

# Summary of nonparametric statistics analysis for the latent trait estimates of Effort/Importance in the first study for signed up students

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Table 1: Summary of Scheirer-Ray-Hare results for the latent trait estimates of Effort/Importance in the first study for signed up students

	Df	Sum Sq	H	p.value	Sig
Type					
Type:Type	1	1050.017	3.491	0.062	
Type:CLRole	1	463.808	1.542	0.214	
Type:Type:CLRole	1	265.209	0.882	0.348	
Type:Residuals	56	15964.465			

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

Table 2: Descriptive statistic of the pair wilcoxon analysis for the latent trait estimates of Effort/Importance in the first study for signed up students

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type.less.1	non-gamified	30	-0.59	26.32	789.5	324.5	-1.87	0.031	0.241	small
Type.less.2	ont-gamified	30	0.21	34.68	1040.5	324.5	-1.87	0.031	0.241	small
Type:CLRole.less.1	non-gamified.Master	16	-0.82	12.69	203.0	67.0	-2.11	0.017	0.379	medium
Type:CLRole.less.2	ont-gamified.Apprentice	15	0.21	19.53	293.0	67.0	-2.11	0.017	0.379	medium
Type:CLRole.two.sided.1	non-gamified.Master	16	-0.82	12.69	203.0	67.0	-2.11	0.034	0.379	medium
Type:CLRole.two.sided.2	ont-gamified.Apprentice	15	0.21	19.53	293.0	67.0	-2.11	0.034	0.379	medium
Type:CLRole.less.11	non-gamified.Master	16	-0.82	13.00	208.0	72.0	-1.91	0.028	0.343	medium
Type:CLRole.less.21	ont-gamified.Master	15	0.21	19.20	288.0	72.0	-1.91	0.028	0.343	medium

Table 3: Full descriptive statistic of the pair wilcoxon analysis for the latent trait estimates of Effort/Importance in the first study for signed up students

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type.less.1	non-gamified	30	-0.59	26.32	789.5	324.5	-1.87	0.031	0.241	small
Type.less.2	ont-gamified	30	0.21	34.68	1040.5	324.5	-1.87	0.031	0.241	small
Type.greater.1	non-gamified	30	-0.59	26.32	789.5	324.5	-1.87	0.970	0.241	small
Type.greater.2	ont-gamified	30	0.21	34.68	1040.5	324.5	-1.87	0.970	0.241	small
Type.two.sided.1	non-gamified	30	-0.59	26.32	789.5	324.5	-1.87	0.062	0.241	small
Type.two.sided.2	ont-gamified	30	0.21	34.68	1040.5	324.5	-1.87	0.062	0.241	small
Type:CLRole.less.1	non-gamified.Apprentice	14	-0.08	18.29	256.0	151.0	1.63	0.950	0.298	small
Type:CLRole.less.2	ont-gamified.Master	16	-0.82	13.06	209.0	151.0	1.63	0.950	0.298	small
Type:CLRole.greater.1	non-gamified.Apprentice	14	-0.08	18.29	256.0	151.0	1.63	0.053	0.298	small
Type:CLRole.greater.2	ont-gamified.Master	16	-0.82	13.06	209.0	151.0	1.63	0.053	0.298	small
Type:CLRole.two.sided.1	non-gamified.Apprentice	14	-0.08	18.29	256.0	151.0	1.63	0.105	0.298	small
Type:CLRole.two.sided.2	ont-gamified.Master	16	-0.82	13.06	209.0	151.0	1.63	0.105	0.298	small
Type:CLRole.less.11	non-gamified.Apprentice	14	-0.08	13.96	195.5	90.5	-0.64	0.269	0.119	small
Type:CLRole.less.21	ont-gamified.Apprentice	15	0.21	15.97	239.5	90.5	-0.64	0.269	0.119	small
Type:CLRole.greater.11	non-gamified.Apprentice	14	-0.08	13.96	195.5	90.5	-0.64	0.741	0.119	small
Type:CLRole.greater.21	ont-gamified.Apprentice	15	0.21	15.97	239.5	90.5	-0.64	0.741	0.119	small
Type:CLRole.two.sided.11	non-gamified.Apprentice	14	-0.08	13.96	195.5	90.5	-0.64	0.540	0.119	small
Type:CLRole.two.sided.21	ont-gamified.Apprentice	15	0.21	15.97	239.5	90.5	-0.64	0.540	0.119	small
Type:CLRole.less.12	non-gamified.Apprentice	14	-0.08	14.29	200.0	95.0	-0.44	0.336	0.082	none
Type:CLRole.less.22	ont-gamified.Master	15	0.21	15.67	235.0	95.0	-0.44	0.336	0.082	none
Type:CLRole.greater.12	non-gamified.Apprentice	14	-0.08	14.29	200.0	95.0	-0.44	0.672	0.082	none
Type:CLRole.greater.22	ont-gamified.Master	15	0.21	15.67	235.0	95.0	-0.44	0.672	0.082	none
Type:CLRole.two.sided.12	non-gamified.Apprentice	14	-0.08	14.29	200.0	95.0	-0.44	0.672	0.082	none
Type:CLRole.two.sided.22	ont-gamified.Master	15	0.21	15.67	235.0	95.0	-0.44	0.672	0.082	none
Type:CLRole.less.13	non-gamified.Master	16	-0.82	12.69	203.0	67.0	-2.11	0.017	0.379	medium
Type:CLRole.less.23	ont-gamified.Apprentice	15	0.21	19.53	293.0	67.0	-2.11	0.017	0.379	medium
Type:CLRole.greater.13	non-gamified.Master	16	-0.82	12.69	203.0	67.0	-2.11	0.984	0.379	medium
Type:CLRole.greater.23	ont-gamified.Apprentice	15	0.21	19.53	293.0	67.0	-2.11	0.984	0.379	medium
Type:CLRole.two.sided.13	non-gamified.Master	16	-0.82	12.69	203.0	67.0	-2.11	0.034	0.379	medium
Type:CLRole.two.sided.23	ont-gamified.Apprentice	15	0.21	19.53	293.0	67.0	-2.11	0.034	0.379	medium
Type:CLRole.less.14	non-gamified.Master	16	-0.82	13.00	208.0	72.0	-1.91	0.028	0.343	medium
Type:CLRole.less.24	ont-gamified.Master	15	0.21	19.20	288.0	72.0	-1.91	0.028	0.343	medium
Type:CLRole.greater.14	non-gamified.Master	16	-0.82	13.00	208.0	72.0	-1.91	0.973	0.343	medium
Type:CLRole.greater.24	ont-gamified.Master	15	0.21	19.20	288.0	72.0	-1.91	0.973	0.343	medium
Type:CLRole.two.sided.14	non-gamified.Master	16	-0.82	13.00	208.0	72.0	-1.91	0.057	0.343	medium
Type:CLRole.two.sided.24	ont-gamified.Master	15	0.21	19.20	288.0	72.0	-1.91	0.057	0.343	medium
Type:CLRole.less.15	ont-gamified.Apprentice	15	0.21	15.87	238.0	118.0	0.23	0.594	0.042	none
Type:CLRole.less.25	ont-gamified.Master	15	0.21	15.13	227.0	118.0	0.23	0.594	0.042	none
Type:CLRole.greater.15	ont-gamified.Apprentice	15	0.21	15.87	238.0	118.0	0.23	0.414	0.042	none
Type:CLRole.greater.25	ont-gamified.Master	15	0.21	15.13	227.0	118.0	0.23	0.414	0.042	none

Table 3: *(continued)*

Group		N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type:CLRole.two.sided.15	ont-gamified.Apprentice	15	0.21	15.87	238.0	118.0	0.23	0.828	0.042	none
Type:CLRole.two.sided.25	ont-gamified.Master	15	0.21	15.13	227.0	118.0	0.23	0.828	0.042	none