

Summary of parametric statistics analysis for the gains in skill/knowledge estimates in the first empirical study

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Table 1: Summary of two-way ANOVA results for the gains in skill/knowledge estimates in the first empirical study

| | Sum Sq | Df | F value | Pr(>F) | Sig |
|------------------|--------|----|---------|--------|-----|
| Type.(Intercept) | 9.866 | 1 | 291.364 | 0.000 | |
| Type.Type | 0.031 | 1 | 0.927 | 0.340 | |
| Type.CLRole | 1.321 | 1 | 39.020 | 0.000 | ** |
| Type.Type:CLRole | 0.002 | 1 | 0.067 | 0.796 | |
| Type.Residuals | 1.693 | 50 | | | |

Signif. codes: 0 “***” 0.01 “**” 0.05

Table 2: Descriptive statistics and Tukey post-hoc test results for the gains in skill/knowledge estimates in the first empirical study

| | N | mean | lsmean | SE | df | lwr.CI | upr.CI | t.ratio | p.value | p.ajd | g | sig | mag |
|--|----|--------|--------|-------|----|--------|--------|---------|---------|-------|--------|-----|-----|
| Type.non-gamified | 24 | 0.419 | 0.407 | 0.038 | 50 | 0.331 | 0.482 | | | | | | |
| Type.ont-gamified | 30 | 0.455 | 0.455 | 0.034 | 50 | 0.388 | 0.523 | | | | | | |
| Type.non-gamified - ont-gamified | 54 | -0.036 | -0.049 | 0.050 | | -0.137 | 0.065 | -0.963 | 0.340 | 0.478 | -0.147 | | |
| Type.non-gamified.Apprentice | 13 | 0.558 | 0.558 | 0.051 | 50 | 0.455 | 0.660 | | | | | | |
| Type.ont-gamified.Apprentice | 15 | 0.620 | 0.620 | 0.048 | 50 | 0.524 | 0.715 | | | | | | |
| Type.non-gamified.Apprentice - ont-gamified.Apprentice | 28 | -0.062 | -0.062 | 0.070 | | -0.247 | 0.124 | -0.885 | 0.380 | 0.813 | -0.376 | | |
| Type.non-gamified.Master | 11 | 0.255 | 0.255 | 0.055 | 50 | 0.144 | 0.367 | | | | | | |
| Type.ont-gamified.Master | 15 | 0.291 | 0.291 | 0.048 | 50 | 0.196 | 0.386 | | | | | | |
| Type.non-gamified.Master - ont-gamified.Master | 26 | -0.036 | -0.036 | 0.073 | | -0.230 | 0.159 | -0.486 | 0.629 | 0.962 | -0.166 | | |