Summary of nonparametric statistics analysis for the latent trait estimates of Perceived Choice in the pilot study for signed up students

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Table 1: Summary of Scheirer-Ray-Hare results for the latent trait estimates of Perceived Choice in the pilot study for signed up students

	Df	Sum Sq	H	p.value	Sig
Type					
Type:Type	1	308.571	3.998	0.046	*
Type:CLRole	1	0.027	0.000	0.985	
Type:Type:CLRole	1	161.485	2.093	0.148	
Type:Residuals	26	1767.917			

Signif. codes: 0 "**" 0.01 "*" 0.05

Table 2: Descriptive statistic of the pair wilcoxon analysis for the latent trait estimates of Perceived Choice in the pilot study for signed up students

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type.less.1	non-gamified	14	−0.25	12.07	169	64	−2.00	0.023	0.365	medium
Type.less.2	ont-gamified	16	0.29	18.50	296	64	−2.00	0.023	0.365	medium
Type.two.sided.1	non-gamified	14	−0.25	12.07	169	64	−2.00	0.046	0.365	medium
Type.two.sided.2	ont-gamified	16	0.29	18.50	296	64	−2.00	0.046	0.365	medium
Type:CLRole.less.1	non-gamified.Master	2	−0.84	2.50	5	2	−1.83	0.044	0.489	medium
Type:CLRole.less.2	ont-gamified.Apprentice	12	0.24	8.33	100	2	−1.83	0.044	0.489	medium

Table 3: Full descriptive statistic of the pair wilcoxon analysis for the latent trait estimates of Perceived Choice in the pilot study for signed up students

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type.less.1	non-gamified	14	−0.25	12.07	169.0	64.0	−2.00	0.023	0.365	medium
Type.less.2	ont-gamified	16	0.29	18.50	296.0	64.0	−2.00	0.023	0.365	medium
Type.greater.1	non-gamified	14	−0.25	12.07	169.0	64.0	−2.00	0.978	0.365	medium
Type.greater.2	ont-gamified	16	0.29	18.50	296.0	64.0	−2.00	0.978	0.365	medium
Type.two.sided.1	non-gamified	14	−0.25	12.07	169.0	64.0	−2.00	0.046	0.365	medium
Type.two.sided.2	ont-gamified	16	0.29	18.50	296.0	64.0	−2.00	0.046	0.365	medium
Type:CLRole.less.1	non-gamified.Apprentice	12	−0.20	8.00	96.0	18.0	1.10	0.868	0.295	small
Type:CLRole.less.2	non-gamified.Master	2	−0.84	4.50	9.0	18.0	1.10	0.868	0.295	small
Type:CLRole.greater.1	non-gamified.Apprentice	12	−0.20	8.00	96.0	18.0	1.10	0.165	0.295	small
Type:CLRole.greater.2	non-gamified.Master	2	−0.84	4.50	9.0	18.0	1.10	0.165	0.295	small
Type:CLRole.two.sided.1	non-gamified.Apprentice	12	−0.20	8.00	96.0	18.0	1.10	0.308	0.295	small
Type:CLRole.two.sided.2	non-gamified.Master	2	−0.84	4.50	9.0	18.0	1.10	0.308	0.295	small
Type:CLRole.less.11	non-gamified.Apprentice	12	−0.20	10.79	129.5	51.5	−1.19	0.123	0.242	small
Type:CLRole.less.21	ont-gamified.Apprentice	12	0.24	14.21	170.5	51.5	−1.19	0.123	0.242	small
Type:CLRole.greater.11	non-gamified.Apprentice	12	−0.20	10.79	129.5	51.5	−1.19	0.883	0.242	small
Type:CLRole.greater.21	ont-gamified.Apprentice	12	0.24	14.21	170.5	51.5	−1.19	0.883	0.242	small
Type:CLRole.two.sided.11	non-gamified.Apprentice	12	−0.20	10.79	129.5	51.5	−1.19	0.246	0.242	small
Type:CLRole.two.sided.21	ont-gamified.Apprentice	12	0.24	14.21	170.5	51.5	−1.19	0.246	0.242	small
Type:CLRole.less.12	non-gamified.Apprentice	12	−0.20	7.38	88.5	10.5	−1.64	0.053	0.411	medium
Type:CLRole.less.22	ont-gamified.Master	4	0.65	11.88	47.5	10.5	−1.64	0.053	0.411	medium
Type:CLRole.greater.12	non-gamified.Apprentice	12	−0.20	7.38	88.5	10.5	−1.64	0.955	0.411	medium
Type:CLRole.greater.22	ont-gamified.Master	4	0.65	11.88	47.5	10.5	−1.64	0.955	0.411	medium
Type:CLRole.two.sided.12	non-gamified.Apprentice	12	−0.20	7.38	88.5	10.5	−1.64	0.107	0.411	medium
Type:CLRole.two.sided.22	ont-gamified.Master	4	0.65	11.88	47.5	10.5	−1.64	0.107	0.411	medium
Type:CLRole.less.13	non-gamified.Master	2	−0.84	2.50	5.0	2.0	−1.83	0.044	0.489	medium
Type:CLRole.less.23	ont-gamified.Apprentice	12	0.24	8.33	100.0	2.0	−1.83	0.044	0.489	medium
Type:CLRole.greater.13	non-gamified.Master	2	−0.84	2.50	5.0	2.0	−1.83	0.978	0.489	medium
Type:CLRole.greater.23	ont-gamified.Apprentice	12	0.24	8.33	100.0	2.0	−1.83	0.978	0.489	medium
Type:CLRole.two.sided.13	non-gamified.Master	2	−0.84	2.50	5.0	2.0	−1.83	0.088	0.489	medium
Type:CLRole.two.sided.23	ont-gamified.Apprentice	12	0.24	8.33	100.0	2.0	−1.83	0.088	0.489	medium
Type:CLRole.less.14	non-gamified.Master	2	−0.84	1.50	3.0	0.0	−1.88	0.067	0.767	large
Type:CLRole.less.24	ont-gamified.Master	4	0.65	4.50	18.0	0.0	−1.88	0.067	0.767	large
Type:CLRole.greater.14	non-gamified.Master	2	−0.84	1.50	3.0	0.0	−1.88	1.000	0.767	large
Type:CLRole.greater.24	ont-gamified.Master	4	0.65	4.50	18.0	0.0	−1.88	1.000	0.767	large
Type:CLRole.two.sided.14	non-gamified.Master	2	−0.84	1.50	3.0	0.0	−1.88	0.133	0.767	large
Type:CLRole.two.sided.24	ont-gamified.Master	4	0.65	4.50	18.0	0.0	−1.88	0.133	0.767	large
Type:CLRole.less.15	ont-gamified.Apprentice	12	0.24	7.83	94.0	16.0	−0.97	0.185	0.243	small
Type:CLRole.less.25	ont-gamified.Master	4	0.65	10.50	42.0	16.0	−0.97	0.185	0.243	small
Type:CLRole.greater.15	ont-gamified.Apprentice	12	0.24	7.83	94.0	16.0	−0.97	0.838	0.243	small
Type:CLRole.greater.25	ont-gamified.Master	4	0.65	10.50	42.0	16.0	−0.97	0.838	0.243	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	12	0.24	7.83	94.0	16.0	−0.97	0.370	0.243	small
Type:CLRole.two.sided.25	ont-gamified.Master	4	0.65	10.50	42.0	16.0	−0.97	0.370	0.243	small