

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

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

	Df	Sum Sq	H	p.value	Sig
Type					
Type:Type	1	1229.745	5.587	0.018	*
Type:CLRole	1	58.513	0.266	0.606	
Type:Type:CLRole	1	274.660	1.248	0.264	
Type:Residuals	47	9442.582			

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

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

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type.greater.1	ont-gamified	24	4.8	31.21	749.0	449.0	2.36	0.009	0.331	medium
Type.greater.2	w/o-gamified	27	3.8	21.37	577.0	449.0	2.36	0.009	0.331	medium
Type.two.sided.1	ont-gamified	24	4.8	31.21	749.0	449.0	2.36	0.017	0.331	medium
Type.two.sided.2	w/o-gamified	27	3.8	21.37	577.0	449.0	2.36	0.017	0.331	medium
Type:CLRole.greater.1	ont-gamified.Master	9	5.4	19.56	176.0	131.0	2.25	0.012	0.424	medium
Type:CLRole.greater.2	w/o-gamified.Apprentice	19	4.0	12.11	230.0	131.0	2.25	0.012	0.424	medium
Type:CLRole.two.sided.1	ont-gamified.Master	9	5.4	19.56	176.0	131.0	2.25	0.023	0.424	medium
Type:CLRole.two.sided.2	w/o-gamified.Apprentice	19	4.0	12.11	230.0	131.0	2.25	0.023	0.424	medium
Type:CLRole.greater.11	ont-gamified.Master	9	5.4	11.50	103.5	58.5	2.17	0.015	0.526	large
Type:CLRole.greater.21	w/o-gamified.Master	8	3.2	6.19	49.5	58.5	2.17	0.015	0.526	large
Type:CLRole.two.sided.11	ont-gamified.Master	9	5.4	11.50	103.5	58.5	2.17	0.029	0.526	large
Type:CLRole.two.sided.21	w/o-gamified.Master	8	3.2	6.19	49.5	58.5	2.17	0.029	0.526	large

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

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type.less.1	ont-gamified	24	4.8	31.21	749.0	449.0	2.36	0.992	0.331	medium
Type.less.2	w/o-gamified	27	3.8	21.37	577.0	449.0	2.36	0.992	0.331	medium
Type.greater.1	ont-gamified	24	4.8	31.21	749.0	449.0	2.36	0.009	0.331	medium
Type.greater.2	w/o-gamified	27	3.8	21.37	577.0	449.0	2.36	0.009	0.331	medium
Type.two.sided.1	ont-gamified	24	4.8	31.21	749.0	449.0	2.36	0.017	0.331	medium
Type.two.sided.2	w/o-gamified	27	3.8	21.37	577.0	449.0	2.36	0.017	0.331	medium
Type:CLRole.less.1	ont-gamified.Apprentice	15	4.6	11.20	168.0	48.0	-1.17	0.128	0.238	small
Type:CLRole.less.2	ont-gamified.Master	9	5.4	14.67	132.0	48.0	-1.17	0.128	0.238	small
Type:CLRole.greater.1	ont-gamified.Apprentice	15	4.6	11.20	168.0	48.0	-1.17	0.878	0.238	small
Type:CLRole.greater.2	ont-gamified.Master	9	5.4	14.67	132.0	48.0	-1.17	0.878	0.238	small
Type:CLRole.two.sided.1	ont-gamified.Apprentice	15	4.6	11.20	168.0	48.0	-1.17	0.256	0.238	small
Type:CLRole.two.sided.2	ont-gamified.Master	9	5.4	14.67	132.0	48.0	-1.17	0.256	0.238	small
Type:CLRole.less.11	ont-gamified.Apprentice	15	4.6	19.80	297.0	177.0	1.20	0.885	0.206	small
Type:CLRole.less.21	w/o-gamified.Apprentice	19	4.0	15.68	298.0	177.0	1.20	0.885	0.206	small
Type:CLRole.greater.11	ont-gamified.Apprentice	15	4.6	19.80	297.0	177.0	1.20	0.118	0.206	small
Type:CLRole.greater.21	w/o-gamified.Apprentice	19	4.0	15.68	298.0	177.0	1.20	0.118	0.206	small
Type:CLRole.two.sided.11	ont-gamified.Apprentice	15	4.6	19.80	297.0	177.0	1.20	0.237	0.206	small
Type:CLRole.two.sided.21	w/o-gamified.Apprentice	19	4.0	15.68	298.0	177.0	1.20	0.237	0.206	small
Type:CLRole.less.12	ont-gamified.Apprentice	15	4.6	13.50	202.5	82.5	1.46	0.928	0.304	medium
Type:CLRole.less.22	w/o-gamified.Master	8	3.2	9.19	73.5	82.5	1.46	0.928	0.304	medium
Type:CLRole.greater.12	ont-gamified.Apprentice	15	4.6	13.50	202.5	82.5	1.46	0.076	0.304	medium
Type:CLRole.greater.22	w/o-gamified.Master	8	3.2	9.19	73.5	82.5	1.46	0.076	0.304	medium
Type:CLRole.two.sided.12	ont-gamified.Apprentice	15	4.6	13.50	202.5	82.5	1.46	0.153	0.304	medium
Type:CLRole.two.sided.22	w/o-gamified.Master	8	3.2	9.19	73.5	82.5	1.46	0.153	0.304	medium
Type:CLRole.less.13	ont-gamified.Master	9	5.4	19.56	176.0	131.0	2.25	0.989	0.424	medium
Type:CLRole.less.23	w/o-gamified.Apprentice	19	4.0	12.11	230.0	131.0	2.25	0.989	0.424	medium
Type:CLRole.greater.13	ont-gamified.Master	9	5.4	19.56	176.0	131.0	2.25	0.012	0.424	medium
Type:CLRole.greater.23	w/o-gamified.Apprentice	19	4.0	12.11	230.0	131.0	2.25	0.012	0.424	medium
Type:CLRole.two.sided.13	ont-gamified.Master	9	5.4	19.56	176.0	131.0	2.25	0.023	0.424	medium
Type:CLRole.two.sided.23	w/o-gamified.Apprentice	19	4.0	12.11	230.0	131.0	2.25	0.023	0.424	medium
Type:CLRole.less.14	ont-gamified.Master	9	5.4	11.50	103.5	58.5	2.17	0.987	0.526	large
Type:CLRole.less.24	w/o-gamified.Master	8	3.2	6.19	49.5	58.5	2.17	0.987	0.526	large
Type:CLRole.greater.14	ont-gamified.Master	9	5.4	11.50	103.5	58.5	2.17	0.015	0.526	large
Type:CLRole.greater.24	w/o-gamified.Master	8	3.2	6.19	49.5	58.5	2.17	0.015	0.526	large
Type:CLRole.two.sided.14	ont-gamified.Master	9	5.4	11.50	103.5	58.5	2.17	0.029	0.526	large
Type:CLRole.two.sided.24	w/o-gamified.Master	8	3.2	6.19	49.5	58.5	2.17	0.029	0.526	large
Type:CLRole.less.15	w/o-gamified.Apprentice	19	4.0	14.37	273.0	83.0	0.37	0.647	0.072	none
Type:CLRole.less.25	w/o-gamified.Master	8	3.2	13.12	105.0	83.0	0.37	0.647	0.072	none
Type:CLRole.greater.15	w/o-gamified.Apprentice	19	4.0	14.37	273.0	83.0	0.37	0.362	0.072	none
Type:CLRole.greater.25	w/o-gamified.Master	8	3.2	13.12	105.0	83.0	0.37	0.362	0.072	none

Table 3: *(continued)*

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type:CLRole.two.sided.15	w/o-gamified.Apprentice	19	4.0	14.37	273.0	83.0	0.37	0.724	0.072	none
Type:CLRole.two.sided.25	w/o-gamified.Master	8	3.2	13.12	105.0	83.0	0.37	0.724	0.072	none