

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

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)	10.287	1	228.937	0.000	
Type.Type	0.095	1	2.124	0.152	
Type.CLRole	0.280	1	6.242	0.016	*
Type.Type:CLRole	0.342	1	7.609	0.009	**
Type.Residuals	1.887	42			

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.adj	g	sig	mag
Type.non-gamified	18	0.532	0.533	0.050	42	0.432	0.635						
Type.ont-gamified	28	0.439	0.439	0.040	42	0.359	0.520						
Type.non-gamified - ont-gamified	46	0.093	0.094	0.064		-0.036	0.222	1.457	0.152	0.155	0.369		
Type.non-gamified.Apprentice	10	0.525	0.525	0.067	42	0.390	0.660						
Type.ont-gamified.Apprentice	14	0.608	0.608	0.057	42	0.494	0.723						
Type.non-gamified.Apprentice - ont-gamified.Apprentice	24	-0.084	-0.084	0.088		-0.318	0.151	-0.953	0.346	0.777	-0.429		
Type.non-gamified.Master	8	0.542	0.542	0.075	42	0.390	0.693						
Type.ont-gamified.Master	14	0.271	0.271	0.057	42	0.156	0.385						
Type.non-gamified.Master - ont-gamified.Master	22	0.271	0.271	0.094		0.020	0.522	2.885	0.006	0.030	1.108	*	large

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