

# 1 Summaries of Parametric Statistics Analysis- for the gains in skill/knowledge estimates in the third empirical study

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

	Sum Sq	Df	F value	Pr(>F)	Sig
Type.(Intercept)	0.011	1	2.046	0.159	
Type.Type	0.039	1	7.066	0.011	*
Type.CLRole	0.038	1	6.848	0.012	*
Type.Type:CLRole	0.000	1	0.060	0.808	
Type.Residuals	0.248	45			

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 third empirical study

	N	mean	lsmean	SE	df	lwr.CI	upr.CI	t.ratio	p.value	p.adj	g	sig	mag
Type.ont-gamified	23	0.028	0.014	0.017	45	-0.019	0.048						
Type.w/o-gamified	26	-0.035	-0.048	0.016	45	-0.081	-0.015						
Type.ont-gamified - w/o-gamified	49	0.063	0.063	0.024		0.020	0.106	2.658	0.011	0.005	0.792	**	medium
Type.ont-gamified.Apprentice	16	0.048	0.048	0.019	45	0.011	0.085						
Type.w/o-gamified.Apprentice	19	-0.020	-0.020	0.017	45	-0.055	0.014						
Type.ont-gamified.Apprentice - w/o-gamified.Apprentice	35	0.068	0.068	0.025		0.001	0.136	2.708	0.010	0.045	0.993	*	large
Type.ont-gamified.Master	7	-0.019	-0.019	0.028	45	-0.076	0.037						
Type.w/o-gamified.Master	7	-0.076	-0.076	0.028	45	-0.133	-0.019						
Type.ont-gamified.Master - w/o-gamified.Master	14	0.057	0.057	0.040		-0.049	0.163	1.429	0.160	0.488	0.583		

Signif. codes: 0 ‘\*\*\*’ 0.01 ‘\*’ 0.05