

# Summary of nonparametric statistics analysis for the latent trait estimates of Level of Motivation in the third study for signed up students

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Table 1: Summary of Scheirer-Ray-Hare results for the latent trait estimates of Level of Motivation in the third study for signed up students

	Df	Sum Sq	H	p.value	Sig
Type					
Type:Type	1	69.333	0.302	0.582	
Type:CLRole	1	55.265	0.241	0.623	
Type:Type:CLRole	1	79.156	0.345	0.557	
Type:Residuals	48	11490.246			

Signif. codes: 0 “\*\*\*” 0.01 “\*” 0.05

Table 2: Full descriptive statistic of the pair wilcoxon analysis for the latent trait estimates of Level of Motivation 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	25	0.03	27.70	692.5	367.5	0.55	0.709	0.076	none
Type.less.2	w/o-gamified	27	-0.02	25.39	685.5	367.5	0.55	0.709	0.076	none
Type.greater.1	ont-gamified	25	0.03	27.70	692.5	367.5	0.55	0.294	0.076	none
Type.greater.2	w/o-gamified	27	-0.02	25.39	685.5	367.5	0.55	0.294	0.076	none
Type.two.sided.1	ont-gamified	25	0.03	27.70	692.5	367.5	0.55	0.589	0.076	none
Type.two.sided.2	w/o-gamified	27	-0.02	25.39	685.5	367.5	0.55	0.589	0.076	none
Type:CLRole.less.1	ont-gamified.Apprentice	16	-0.07	12.22	195.5	59.5	-0.71	0.248	0.142	small
Type:CLRole.less.2	ont-gamified.Master	9	0.07	14.39	129.5	59.5	-0.71	0.248	0.142	small
Type:CLRole.greater.1	ont-gamified.Apprentice	16	-0.07	12.22	195.5	59.5	-0.71	0.761	0.142	small
Type:CLRole.greater.2	ont-gamified.Master	9	0.07	14.39	129.5	59.5	-0.71	0.761	0.142	small
Type:CLRole.two.sided.1	ont-gamified.Apprentice	16	-0.07	12.22	195.5	59.5	-0.71	0.495	0.142	small
Type:CLRole.two.sided.2	w/o-gamified.Apprentice	9	0.07	14.39	129.5	59.5	-0.71	0.495	0.142	small
Type:CLRole.less.11	ont-gamified.Apprentice	16	-0.07	18.19	291.0	155.0	0.10	0.542	0.017	none
Type:CLRole.less.21	w/o-gamified.Apprentice	19	-0.02	17.84	339.0	155.0	0.10	0.542	0.017	none
Type:CLRole.greater.11	ont-gamified.Apprentice	16	-0.07	18.19	291.0	155.0	0.10	0.464	0.017	none
Type:CLRole.greater.21	w/o-gamified.Apprentice	19	-0.02	17.84	339.0	155.0	0.10	0.464	0.017	none
Type:CLRole.two.sided.11	ont-gamified.Apprentice	16	-0.07	18.19	291.0	155.0	0.10	0.928	0.017	none
Type:CLRole.two.sided.21	w/o-gamified.Apprentice	19	-0.02	17.84	339.0	155.0	0.10	0.928	0.017	none
Type:CLRole.less.12	ont-gamified.Apprentice	16	-0.07	12.56	201.0	65.0	0.06	0.530	0.013	none
Type:CLRole.less.22	w/o-gamified.Master	8	-0.02	12.38	99.0	65.0	0.06	0.530	0.013	none
Type:CLRole.greater.12	ont-gamified.Apprentice	16	-0.07	12.56	201.0	65.0	0.06	0.482	0.013	none
Type:CLRole.greater.22	w/o-gamified.Master	8	-0.02	12.38	99.0	65.0	0.06	0.482	0.013	none
Type:CLRole.two.sided.12	ont-gamified.Apprentice	16	-0.07	12.56	201.0	65.0	0.06	0.965	0.013	none
Type:CLRole.two.sided.22	w/o-gamified.Master	8	-0.02	12.38	99.0	65.0	0.06	0.965	0.013	none
Type:CLRole.less.13	ont-gamified.Master	9	0.07	16.44	148.0	103.0	0.86	0.806	0.163	small
Type:CLRole.less.23	w/o-gamified.Apprentice	19	-0.02	13.58	258.0	103.0	0.86	0.806	0.163	small
Type:CLRole.greater.13	ont-gamified.Master	9	0.07	16.44	148.0	103.0	0.86	0.201	0.163	small
Type:CLRole.greater.23	w/o-gamified.Apprentice	19	-0.02	13.58	258.0	103.0	0.86	0.201	0.163	small
Type:CLRole.two.sided.13	ont-gamified.Master	9	0.07	16.44	148.0	103.0	0.86	0.402	0.163	small
Type:CLRole.two.sided.23	w/o-gamified.Apprentice	19	-0.02	13.58	258.0	103.0	0.86	0.402	0.163	small
Type:CLRole.less.14	ont-gamified.Master	9	0.07	9.94	89.5	44.5	0.82	0.796	0.199	small
Type:CLRole.less.24	w/o-gamified.Master	8	-0.02	7.94	63.5	44.5	0.82	0.796	0.199	small
Type:CLRole.greater.14	ont-gamified.Master	9	0.07	9.94	89.5	44.5	0.82	0.219	0.199	small
Type:CLRole.greater.24	w/o-gamified.Master	8	-0.02	7.94	63.5	44.5	0.82	0.219	0.199	small
Type:CLRole.two.sided.14	ont-gamified.Master	9	0.07	9.94	89.5	44.5	0.82	0.437	0.199	small
Type:CLRole.two.sided.24	w/o-gamified.Master	8	-0.02	7.94	63.5	44.5	0.82	0.437	0.199	small
Type:CLRole.less.15	w/o-gamified.Apprentice	19	-0.02	14.11	268.0	78.0	0.11	0.547	0.020	none
Type:CLRole.less.25	w/o-gamified.Master	8	-0.02	13.75	110.0	78.0	0.11	0.547	0.020	none
Type:CLRole.greater.15	w/o-gamified.Apprentice	19	-0.02	14.11	268.0	78.0	0.11	0.464	0.020	none
Type:CLRole.greater.25	w/o-gamified.Master	8	-0.02	13.75	110.0	78.0	0.11	0.464	0.020	none

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	19	-0.02	14.11	268.0	78.0	0.11	0.927	0.020	none
Type:CLRole.two.sided.25	w/o-gamified.Master	8	-0.02	13.75	110.0	78.0	0.11	0.927	0.020	none