

Appendix 5. Reliability of the Try Out Test Formula

First, using Pearson Product Moment Correlation, the coefficient correlation between odd and even number of the items is counted.

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

In which:

r_{xy} : coefficient of reliability between odd and even numbers items

x : odd number

y : even number

$\sum x^2$: total score of odd number items

$\sum y^2$: total score of even number items

$\sum xy$: total score of odd and even number

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

$$r_{xy} = \frac{3480}{\sqrt{3698.3241.}}$$

$$r_{xy} = \frac{3480}{\sqrt{13420042}}$$

$$r_{xy} = \frac{3480}{3664.6}$$

$$r_{xy} = 0.949$$

After getting the reliability of half test, the researcher will use Spearman Brown to determine the reliability of the whole tests, as follows:

$$r_k = \frac{2 r_{xy}}{1 + r_{xy}}$$

where:

r_k : the reliability of the whole tests

r_{xy} : the reliability of half test

$$r_k = \frac{2 r_{xy}}{1 + r_{xy}}$$

$$r_k = \frac{2 \cdot 0.949}{1 + 0.949}$$

$$r_k = \frac{1.898}{1.949}$$

$$r_k = 0.974$$

Based on the criteria of reliability, it is found that the test items have high reliability that is 0.974.