LAMPIRAN 4

| No. Resp | Jawaban Item Pernyataan | | | | | | | | | | | | | | | | | | | | Skor Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | |
| 1 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 4 | 3 | 4 | 3 | 3 | 4 | 3 | 3 | 60 |
| 2 | 4 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 86 |
| 3 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 5 | 5 | 89 |
| 4 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 98 |
| 5 | 5 | 5 | 5 | 5 | 3 | 3 | 5 | 4 | 5 | 5 | 5 | 5 | 2 | 5 | 1 | 5 | 1 | 5 | 5 | 5 | 84 |
| 6 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 4 | 4 | 4 | 4 | 82 |
| 7 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 3 | 4 | 5 | 4 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 4 | 91 |
| 8 | 4 | 5 | 4 | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 82 |
| 9 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 100 |
| 10 | 5 | 5 | 5 | 5 | 5 | 5 | 2 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 94 |
| 11 | 4 | 5 | 3 | 3 | 4 | 4 | 5 | 4 | 4 | 4 | 5 | 5 | 4 | 4 | 5 | 4 | 4 | 4 | 4 | 4 | 83 |
| 12 | 5 | 4 | 4 | 4 | 5 | 3 | 4 | 5 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 4 | 5 | 88 |
| 13 | 4 | 4 | 2 | 4 | 4 | 4 | 4 | 5 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 5 | 4 | 5 | 5 | 5 | 76 |
| 14 | 5 | 5 | 5 | 5 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 | 4 | 4 | 4 | 5 | 4 | 5 | 5 | 4 | 90 |
| 15 | 5 | 3 | 3 | 3 | 5 | 3 | 5 | 3 | 3 | 3 | 4 | 4 | 2 | 3 | 5 | 3 | 3 | 3 | 4 | 3 | 70 |
| 16 | 5 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 4 | 5 | 3 | 4 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 4 | 87 |
| 17 | 5 | 3 | 4 | 5 | 5 | 3 | 5 | 5 | 5 | 5 | 5 | 3 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 92 |
| 18 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 4 | 4 | 4 | 5 | 4 | 5 | 4 | 90 |
| 19 | 4 | 3 | 3 | 3 | 5 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 74 |
| 20 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 99 |
| Jumlah | 91 | 89 | 82 | 87 | 88 | 80 | 85 | 84 | 83 | 87 | 87 | 86 | 84 | 84 | 84 | 90 | 81 | 89 | 89 | 85 | 1715 |
| r Hitung | 0.69 | 0.67 | 0.76 | 0.81 | 0.564 | 0.54 | 0.38 | 0.628 | 0.83 | 0.81 | 0.669 | 0.61 | 0.62 | 0.75 | 0.2 | 0.72 | 0.55 | 0.65 | 0.75 | 0.685 | |
| r Tabel | 0,444 | 0,444 | 0,444 | 0,444 | 0,444 | 0,444 | 0,444 | 0,444 | 0,444 | 0,444 | 0,444 | 0,444 | 0,444 | 0,444 | 0,444 | 0,444 | 0,444 | 0,444 | 0,444 | 0,444 | |
| Ket. | V | V | V | V | V | V | TV | V | V | V | V | V | V | V | TV | V | V | V | V | V | |

Rekap Data X1

| | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $\sum X$ | 91 | 89 | 82 | 87 | 88 | 80 | 85 | 84 | 83 | 87 | 87 | 86 | 84 | 84 | 84 | 90 | 81 | 89 | 89 | 85 |
| $\sum Y$ | 1715 | | | | | | | | | | | | | | | | | | | |
| $\sum X Y$ | 7883 | 7737 | 7163 | 7586 | 7634 | 6942 | 7355 | 7286 | 7245 | 7575 | 7555 | 7460 | 7315 | 7302 | 7240 | 7812 | 7044 | 7716 | 7729 | 7382 |
| $\sum X^2$ | 421 | 409 | 352 | 391 | 400 | 332 | 377 | 362 | 357 | 389 | 389 | 380 | 370 | 362 | 370 | 414 | 345 | 405 | 405 | 371 |
| $\sum Y^2$ | 148961 | | | | | | | | | | | | | | | | | | | |
| 20* XY | 157660 | 154740 | 143260 | 151720 | 152680 | 138840 | 147100 | 145720 | 144900 | 151500 | 151100 | 149200 | 146300 | 146040 | 144800 | 156240 | 140880 | 154320 | 154580 | 147640 |
| $20*X^2$ | 8420 | 8180 | 7040 | 7820 | 8000 | 6640 | 7540 | 7240 | 7140 | 7780 | 7780 | 7600 | 7400 | 7240 | 7400 | 8280 | 6900 | 8100 | 8100 | 7420 |
| $(x)^2$ | 8281 | 7921 | 6724 | 7569 | 7744 | 6400 | 7225 | 7056 | 6889 | 7569 | 7569 | 7396 | 7056 | 7056 | 7056 | 8100 | 6561 | 7921 | 7921 | 7225 |
| $20*X^2-(X)^2$ | 139 | 259 | 316 | 251 | 256 | 240 | 315 | 184 | 251 | 211 | 211 | 204 | 344 | 184 | 344 | 180 | 339 | 179 | 179 | 195 |
| $20*Y^2$ | 2979220 | | | | | | | | | | | | | | | | | | | |
| $(\sum Y)^2$ | 2941225 | | | | | | | | | | | | | | | | | | | |
| $20*Y^2-(\sum Y)^2$ | 37995 | | | | | | | | | | | | | | | | | | | |
| $\sum X* \sum Y$ | 156065 | 152635 | 140630 | 149205 | 150920 | 137200 | 145775 | 144060 | 142345 | 149205 | 149205 | 147490 | 144060 | 144060 | 144060 | 154350 | 138915 | 152635 | 152635 | 145775 |
| r hitung | 0.694 | 0.671 | 0.759 | 0.814 | 0.564 | 0.543 | 0.383 | 0.627 | 0.827 | 0.810 | 0.669 | 0.614 | 0.619 | 0.748 | 0.204 | 0.722 | 0.547 | 0.6461 | 0.7458 | 0.6852 |

Ket: X2 ( X Kuadrat)

Ket: Y2 ( Y Kuadrat)

## Uji Validitas Variabel X1

Pengujian validitas dilakukan menggunakan rumus Korelasi Pearson

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

$$r_{xy} = \frac{20(7883) - (91)(1715)}{\sqrt{\left((20(421) - (91)^2(20(148961) - (1715)^2\right)}}$$

$$r_{xy} = \frac{157660 - 156065}{\sqrt{(139)(37995)}} = \frac{1595}{2298{,}10} = 0{,}694$$

$$r_{xy} = \frac{20(7737) - (89)(1715)}{\sqrt{\left((20(409) - (89)^2(20(148961) - (1715)^2\right)}}$$

$$r_{xy} = \frac{154740 - 152635}{\sqrt{(259)(37995)}} = \frac{2105}{3136{,}98} = 0{,}671$$

$$r_{xy} = \frac{20(7163) - (82)(1715)}{\sqrt{\left((20(352) - (82)^2(20(148961) - (1715)^2\right)}}$$

$$r_{xy} = \frac{143260 - 140630}{\sqrt{(316)(37995)}} = \frac{2630}{3465{,}02} = 0{,}759$$

$$r_{xy} = \frac{20(7586) - (87)(1715)}{\sqrt{\left((20(391) - (87)^2(20(148961) - (1715)^2\right)}}$$

$$r_{xy} = \frac{151720 - 149205}{\sqrt{(251)(37995)}} = \frac{2515}{3088{,}16} = 0{,}8144$$

$$r_{xy} = \frac{20(7634) - (88)(1715)}{\sqrt{\left((20(400) - (88)^2(20(148961) - (1715)^2\right)}}$$

$$r_{xy} = \frac{152680 - 150920}{\sqrt{(256)(37995)}} = \frac{1760}{3118{,}76} = 0{,}5643$$

$$r_{xy} = \frac{20(6942) - (80)(1715)}{\sqrt{\left((20(332) - (80)^2(20(148961) - (1715)^2\right)}}$$

$$r_{xy} = \frac{138840 - 137200}{\sqrt{(240)(37995)}} = \frac{1640}{3019{,}73} = 0{,}543$$

$$r_{xy} = \frac{20(7355) - (85)(1715)}{\sqrt{\left((20(377) - (85)^2(20(148961) - (1715)^2\right)}}$$

$$r_{xy} = \frac{147100 - 145775}{\sqrt{(315)(37995)}} = \frac{1325}{3459{,}54} = 0{,}38$$

$$r_{xy} = \frac{20(7286) - (84)(1715)}{\sqrt{\left((20(362) - (84)^2(20(148961) - (1715)^2\right)}}$$

$$r_{xy} = \frac{145720 - 144060}{\sqrt{(184)(37995)}} = \frac{1660}{2644{,}06} = 0{,}627$$

$$r_{xy} = \frac{20(7245) - (83)(1715)}{\sqrt{\left((20(357) - (83)^2(20(148961) - (1715)^2\right)}}$$

$$r_{xy} = \frac{144900 - 142345}{\sqrt{(251)(37995)}} = \frac{2555}{3088{,}16} = 0{,}8274$$

$$r_{xy} = \frac{20(7575) - (87)(1715)}{\sqrt{\left((20(389) - (87)^2(20(148961) - (1715)^2\right)}}$$

$$r_{xy} = \frac{151500 - 149205}{\sqrt{(211)(37995)}} = \frac{2295}{2831{,}4} = 0{,}810$$

$$r_{xy} = \frac{20(7555)-(87)(1715)}{\sqrt{((20(389)-(87)^2(20(148961)-(1715)^2)}}$$

$$r_{xy} = \frac{151100-149205}{\sqrt{(211)(37995)}} = \frac{1895}{2831,4} = 0,6693$$

$$r_{xy} = \frac{20(7460)-(86)(1715)}{\sqrt{((20(380)-(86)^2(20(148961)-(1715)^2)}}$$

$$r_{xy} = \frac{149200-147490}{\sqrt{(204)(37995)}} = \frac{1710}{2784,05} = 0,6142$$

$$r_{xy} = \frac{20(7315)-(84)(1715)}{\sqrt{((20(370)-(84)^2(20(148961)-(1715)^2)}}$$

$$r_{xy} = \frac{146300-144060}{\sqrt{(344)(37995)}} = \frac{2240}{3615,28} = 0,6195$$

$$r_{xy} = \frac{20(7302)-(84)(1715)}{\sqrt{((20(362)-(84)^2(20(148961)-(1715)^2)}}$$

$$r_{xy} = \frac{146040-144060}{\sqrt{(184)(37995)}} = \frac{1980}{2644,065} = 0,7488$$

$$r_{xy} = \frac{20(7240)-(84)(1715)}{\sqrt{((20(370)-(84)^2(20(148961)-(1715)^2)}}$$

$$r_{xy} = \frac{144800-144060}{\sqrt{(344)(37995)}} = \frac{740}{3615,284} = 0,2047$$

$$r_{xy} = \frac{20(7812)-(90)(1715)}{\sqrt{((20(414)-(90)^2(20(148961)-(1715)^2)}}$$

$$r_{xy} = \frac{156240-154350}{\sqrt{(180)(37995)}} = \frac{1890}{2615,16} = 0,7227$$

$$r_{xy} = \frac{20(7044)-(81)(1715)}{\sqrt{((20(345)-(81)^2(20(148961)-(1715)^2)}}$$

$$r_{xy} = \frac{140880-138915}{\sqrt{(339)(37995)}} = \frac{1965}{3588,91} = 0,5475$$

$$r_{xy} = \frac{20(7716)-(89)(1715)}{\sqrt{((20(405)-(89)^2(20(148961)-(1715)^2)}}$$

$$r_{xy} = \frac{154320-152635}{\sqrt{(179)(37995)}} = \frac{1685}{2607,89} = 0,6461$$

$$r_{xy} = \frac{20(7729)-(89)(1715)}{\sqrt{((20(405)-(89)^2(20(148961)-(1715)^2)}}$$

$$r_{xy} = \frac{154580-152635}{\sqrt{(179)(37995)}} = \frac{1945}{2607,89} = 0,7458$$

$$r_{xy} = \frac{20(7382)-(85)(1715)}{\sqrt{\left((20(371)-(85)^2((20(148961)-(1715)^2\right)}}$$

$$r_{xy} = \frac{147640-145775}{\sqrt{(195)(37795)}} = \frac{1865}{2714,77} = 0,6852$$

Dari hasil perhitungan seluruh item ditampilkan pada tabel berikut

| No Item | r hitung | r tabel | Ket |
|---|---|---|---|
| 1 | 0,694 | 0,444 | Valid |
| 2 | 0,671 | 0,444 | Valid |
| 3 | 0,759 | 0,444 | Valid |
| 4 | 0,8144 | 0,444 | Valid |
| 5 | 0,5643 | 0,444 | Valid |
| 6 | 0,543 | 0,444 | Valid |
| 7 | 0, 38 | 0,444 | Tidak Valid |
| 8 | 0,627 | 0,444 | Valid |
| 9 | 0,8274 | 0,444 | Valid |
| 10 | 0,810 | 0,444 | Valid |
| 11 | 0,6693 | 0,444 | Valid |
| 12 | 0,6142 | 0,444 | Valid |
| 13 | 0,6195 | 0,444 | Valid |
| 14 | 0,7488 | 0,444 | Valid |
| 15 | 0,2047 | 0,444 | Tidak Valid |
| 16 | 0,7227 | 0,444 | Valid |
| 17 | 0,5475 | 0,444 | Valid |
| 18 | 0,6461 | 0,444 | Valid |
| 19 | 0,7458 | 0,444 | Valid |
| 20 | 0,6852 | 0,444 | Valid |

Dari hasil perhitungan seperti tercantum pada tabel diatas maka terdapat 2 item pernyataan pada variabel X1 yang dinyatakan tidak valid dan harus diperbaiki atau dikeluarkan dari instrument.

**Uji Reliabilitas Variabel X1**

Uji reliabilitas instrument dengan alpha cronbach, terlebih dahulu menghitung varians masing masing butir dengan rumus berikut,

$$\sigma_1^2 = \frac{\sum X^2 - \frac{(\sum X)^2}{n}}{n-1}$$

$\sigma_1^2 = \frac{421-\frac{(91)^2}{20}}{19}$= 0,365 $\sigma_1^2 = \frac{409-\frac{(89)^2}{20}}{19}$= 0,681 $\sigma_1^2 = \frac{352-\frac{(82)^2}{20}}{19}$= 0,831

$\sigma_1^2 = \frac{391-\frac{(87)^2}{20}}{19}$= 0,660 $\sigma_1^2 = \frac{400-\frac{(88)^2}{20}}{19}$= 0,673 $\sigma_1^2 = \frac{332-\frac{(80)^2}{20}}{19}$= 0,631

$\sigma_1^2 = \frac{377-\frac{(85)^2}{20}}{19}$= 0,828 $\sigma_1^2 = \frac{362-\frac{(84)^2}{20}}{19}$= 0, 484 $\sigma_1^2 = \frac{357-\frac{(83)^2}{20}}{19}$= 0,660

$\sigma_1^2 = \frac{389-\frac{(87)^2}{20}}{19}$= 0,555 $\sigma_1^2 = \frac{389-\frac{(87)^2}{20}}{19}$= 0,555 $\sigma_1^2 = \frac{380-\frac{(86)^2}{20}}{19}$= 0,536

$\sigma_1^2 = \frac{370-\frac{(84)^2}{20}}{19}$= 0,905 $\sigma_1^2 = \frac{362-\frac{(84)^2}{20}}{19}$= 0,484 $\sigma_1^2 = \frac{370-\frac{(84)^2}{20}}{19}$= 0,905

$\sigma_1^2 = \frac{414-\frac{(90)^2}{20}}{19}$= 0,473 $\sigma_1^2 = \frac{345-\frac{(81)^2}{20}}{19}$= 0,892 $\sigma_1^2 = \frac{405-\frac{(89)^2}{20}}{19}$= 0,471

$\sigma_1^2 = \frac{405-\frac{(89)^2}{20}}{19}$= 0,471 $\sigma_1^2 = \frac{371-\frac{(85)^2}{20}}{19}$= 0,513

Dari hasil perhitungan varians seluruh item ditampilkan pada tabel berikut

| No item | $\sigma_1^2$ |
|---|---|
| 1 | 0,365 |
| 2 | 0,681 |
| 3 | 0,831 |
| 4 | 0,660 |
| 5 | 0,673 |
| 6 | 0,631 |
| 7 | 0,828 |
| 8 | 0, 484 |
| 9 | 0,660 |
| 10 | 0,555 |
| 11 | 0,555 |
| 12 | 0,536 |
| 13 | 0,905 |
| 14 | 0,484 |
| 15 | 0,905 |
| 16 | 0,473 |
| 17 | 0,892 |
| 18 | 0,471 |
| 19 | 0,471 |
| 20 | 0,513 |
| $\sum s_i^2$ | 12,573 |

Menghitung varians total item sebagai berikut

$$\sigma_1^2 = \frac{148961 - \frac{(1715)^2}{20}}{19} = 99{,}986$$

Menghitung nilai Alpha Cronbach dengan rumus

$r_{11} = \left(\frac{k}{k-1}\right)\left(1 - \frac{\sum s_i^2}{s_i^2}\right)$

$r_{11} = \left(\frac{20}{19}\right)\left(1 - \frac{12{,}573}{99{,}986}\right)$

$r_{11} = (1{,}053)(0{,}87426)$

$r_{11} = 0{,}92059$ *(reliabilitasnya tinggi)*