

Summary of nonparametric statistics analysis for Perceived Choice score in the pilot study for students with effective participation

Table 1: Summary of Scheirer-Ray-Hare results for Perceived Choice score in the pilot study for students with effective participation

	Df	Sum Sq	H	p.value	Sig
Type					
Type:Type	1	42.000	1.098	0.295	
Type:CLRole	1	1.458	0.038	0.845	
Type:Type:CLRole	1	155.429	4.064	0.044	*
Type:Residuals	17	566.113			

Signif. codes: 0 “***” 0.01 “**” 0.05

Table 2: Descriptive statistic of the pair wilcoxon analysis for Perceived Choice score in the pilot study for students with effective participation

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type:CLRole.greater.1	non-gamified.Apprentice	5	5.0	5.0	25	10	1.97	0.048	0.745	large
Type:CLRole.greater.2	non-gamified.Master	2	2.8	1.5	3	10	1.97	0.048	0.745	large
Type:CLRole.two.sided.1	non-gamified.Apprentice	5	5.0	5.0	25	10	1.97	0.048	0.745	large
Type:CLRole.two.sided.2	non-gamified.Master	2	2.8	1.5	3	10	1.97	0.048	0.745	large

Table 3: Full descriptive statistic of the pair wilcoxon analysis for Perceived Choice score in the pilot study for students with effective participation

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type.less.1	non-gamified	7	3.8	9.00	63.0	35.0	-1.05	0.156	0.229	small
Type.less.2	ont-gamified	14	4.9	12.00	168.0	35.0	-1.05	0.156	0.229	small
Type.greater.1	non-gamified	7	3.8	9.00	63.0	35.0	-1.05	0.852	0.229	small
Type.greater.2	ont-gamified	14	4.9	12.00	168.0	35.0	-1.05	0.852	0.229	small
Type.two.sided.1	non-gamified	7	3.8	9.00	63.0	35.0	-1.05	0.312	0.229	small
Type.two.sided.2	ont-gamified	14	4.9	12.00	168.0	35.0	-1.05	0.312	0.229	small
Type:CLRole.less.1	non-gamified.Apprentice	5	5.0	5.00	25.0	10.0	1.97	1.000	0.745	large
Type:CLRole.less.2	non-gamified.Master	2	2.8	1.50	3.0	10.0	1.97	1.000	0.745	large
Type:CLRole.greater.1	non-gamified.Apprentice	5	5.0	5.00	25.0	10.0	1.97	0.048	0.745	large
Type:CLRole.greater.2	non-gamified.Master	2	2.8	1.50	3.0	10.0	1.97	0.048	0.745	large
Type:CLRole.two.sided.1	non-gamified.Apprentice	5	5.0	5.00	25.0	10.0	1.97	0.048	0.745	large
Type:CLRole.two.sided.2	non-gamified.Master	2	2.8	1.50	3.0	10.0	1.97	0.048	0.745	large
Type:CLRole.less.11	non-gamified.Apprentice	5	5.0	8.40	42.0	27.0	0.25	0.604	0.064	none
Type:CLRole.less.21	ont-gamified.Apprentice	10	4.7	7.80	78.0	27.0	0.25	0.604	0.064	none
Type:CLRole.greater.11	non-gamified.Apprentice	5	5.0	8.40	42.0	27.0	0.25	0.418	0.064	none
Type:CLRole.greater.21	ont-gamified.Apprentice	10	4.7	7.80	78.0	27.0	0.25	0.418	0.064	none
Type:CLRole.two.sided.11	non-gamified.Apprentice	5	5.0	8.40	42.0	27.0	0.25	0.835	0.064	none
Type:CLRole.two.sided.21	ont-gamified.Apprentice	10	4.7	7.80	78.0	27.0	0.25	0.835	0.064	none
Type:CLRole.less.12	non-gamified.Apprentice	5	5.0	4.20	21.0	6.0	-0.98	0.190	0.328	medium
Type:CLRole.less.22	ont-gamified.Master	4	5.5	6.00	24.0	6.0	-0.98	0.190	0.328	medium
Type:CLRole.greater.12	non-gamified.Apprentice	5	5.0	4.20	21.0	6.0	-0.98	0.849	0.328	medium
Type:CLRole.greater.22	ont-gamified.Master	4	5.5	6.00	24.0	6.0	-0.98	0.849	0.328	medium
Type:CLRole.two.sided.12	non-gamified.Apprentice	5	5.0	4.20	21.0	6.0	-0.98	0.373	0.328	medium
Type:CLRole.two.sided.22	ont-gamified.Master	4	5.5	6.00	24.0	6.0	-0.98	0.373	0.328	medium
Type:CLRole.less.13	non-gamified.Apprentice	2	2.8	2.50	5.0	2.0	-1.72	0.061	0.497	medium
Type:CLRole.less.23	ont-gamified.Apprentice	10	4.7	7.30	73.0	2.0	-1.72	0.061	0.497	medium
Type:CLRole.greater.13	non-gamified.Master	2	2.8	2.50	5.0	2.0	-1.72	0.970	0.497	medium
Type:CLRole.greater.23	ont-gamified.Apprentice	10	4.7	7.30	73.0	2.0	-1.72	0.970	0.497	medium
Type:CLRole.two.sided.13	non-gamified.Master	2	2.8	2.50	5.0	2.0	-1.72	0.121	0.497	medium
Type:CLRole.two.sided.23	ont-gamified.Apprentice	10	4.7	7.30	73.0	2.0	-1.72	0.121	0.497	medium
Type:CLRole.less.14	non-gamified.Master	2	2.8	1.50	3.0	0.0	-1.88	0.067	0.767	large
Type:CLRole.less.24	ont-gamified.Master	4	5.5	4.50	18.0	0.0	-1.88	0.067	0.767	large
Type:CLRole.greater.14	non-gamified.Master	2	2.8	1.50	3.0	0.0	-1.88	1.000	0.767	large
Type:CLRole.greater.24	ont-gamified.Master	4	5.5	4.50	18.0	0.0	-1.88	1.000	0.767	large
Type:CLRole.two.sided.14	non-gamified.Master	2	2.8	1.50	3.0	0.0	-1.88	0.133	0.767	large
Type:CLRole.two.sided.24	ont-gamified.Master	4	5.5	4.50	18.0	0.0	-1.88	0.133	0.767	large
Type:CLRole.less.15	ont-gamified.Apprentice	10	4.7	6.85	68.5	13.5	-0.92	0.200	0.246	small
Type:CLRole.less.25	ont-gamified.Master	4	5.5	9.12	36.5	13.5	-0.92	0.200	0.246	small
Type:CLRole.greater.15	ont-gamified.Apprentice	10	4.7	6.85	68.5	13.5	-0.92	0.824	0.246	small
Type:CLRole.greater.25	ont-gamified.Master	4	5.5	9.12	36.5	13.5	-0.92	0.824	0.246	small

Table 3: *(continued)*

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type:CLRole.two.sided.15	ont-gamified.Apprentice	10	4.7	6.85	68.5	13.5	-0.92	0.394	0.246	small
Type:CLRole.two.sided.25	ont-gamified.Master	4	5.5	9.12	36.5	13.5	-0.92	0.394	0.246	small