

Summary of parametric statistics analysis for the differences of scores in the pilot empirical study

Table 1: Summary of two-way ANOVA results for the differences of scores in the pilot empirical study

| | Sum Sq | Df | F value | Pr(>F) | Sig |
|------------------|---------|----|---------|--------|-----|
| Type.(Intercept) | 77.012 | 1 | 3.740 | 0.064 | |
| Type.Type | 53.583 | 1 | 2.602 | 0.119 | |
| Type.CLRole | 107.626 | 1 | 5.227 | 0.031 | * |
| Type.Type:CLRole | 0.410 | 1 | 0.020 | 0.889 | |
| Type.Residuals | 535.361 | 26 | | | |

Signif. codes: 0 ‘***’ 0.01 ‘**’ 0.05

Table 2: Descriptive statistics and Tukey post-hoc test results for the differences of scores in the pilot empirical study

| | N | mean | lsmean | SE | df | lwr.CI | upr.CI | t.ratio | p.value | p.adj | g | sig | mag |
|--|----|--------|--------|-------|----|--------|--------|---------|---------|-------|-------|-----|-----|
| Type.non-gamified | 14 | 4.579 | 3.403 | 1.478 | 26 | 0.365 | 6.441 | | | | | | |
| Type.ont-gamified | 16 | 1.181 | 0.308 | 1.224 | 26 | -2.208 | 2.823 | | | | | | |
| Type.non-gamified - ont-gamified | 30 | 3.398 | 3.095 | 1.919 | | -0.016 | 6.811 | 1.613 | 0.119 | 0.051 | 0.686 | | |
| Type.non-gamified.Apprentice | 11 | 5.461 | 5.461 | 1.368 | 26 | 2.649 | 8.273 | | | | | | |
| Type.ont-gamified.Apprentice | 11 | 2.636 | 2.636 | 1.368 | 26 | -0.176 | 5.449 | | | | | | |
| Type.non-gamified.Apprentice - ont-gamified.Apprentice | 22 | 2.825 | 2.825 | 1.935 | | -2.484 | 8.133 | 1.460 | 0.156 | 0.475 | 0.594 | | |
| Type.non-gamified.Master | 3 | 1.345 | 1.345 | 2.620 | 26 | -4.040 | 6.730 | | | | | | |
| Type.ont-gamified.Master | 5 | -2.021 | -2.021 | 2.029 | 26 | -6.192 | 2.150 | | | | | | |
| Type.non-gamified.Master - ont-gamified.Master | 8 | 3.366 | 3.366 | 3.314 | | -5.725 | 12.457 | 1.016 | 0.319 | 0.742 | 0.663 | | |