

Summary of nonparametric statistics analysis for the scores of Perceived Choice in the third study for students with effective participation

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

	Df	Sum Sq	H	p.value	Sig
Type					
Type:Type	1	208.305	1.326	0.249	
Type:CLRole	1	34.106	0.217	0.641	
Type:Type:CLRole	1	281.433	1.792	0.181	
Type:Residuals	39	6071.656			

Signif. codes: 0 ‘***’ 0.01 ‘**’ 0.05

Table 2: Full descriptive statistic of the pair wilcoxon analysis for the scores of Perceived Choice in the third study for students with effective participation

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type.less.1	ont-gamified	24	4.8	23.96	575.0	275.0	1.15	0.875	0.176	small
Type.less.2	w/o-gamified	19	4.2	19.53	371.0	275.0	1.15	0.875	0.176	small
Type.greater.1	ont-gamified	24	4.8	23.96	575.0	275.0	1.15	0.127	0.176	small
Type.greater.2	w/o-gamified	19	4.2	19.53	371.0	275.0	1.15	0.127	0.176	small
Type.two.sided.1	ont-gamified	24	4.8	23.96	575.0	275.0	1.15	0.255	0.176	small
Type.two.sided.2	w/o-gamified	19	4.2	19.53	371.0	275.0	1.15	0.255	0.176	small
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	14.63	219.5	99.5	0.09	0.541	0.017	none
Type:CLRole.less.21	w/o-gamified.Apprentice	13	4.2	14.35	186.5	99.5	0.09	0.541	0.017	none
Type:CLRole.greater.11	ont-gamified.Apprentice	15	4.6	14.63	219.5	99.5	0.09	0.468	0.017	none
Type:CLRole.greater.21	w/o-gamified.Apprentice	13	4.2	14.35	186.5	99.5	0.09	0.468	0.017	none
Type:CLRole.two.sided.11	ont-gamified.Apprentice	15	4.6	14.63	219.5	99.5	0.09	0.937	0.017	none
Type:CLRole.two.sided.21	w/o-gamified.Apprentice	13	4.2	14.35	186.5	99.5	0.09	0.937	0.017	none
Type:CLRole.less.12	ont-gamified.Apprentice	15	4.6	11.70	175.5	55.5	0.82	0.795	0.179	small
Type:CLRole.less.22	w/o-gamified.Master	6	3.7	9.25	55.5	55.5	0.82	0.795	0.179	small
Type:CLRole.greater.12	ont-gamified.Apprentice	15	4.6	11.70	175.5	55.5	0.82	0.217	0.179	small
Type:CLRole.greater.22	w/o-gamified.Master	6	3.7	9.25	55.5	55.5	0.82	0.217	0.179	small
Type:CLRole.two.sided.12	ont-gamified.Apprentice	15	4.6	11.70	175.5	55.5	0.82	0.433	0.179	small
Type:CLRole.two.sided.22	w/o-gamified.Master	6	3.7	9.25	55.5	55.5	0.82	0.433	0.179	small
Type:CLRole.less.13	ont-gamified.Master	9	5.4	13.83	124.5	79.5	1.41	0.921	0.300	small
Type:CLRole.less.23	w/o-gamified.Apprentice	13	4.2	9.88	128.5	79.5	1.41	0.921	0.300	small
Type:CLRole.greater.13	ont-gamified.Master	9	5.4	13.83	124.5	79.5	1.41	0.084	0.300	small
Type:CLRole.greater.23	w/o-gamified.Apprentice	13	4.2	9.88	128.5	79.5	1.41	0.084	0.300	small
Type:CLRole.two.sided.13	ont-gamified.Master	9	5.4	13.83	124.5	79.5	1.41	0.168	0.300	small
Type:CLRole.two.sided.23	w/o-gamified.Apprentice	13	4.2	9.88	128.5	79.5	1.41	0.168	0.300	small
Type:CLRole.less.14	ont-gamified.Master	9	5.4	9.50	85.5	40.5	1.60	0.947	0.412	medium
Type:CLRole.less.24	w/o-gamified.Master	6	3.7	5.75	34.5	40.5	1.60	0.947	0.412	medium
Type:CLRole.greater.14	ont-gamified.Master	9	5.4	9.50	85.5	40.5	1.60	0.060	0.412	medium
Type:CLRole.greater.24	w/o-gamified.Master	6	3.7	5.75	34.5	40.5	1.60	0.060	0.412	medium
Type:CLRole.two.sided.14	ont-gamified.Master	9	5.4	9.50	85.5	40.5	1.60	0.121	0.412	medium
Type:CLRole.two.sided.24	w/o-gamified.Master	6	3.7	5.75	34.5	40.5	1.60	0.121	0.412	medium
Type:CLRole.less.15	w/o-gamified.Apprentice	13	4.2	10.69	139.0	48.0	0.79	0.787	0.182	small
Type:CLRole.less.25	w/o-gamified.Master	6	3.7	8.50	51.0	48.0	0.79	0.787	0.182	small
Type:CLRole.greater.15	w/o-gamified.Apprentice	13	4.2	10.69	139.0	48.0	0.79	0.227	0.182	small
Type:CLRole.greater.25	w/o-gamified.Master	6	3.7	8.50	51.0	48.0	0.79	0.227	0.182	small

Table 2: *(continued)*

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type:CLRole.two.sided.15	w/o-gamified.Apprentice	13	4.2	10.69	139.0	48.0	0.79	0.452	0.182	small
Type:CLRole.two.sided.25	w/o-gamified.Master	6	3.7	8.50	51.0	48.0	0.79	0.452	0.182	small