Summary of nonparametric statistics analysis for the scores of Attention in the second study for signed up students

Table 1: Summary of Scheirer-Ray-Hare results for the scores of Attention in the second study for signed up students

| | Df | Sum Sq | Н | p.value | Sig |
|------------------|----|-----------|-------|---------|-----|
| Type | | | | | |
| Type:Type | 1 | 628.049 | 2.209 | 0.137 | |
| Type:CLRole | 1 | 12.385 | 0.044 | 0.835 | |
| Type:Type:CLRole | 1 | 311.029 | 1.094 | 0.296 | |
| Type:Residuals | 54 | 15253.537 | | | |

Signif. codes: 0 "**" 0.01 "*" 0.05

Table 2: Descriptive statistic of the pair wilcoxon analysis for the scores of Attention in the second study for signed up students

| | Group | N | Median | Mean.Ranks | Sum.Ranks | U | Z | p.value | r | magnitude |
|--------------------|-------------------------|----|--------|------------|-----------|-----|-------|---------|-------|-----------|
| Type:CLRole.less.1 | non-gamified.Apprentice | 23 | 3.50 | 17.35 | 399 | 123 | -1.75 | 0.041 | 0.279 | small |
| Type:CLRole.less.2 | ont-gamified.Apprentice | 16 | 4.42 | 23.81 | 381 | 123 | -1.75 | 0.041 | 0.279 | small |

Table 3: Full descriptive statistic of the pair wilcoxon analysis for the scores of Attention in the second study for signed up students

| | Group | N | Median | Mean.Ranks | Sum.Ranks | U | Z | p.value | r | magnitude |
|--------------------------|-------------------------|---------|--------|------------|-----------|-------|-------|---------|-------|------------------------|
| Type.less.1 | non-gamified | 34 | 3.75 | 26.74 | 909.0 | 314.0 | -1.49 | 0.070 | 0.195 | small |
| Type.less.2 | ont-gamified | 24 | 4.25 | 33.42 | 802.0 | 314.0 | -1.49 | 0.070 | 0.195 | small |
| Type.greater.1 | non-gamified | 34 | 3.75 | 26.74 | 909.0 | 314.0 | -1.49 | 0.931 | 0.195 | small |
| Type.greater.2 | ont-gamified | 24 | 4.25 | 33.42 | 802.0 | 314.0 | -1.49 | 0.931 | 0.195 | small |
| Type.two.sided.1 | non-gamified | 34 | 3.75 | 26.74 | 909.0 | 314.0 | -1.49 | 0.139 | 0.195 | small |
| Type.two.sided.2 | ont-gamified | 24 | 4.25 | 33.42 | 802.0 | 314.0 | -1.49 | 0.139 | 0.195 | small |
| Type:CLRole.less.1 | non-gamified.Apprentice | 23 | 3.50 | 16.52 | 380.0 | 104.0 | -0.83 | 0.209 | 0.142 | small |
| Type:CLRole.less.2 | non-gamified.Master | 11 | 4.33 | 19.55 | 215.0 | 104.0 | -0.83 | 0.209 | 0.142 | small |
| Type:CLRole.greater.1 | non-gamified.Apprentice | 23 | 3.50 | 16.52 | 380.0 | 104.0 | -0.83 | 0.796 | 0.142 | small |
| Type:CLRole.greater.2 | non-gamified.Master | 11 | 4.33 | 19.55 | 215.0 | 104.0 | -0.83 | 0.796 | 0.142 | small |
| Type:CLRole.two.sided.1 | non-gamified.Apprentice | 23 | 3.50 | 16.52 | 380.0 | 104.0 | -0.83 | 0.418 | 0.142 | small |
| Type:CLRole.two.sided.2 | non-gamified.Master | 11 | 4.33 | 19.55 | 215.0 | 104.0 | -0.83 | 0.418 | 0.142 | small |
| Type:CLRole.less.11 | non-gamified.Apprentice | 23 | 3.50 | 17.35 | 399.0 | 123.0 | -1.75 | 0.041 | 0.279 | small |
| Type:CLRole.less.21 | ont-gamified.Apprentice | 16 | 4.42 | 23.81 | 381.0 | 123.0 | -1.75 | 0.041 | 0.279 | small |
| Type:CLRole.greater.11 | non-gamified.Apprentice | 23 | 3.50 | 17.35 | 399.0 | 123.0 | -1.75 | 0.960 | 0.279 | small |
| Type:CLRole.greater.21 | ont-gamified.Apprentice | 16 | 4.42 | 23.81 | 381.0 | 123.0 | -1.75 | 0.960 | 0.279 | small |
| Type:CLRole.two.sided.11 | non-gamified.Apprentice | 23 | 3.50 | 17.35 | 399.0 | 123.0 | -1.75 | 0.082 | 0.279 | small |
| Type:CLRole.two.sided.21 | ont-gamified.Apprentice | 16 | 4.42 | 23.81 | 381.0 | 123.0 | -1.75 | 0.082 | 0.279 | small |
| Type:CLRole.less.12 | non-gamified.Apprentice | 23 | 3.50 | 15.20 | 349.5 | 73.5 | -0.84 | 0.208 | 0.150 | small |
| Type:CLRole.less.22 | ont-gamified.Master | 8 | 4.17 | 18.31 | 146.5 | 73.5 | -0.84 | 0.208 | 0.150 | small |
| Type:CLRole.greater.12 | non-gamified.Apprentice | 23 | 3.50 | 15.20 | 349.5 | 73.5 | -0.84 | 0.798 | 0.150 | small |
| Type:CLRole.greater.22 | ont-gamified.Master | 8 | 4.17 | 18.31 | 146.5 | 73.5 | -0.84 | 0.798 | 0.150 | small |
| Type:CLRole.two.sided.12 | non-gamified.Apprentice | 23 | 3.50 | 15.20 | 349.5 | 73.5 | -0.84 | 0.417 | 0.150 | small |
| Type:CLRole.two.sided.22 | ont-gamified.Master | 8 | 4.17 | 18.31 | 146.5 | 73.5 | -0.84 | 0.417 | 0.150 | small |
| Type:CLRole.less.13 | non-gamified.Master | 11 | 4.33 | 12.59 | 138.5 | 72.5 | -0.77 | 0.229 | 0.148 | small |
| Type:CLRole.less.23 | ont-gamified.Apprentice | 16 | 4.42 | 14.97 | 239.5 | 72.5 | -0.77 | 0.229 | 0.148 | small |
| Type:CLRole.greater.13 | non-gamified.Master | 11 | 4.33 | 12.59 | 138.5 | 72.5 | -0.77 | 0.779 | 0.148 | small |
| Type:CLRole.greater.23 | ont-gamified.Apprentice | 16 | 4.42 | 14.97 | 239.5 | 72.5 | -0.77 | 0.779 | 0.148 | small |
| Type:CLRole.two.sided.13 | non-gamified.Master | 11 | 4.33 | 12.59 | 138.5 | 72.5 | -0.77 | 0.457 | 0.148 | small |
| Type:CLRole.two.sided.23 | ont-gamified.Apprentice | 16 | 4.42 | 14.97 | 239.5 | 72.5 | -0.77 | 0.457 | 0.148 | small |
| Type:CLRole.less.14 | non-gamified.Master | 11 | 4.33 | 10.09 | 111.0 | 45.0 | 0.08 | 0.540 | 0.019 | none |
| Type:CLRole.less.24 | ont-gamified.Master | 8 | 4.17 | 9.88 | 79.0 | 45.0 | 0.08 | 0.540 | 0.019 | none |
| Type:CLRole.greater.14 | non-gamified.Master | 11 | 4.33 | 10.09 | 111.0 | 45.0 | 0.08 | 0.476 | 0.019 | none |
| Type:CLRole.greater.24 | ont-gamified.Master | 8 | 4.17 | 9.88 | 79.0 | 45.0 | 0.08 | 0.476 | 0.019 | none |
| Type:CLRole.two.sided.14 | non-gamified.Master | 11 | 4.33 | 10.09 | 111.0 | 45.0 | 0.08 | 0.951 | 0.019 | none |
| Type:CLRole.two.sided.24 | ont-gamified.Master | 8 | 4.17 | 9.88 | 79.0 | 45.0 | 0.08 | 0.951 | 0.019 | none |
| Type:CLRole.less.15 | ont-gamified.Apprentice | 16 | 4.42 | 13.25 | 212.0 | 76.0 | 0.74 | 0.771 | 0.151 | small |
| Type:CLRole.less.25 | ont-gamified.Master | 8 | 4.17 | 11.00 | 88.0 | 76.0 | 0.74 | 0.771 | 0.151 | small |
| Type:CLRole.greater.15 | ont-gamified.Apprentice | 16 | 4.42 | 13.25 | 212.0 | 76.0 | 0.74 | 0.239 | 0.151 | small |
| Type:CLRole.greater.25 | ont-gamified.Master | 8 | 4.17 | 11.00 | 88.0 | 76.0 | 0.74 | 0.239 | 0.151 | small |

Table 3: (continued)

| | Group | N | Median | Mean.Ranks | Sum.Ranks | U | \mathbf{Z} | p.value | \mathbf{r} | magnitude |
|--------------------------|-------------------------|----|--------|------------|-----------|------|--------------|---------|--------------|-----------|
| Type:CLRole.two.sided.15 | ont-gamified.Apprentice | 16 | 4.42 | 13.25 | 212.0 | 76.0 | 0.74 | 0.478 | 0.151 | small |
| Type:CLRole.two.sided.25 | ont-gamified.Master | 8 | 4.17 | 11.00 | 88.0 | 76.0 | 0.74 | 0.478 | 0.151 | small |