|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Raters** | **Education Expert** | | | | | |
| **Author** | 4-point scale | High | Mid | Low | Not Present | **Total** |
| High | 4 | 0 | 0 | 0 | 4 |
| Mid | 4 | 13 | 2 | 0 | 19 |
| Low | 3 | 14 | 23 | 5 | 45 |
| Not Present | 0 | 2 | 1 | 17 | 20 |
| **Total** | 11 | 29 | 26 | 22 | 88 |

1. **Observed Frequencies from Education Expert and Author**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Raters** | **Education Expert** | | | | | |
| **Author** | 4-point scale | High | Mid | Low | Not Present | **Total** |
| High | 0.5 | 1.318 | 1.182 | 1 | 4 |
| Mid | 2.375 | 6.261 | 5.614 | 4.75 | 19 |
| Low | 5.625 | 14.83 | 13.30 | 11.25 | 45 |
| Not Present | 2.5 | 6.591 | 5.91 | 5 | 20 |
| **Total** | 11 | 29 | 26 | 22 | 88 |

1. **Chance Expected Given the Observed Marginal Totals**
2. **Calculating Cohen’s Kappa Statistic**
3. **Standard Error and 95% Confidence Interval**

The standard error was calculated using the formula given in McHugh (2012, p.281)

The 95% confidence interval was calculated:

1. **Linear Weightings**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Not Present | Low | Mid | High |  |  | Not Present | Low | Mid | High |
| Linear Scheme | Not Present | 0 | 1 | 2 | 3 | Linear Weight | Not Present | 1 | 0. | 0. | 0 |
| Low | 1 | 0 | 1 | 2 | Low | 0. | 1 | 0. | 0. |
| Mid | 2 | 1 | 0 | 1 | Mid | 0. | 0. | 1 | 0. |
| High | 3 | 2 | 1 | 0 | High | 0 | 0. | 0. | 1 |

1. **Converting Each Frequency Value to a Proportion multiplied by Linear Weighting**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Proportions (Observed)Linear Weighting** | | | | | |
|  | 4-point scale | High | Mid | Low | Not Present | **Total** |
| High | 0.0455(1) | 0(0.) | 0(0.) | 0(0) | 0.0455 |
| Mid | 0.0455(0.) | 0.1477(1) | 0.0227(0.) | 0(0.) | 0.1932 |
| Low | 0.0341(0.) | 0.1591(0.) | 0.2614(1) | 0.0568(0.) | 0.4167 |
| Not Present | 0(0) | 0.0227(0.) | 0.0114(0.) | 0.1932(1) | 0.2084 |
| **Total** | 0.08722 | 0.2613 | 0.28413 | 0.23107 |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Proportions (Chance Expected) Linear Weighting | | | | | |
|  | 4-point scale | High | Mid | Low | Not Present | **Total** |
| High | 0.0057(1) | 0.0150(0.) | 0.0134(0.) | 0.0114(0) | 0.0202 |
| Mid | 0.0270(0.) | 0.0711(1) | 0.0638(0.) | 0.0540(0.) | 0.1496 |
| Low | 0.0639(0.) | 0.1685(0.) | 0.1511(1) | 0.1278(0.) | 0.3699 |
| Not Present | 0.0284(0) | 0.0749(0.) | 0.0672(0.) | 0.0568(1) | 0.1266 |
| **Total** | 0.045 | 0.2184 | 0.2429 | 0.16 | 0.6663 |

1. **Summing Values from both Tables and Calculating Cohen’s Linear Weighting Kappa Statistic**

0.864

0.6663

1. **Standard Error for Linear Weighting and 95% Confidence Interval**