Appendix 9

The Reliability of Grammar mastery

N = 36 $\sum Y$ = 579 $\sum X^2$ = 11391 $(\sum X)^2$ = 388129

$\sum X$ = 623 $\sum XY$ = 10323 $\sum Y^2$ = 9807 $(\sum Y)^2$ = 335281

Product moment by Pearson

$$rxy = \frac{N\sum XY - \sum X \sum Y}{\sqrt{(N\sum X^2 - (\sum X)^2)(N\sum Y^2 - (\sum Y)^2)}}$$

$$rxy = \frac{36 \text{ x } 10323 - 623 \text{ x } 579}{\sqrt{(36 \text{ x } 11391 - (388129)\ (36 \text{ x } 9807 - (335281)}}$$

$$rxy = \frac{371628 - 360717}{\sqrt{(21947)\ (360717)}}$$

$$rxy = \frac{10911}{19771{,}141}$$

rxy = 0.551

Sperman – Brown's Formula (Split half)

$$r11 = \frac{2 \times r_{½.½}}{(1 + r_{½.½})}$$

$$r11 = \frac{2 \times 0.551}{(1 + 0.551)} = \frac{1,102}{1,551}$$

$r11 = 0.71$

The result of the coefficient correlation of the test is 0.71.

Based on the calculation of reliability, the result of the coefficient correlation of the test is 0.71 (high). It can be concluded that the test is reliable