

Summary of nonparametric statistics analysis for the scores of Perceived Choice in the first study for signed up students

Table 1: Summary of Scheirer-Ray-Hare results for the scores of Perceived Choice in the first study for signed up students

	Df	Sum Sq	H	p.value	Sig
Type					
Type:Type	1	1804.017	5.938	0.015	*
Type:CLRole	1	74.909	0.247	0.620	
Type:Type:CLRole	1	12.988	0.043	0.836	
Type:Residuals	56	16034.087			

Signif. codes: 0 ‘***’ 0.01 ‘**’ 0.05

Table 2: Descriptive statistic of the pair wilcoxon analysis for the scores of Perceived Choice in the first study for signed up students

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type.less.1	non-gamified	30	4.7	25.02	750.5	285.5	-2.44	0.007	0.315	medium
Type.less.2	ont-gamified	30	5.7	35.98	1079.5	285.5	-2.44	0.007	0.315	medium
Type.two.sided.1	non-gamified	30	4.7	25.02	750.5	285.5	-2.44	0.014	0.315	medium
Type.two.sided.2	ont-gamified	30	5.7	35.98	1079.5	285.5	-2.44	0.014	0.315	medium
Type.CLRole.less.1	non-gamified.Apprentice	14	4.4	11.43	160.0	55.0	-2.19	0.014	0.406	medium
Type.CLRole.less.2	ont-gamified.Master	15	5.6	18.33	275.0	55.0	-2.19	0.014	0.406	medium
Type.CLRole.two.sided.1	non-gamified.Apprentice	14	4.4	11.43	160.0	55.0	-2.19	0.028	0.406	medium
Type.CLRole.two.sided.2	ont-gamified.Master	15	5.6	18.33	275.0	55.0	-2.19	0.028	0.406	medium
Type.CLRole.less.11	non-gamified.Master	16	5.1	12.97	207.5	71.5	-1.92	0.028	0.345	medium
Type.CLRole.less.21	ont-gamified.Master	15	5.6	19.23	288.5	71.5	-1.92	0.028	0.345	medium

Table 3: Full descriptive statistic of the pair wilcoxon analysis for the scores of Perceived Choice in the first study for signed up students

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type.less.1	non-gamified	30	4.7	25.02	750.5	285.5	-2.44	0.007	0.315	medium
Type.less.2	ont-gamified	30	5.7	35.98	1079.5	285.5	-2.44	0.007	0.315	medium
Type.greater.1	non-gamified	30	4.7	25.02	750.5	285.5	-2.44	0.993	0.315	medium
Type.greater.2	ont-gamified	30	5.7	35.98	1079.5	285.5	-2.44	0.993	0.315	medium
Type.two.sided.1	non-gamified	30	4.7	25.02	750.5	285.5	-2.44	0.014	0.315	medium
Type.two.sided.2	ont-gamified	30	5.7	35.98	1079.5	285.5	-2.44	0.014	0.315	medium
Type.CLRole.less.1	non-gamified.Apprentice	14	4.4	15.00	210.0	105.0	-0.29	0.391	0.053	none
Type.CLRole.less.2	non-gamified.Master	16	5.1	15.94	255.0	105.0	-0.29	0.391	0.053	none
Type.CLRole.greater.1	non-gamified.Apprentice	14	4.4	15.00	210.0	105.0	-0.29	0.617	0.053	none
Type.CLRole.greater.2	non-gamified.Master	16	5.1	15.94	255.0	105.0	-0.29	0.617	0.053	none
Type.CLRole.two.sided.1	non-gamified.Apprentice	14	4.4	15.00	210.0	105.0	-0.29	0.782	0.053	none
Type.CLRole.two.sided.2	non-gamified.Master	16	5.1	15.94	255.0	105.0	-0.29	0.782	0.053	none
Type.CLRole.less.11	non-gamified.Apprentice	14	4.4	12.89	180.5	75.5	-1.29	0.102	0.239	small
Type.CLRole.less.21	ont-gamified.Apprentice	15	5.8	16.97	254.5	75.5	-1.29	0.102	0.239	small
Type.CLRole.greater.11	non-gamified.Apprentice	14	4.4	12.89	180.5	75.5	-1.29	0.902	0.239	small
Type.CLRole.greater.21	ont-gamified.Apprentice	15	5.8	16.97	254.5	75.5	-1.29	0.902	0.239	small
Type.CLRole.two.sided.11	non-gamified.Apprentice	14	4.4	12.89	180.5	75.5	-1.29	0.204	0.239	small
Type.CLRole.two.sided.21	ont-gamified.Apprentice	15	5.8	16.97	254.5	75.5	-1.29	0.204	0.239	small
Type.CLRole.less.12	non-gamified.Apprentice	14	4.4	11.43	160.0	55.0	-2.19	0.014	0.406	medium
Type.CLRole.less.22	ont-gamified.Master	15	5.6	18.33	275.0	55.0	-2.19	0.014	0.406	medium
Type.CLRole.greater.12	non-gamified.Apprentice	14	4.4	11.43	160.0	55.0	-2.19	0.987	0.406	medium
Type.CLRole.greater.22	ont-gamified.Master	15	5.6	18.33	275.0	55.0	-2.19	0.987	0.406	medium
Type.CLRole.two.sided.12	non-gamified.Apprentice	14	4.4	11.43	160.0	55.0	-2.19	0.028	0.406	medium
Type.CLRole.two.sided.22	ont-gamified.Master	15	5.6	18.33	275.0	55.0	-2.19	0.028	0.406	medium
Type.CLRole.less.13	non-gamified.Master	16	5.1	13.72	219.5	83.5	-1.45	0.076	0.260	small
Type.CLRole.less.23	ont-gamified.Apprentice	15	5.8	18.43	276.5	83.5	-1.45	0.076	0.260	small
Type.CLRole.greater.13	non-gamified.Master	16	5.1	13.72	219.5	83.5	-1.45	0.927	0.260	small
Type.CLRole.greater.23	ont-gamified.Apprentice	15	5.8	18.43	276.5	83.5	-1.45	0.927	0.260	small
Type.CLRole.two.sided.13	non-gamified.Master	16	5.1	13.72	219.5	83.5	-1.45	0.152	0.260	small
Type.CLRole.two.sided.23	ont-gamified.Apprentice	15	5.8	18.43	276.5	83.5	-1.45	0.152	0.260	small
Type.CLRole.less.14	non-gamified.Master	16	5.1	12.97	207.5	71.5	-1.92	0.028	0.345	medium
Type.CLRole.less.24	ont-gamified.Master	15	5.6	19.23	288.5	71.5	-1.92	0.028	0.345	medium
Type.CLRole.greater.14	non-gamified.Master	16	5.1	12.97	207.5	71.5	-1.92	0.974	0.345	medium
Type.CLRole.greater.24	ont-gamified.Master	15	5.6	19.23	288.5	71.5	-1.92	0.974	0.345	medium
Type.CLRole.two.sided.14	non-gamified.Master	16	5.1	12.97	207.5	71.5	-1.92	0.055	0.345	medium
Type.CLRole.two.sided.24	ont-gamified.Master	15	5.6	19.23	288.5	71.5	-1.92	0.055	0.345	medium
Type.CLRole.less.15	ont-gamified.Apprentice	15	5.8	15.00	225.0	105.0	-0.31	0.383	0.057	none
Type.CLRole.less.25	ont-gamified.Master	15	5.6	16.00	240.0	105.0	-0.31	0.383	0.057	none
Type.CLRole.greater.15	ont-gamified.Apprentice	15	5.8	15.00	225.0	105.0	-0.31	0.625	0.057	none
Type.CLRole.greater.25	ont-gamified.Master	15	5.6	16.00	240.0	105.0	-0.31	0.625	0.057	none

Table 3: *(continued)*

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type:CLRole.two.sided.15	ont-gamified.Apprentice	15	5.8	15.00	225.0	105.0	−0.31	0.766	0.057	none
Type:CLRole.two.sided.25	ont-gamified.Master	15	5.6	16.00	240.0	105.0	−0.31	0.766	0.057	none