comprehension. The result in SPSS can be presented below:
Table 5. Correlation between Translation ability and Reading Comprehension

<table>
<thead>
<tr>
<th></th>
<th>Translation</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>-0.306</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.069</td>
<td>1</td>
</tr>
<tr>
<td>N</td>
<td>36</td>
<td>36</td>
</tr>
</tbody>
</table>

Based on the SPSS 25 calculation, the two-tailed significance value (Sig.) was found to be 0.069, which is greater than the significance level of 0.05. This indicates a negative correlation between students’ translation ability and their reading comprehension. Therefore, this study concludes that the null hypothesis (H0) is accepted, and the alternative hypothesis (Ha) is rejected.

3.4.2 Pearson Correlation Formula

The formula can be seen below:

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

Where:
- \( R_{xy} \): Coefficient Correlation r Pearson
- \( N \): Number of respondents (36)
- \( X \): The students translation score
- \( Y \): The students reading score
- \( \Sigma X \): The sum of students’ translation score (3039)
- \( \Sigma Y \): The sum of students reading score (2032)
- \( \Sigma X^2 \): The sum of the squared the students’ translation score (256943)
- \( \Sigma Y^2 \): The sum of the squared the students reading score (124480)
- \( (\Sigma X)^2 \): The squared of the sum students’ translation score (9235521)
- \( (\Sigma Y)^2 \): The squared of the sum students’ translation score (4129024)
- \( \Sigma XY \): The sum of students’ translation score and students’ reading score (170926)

Next, the correlation index was computed, and the results of this calculation are presented below:

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

\[ R_{xy} = \frac{36(170928) - 3039(2032)}{\sqrt{36(256943) - (9235521)(3039)(2032)}} \]

\[ R_{xy} = \frac{14427(352256)}{5081997312} \]

\[ R_{xy} = -0.306 \]
According to the calculation above, the correlation index between variable X and Y was found to be -0.306. To determine the value of 'r' based on the degrees of freedom, further information is needed to proceed with this calculation. Please provide the necessary details or context for the degrees of freedom calculation.

\[ Df = N - nr \]
\[ \text{Where:} \]
\[ N = 36 \]
\[ Nr = 2 \]

So, \( Df = N - nr = 36 - 2 = 34 \)

It can be presented on \( r_{table} \) that df 34 in significant 0.05 = 0.329. The result of \( r_{value} = -0.306 \) < 0.329. It means that \( r_{values} \) showed negative correlation between students' translation ability and their reading comprehension.

After obtaining the correlation coefficient value from the calculation results, then we need to know the significance of the value to state whether the hypothesis is accepted or not by using the t test. The value of t can be calculated by using formula:

\[ t_{value} = \frac{r \sqrt{n - 2}}{\sqrt{1 - (r^2)}} \]
\[ t_{value} = \frac{-0.306 \sqrt{36 - 2}}{\sqrt{1 - (-0.306^2)}} \]
\[ t_{value} = \frac{-0.306 \sqrt{34}}{\sqrt{1 - 0.093636}} \]
\[ t_{value} = \frac{0.306 \sqrt{34}}{\sqrt{1 - 0.093636}} \]
\[ t_{value} = \frac{0.306 \times 5.8309518}{0.906364} \]
\[ t_{value} = \frac{1.7842712}{0.9520315} \]
\[ t_{value} = 1.8741724 \]

The criteria of the test; if \( t_{value} < t_{table} \) it means that H0 is received and there is no significant correlation. If the \( t_{value} > t_{table} \) it means that refused H0 and there is a significant correlation between variables. Based on the calculation, \( t_{value} = 1.8741724 \) and \( t_{table} \) used the formula df = n -2 = 34 = 2.03224 in significant 0.05. It means \( t_{value} < t_{table} \) as the result Ha (there is a significant correlation between the students' translation ability and reading comprehension) was rejected and H0 (there is no significant correlation between the students’ translation ability and reading comprehension) was accepted. The correlation between students' translation ability and their reading comprehension based on the index correlation categories is in the 'low correlation' and it can be concluded that the students' translation ability did not influence the students' reading comprehension.

The eleventh grade of mathematics and natural science students in SMAN 1 Wonomulyo that has been selected as the sample of this research translated the text literally, they still translate information from the source language word for word just like word-for-word translation. But in this method the students try to change the grammatical structure of the source language as close as possible to the grammatical structure of the target language. From the results of the translation that has been carried out, there are several sentences that are still rigid in their translation and also often deviate from their proper meaning. Meanwhile, in the reading test, students were asked to answer 25 multiple questions with narrative text in it. After the scoring process, based on table 4.5 indicates 1 (2.8%) student in
excellent classification, 17 (47.2%) students in good classification, 8 (22.2%) students in moderate classification, 10 (27.8%) students in poor classification and 0 (0%) student in very poor classification. With an average 56.44, this indicates that eleventh grade of Mathematics and science students were classified in a moderate category.

Based on the results of the correlation analysis between students’ translation ability and their reading comprehension using SPSS 25, the two-tailed significance value (Sig.) was calculated as 0.069, which is greater than 0.05. This implies that there is no significant correlation between the students’ translation ability and their reading comprehension. In other words, the null hypothesis (H0) is accepted, indicating that there is no significant correlation between these two variables.

The multiple correlation formula was also used in this research to strengthen the result contained in SPSS. The result by using multiple correlation formula has shown that the index correlation of variable X and Y was -0.036. To prove the value of ‘r’ based on the calculation degree of freedom by using formula Df = N-nr = 36-2 = 34, it can be presented on r_table that Df 34 in significant 0.05 = 0.329. The result of r_value = -0.306 < 0.329. It means that r_value showed negative correlation between students’ translation ability and their reading comprehension. Then we need to know the significance of the value to state whether the hypothesis is accepted or not by using the t test. The criteria of the t test; if t_value < t_table it means that H0 is received and there is no significant correlation. If the t_value > t_table it means that refused H0 and there is a significant correlation between variables. Based on the calculation, t_value = 1.8741724 and t_table used the formula Df = N - 2 = 34 = 2.03224 in significant 0.05. It means t_value 1.8741724 < t_table 2.03224 and as the result the alternative hypothesis (Ha), which suggests a significant correlation between the students’ translation ability and reading comprehension, was rejected. On the other hand, the null hypothesis (H0), which implies no significant correlation between the two variables, was accepted.

In this study, the results obtained after the assessment process for the translating test and reading test showed a significantly different score. In the translating test, participants can score up to 89 and the lowest score is 78, while in the reading test students get the highest score of 84 while the lowest score is 28. This significant difference can be obtained because when translating students only focus on only one text, this is supported by the opinion of Atiqoh (2020) which states that when translating, students make observations, identify, and then find appropriate solutions to translate every word they read. Through this strategy, students then begin to translate words that they know the meaning of and then begin to connect one word to another to form a complete paragraph. Meanwhile, when doing the reading test, students are asked to answer multiple choice questions consisting of 25 numbers with a total of 4 narrative texts. In multiple choice tests, students who are careful when reading will get the correct answer and vice versa. In a reading test using a foreign language, the students who were sampled in this study tended to get bored easily because the reading text had to be read repeatedly to answer several questions which then resulted in their lack of concentration on the questions given.

Based on the explanation provided, it can be concluded that the limited relationship between translation and reading is attributed to variations in the way students approached and performed on the two tests. The study’s findings indicate that the null hypothesis was accepted, signifying that there is no significant correlation between students’ translation ability and their reading comprehension. In order to know the contribution of variable X (students’ translation ability) in variable Y (students’ reading comprehension) by using the coefficients determination formula is r^2 x 100% = (0.306)^2 x 100% = 0.09363 x 100% = 9.3636, which means that 9.3636% students reading comprehension affected by their translation ability.
4. CONCLUSION

Based on the result of the research and discussion, both SPSS and multiple correlational formula showed that the \(r_{value}\) is -0.306. By seeing at the indexes of correlation coefficient table, it showed that 0.306 is on the level of low correlation. It means that variable X (translation ability) and variable Y (reading comprehension) have a low degree correlation and the form of the relationship is negative. The point of a negative relationship is that the higher value of variable X, the lower value of variable Y, and vice versa. The hypothesis was tested by using two criteria, first is by seeing the sig. (2 tailed) in SPSS showed that the Sig. 2 tailed was 0.069 > 0.05 and the second were used t-test formula and found that t-value (1.8741724) > t-table (2,03224) with df=n-2 (34) in the level of significance 0.05. Based on the data, the conclusion drawn from the analysis is that the null hypothesis was accepted, indicating that there is no significant correlation between students' translation ability and their reading comprehension among eleventh-grade mathematics and science students at SMAN 1 Wonomulyo.

REFERENCES


Safitri, A. (2019). The correlation between students’ reading comprehension and translation ability at english education study program of IAIN Palangka Raya. IAIN Palangka Raya.