Summary of nonparametric statistics analysis for the latent trait estimates of Level of Motivation in the third study for students with effective participation

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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 students with effective participation

	Df	Sum Sq	H	p.value	Sig
Type					
Type:Type	1	9.263	0.056	0.813	
Type:CLRole	1	6.394	0.039	0.844	
Type:Type:CLRole	1	120.045	0.729	0.393	
Type:Residuals	40	6946.798			

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 students with effective participation

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type.less.1	ont-gamified	25	0.03	22.10	552.5	227.5	−0.24	0.410	0.036	none
Type.less.2	w/o-gamified	19	0.03	23.03	437.5	227.5	−0.24	0.410	0.036	none
Type.greater.1	ont-gamified	25	0.03	22.10	552.5	227.5	−0.24	0.595	0.036	none
Type.greater.2	w/o-gamified	19	0.03	23.03	437.5	227.5	−0.24	0.595	0.036	none
Type.two.sided.1	ont-gamified	25	0.03	22.10	552.5	227.5	−0.24	0.819	0.036	none
Type.two.sided.2	w/o-gamified	19	0.03	23.03	437.5	227.5	−0.24	0.819	0.036	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	ont-gamified.Master	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	14.03	224.5	88.5	−0.68	0.254	0.126	small
Type:CLRole.less.21	w/o-gamified.Apprentice	13	0.03	16.19	210.5	88.5	−0.68	0.254	0.126	small
Type:CLRole.greater.11	ont-gamified.Apprentice	16	−0.07	14.03	224.5	88.5	−0.68	0.752	0.126	small
Type:CLRole.greater.21	w/o-gamified.Apprentice	13	0.03	16.19	210.5	88.5	−0.68	0.752	0.126	small
Type:CLRole.two.sided.11	ont-gamified.Apprentice	16	−0.07	14.03	224.5	88.5	−0.68	0.509	0.126	small
Type:CLRole.two.sided.21	w/o-gamified.Apprentice	13	0.03	16.19	210.5	88.5	−0.68	0.509	0.126	small
Type:CLRole.less.12	ont-gamified.Apprentice	16	−0.07	11.50	184.0	48.0	0.00	0.508	0.000	none
Type:CLRole.less.22	w/o-gamified.Master	6	0.08	11.50	69.0	48.0	0.00	0.508	0.000	none
Type:CLRole.greater.12	ont-gamified.Apprentice	16	−0.07	11.50	184.0	48.0	0.00	0.508	0.000	none
Type:CLRole.greater.22	w/o-gamified.Master	6	0.08	11.50	69.0	48.0	0.00	0.508	0.000	none
Type:CLRole.two.sided.12	ont-gamified.Apprentice	16	−0.07	11.50	184.0	48.0	0.00	1.000	0.000	none
Type:CLRole.two.sided.22	w/o-gamified.Master	6	0.08	11.50	69.0	48.0	0.00	1.000	0.000	none
Type:CLRole.less.13	ont-gamified.Master	9	0.07	11.67	105.0	60.0	0.10	0.546	0.021	none
Type:CLRole.less.23	w/o-gamified.Apprentice	13	0.03	11.38	148.0	60.0	0.10	0.546	0.021	none
Type:CLRole.greater.13	ont-gamified.Master	9	0.07	11.67	105.0	60.0	0.10	0.467	0.021	none
Type:CLRole.greater.23	w/o-gamified.Apprentice	13	0.03	11.38	148.0	60.0	0.10	0.467	0.021	none
Type:CLRole.two.sided.13	ont-gamified.Master	9	0.07	11.67	105.0	60.0	0.10	0.934	0.021	none
Type:CLRole.two.sided.23	w/o-gamified.Apprentice	13	0.03	11.38	148.0	60.0	0.10	0.934	0.021	none
Type:CLRole.less.14	ont-gamified.Master	9	0.07	8.44	76.0	31.0	0.47	0.686	0.122	small
Type:CLRole.less.24	w/o-gamified.Master	6	0.08	7.33	44.0	31.0	0.47	0.686	0.122	small
Type:CLRole.greater.14	ont-gamified.Master	9	0.07	8.44	76.0	31.0	0.47	0.333	0.122	small
Type:CLRole.greater.24	w/o-gamified.Master	6	0.08	7.33	44.0	31.0	0.47	0.333	0.122	small
Type:CLRole.two.sided.14	ont-gamified.Master	9	0.07	8.44	76.0	31.0	0.47	0.667	0.122	small
Type:CLRole.two.sided.24	w/o-gamified.Master	6	0.08	7.33	44.0	31.0	0.47	0.667	0.122	small
Type:CLRole.less.15	w/o-gamified.Apprentice	13	0.03	10.50	136.5	45.5	0.57	0.718	0.131	small
Type:CLRole.less.25	w/o-gamified.Master	6	0.08	8.92	53.5	45.5	0.57	0.718	0.131	small
Type:CLRole.greater.15	w/o-gamified.Apprentice	13	0.03	10.50	136.5	45.5	0.57	0.297	0.131	small
Type:CLRole.greater.25	w/o-gamified.Master	6	0.08	8.92	53.5	45.5	0.57	0.297	0.131	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	0.03	10.50	136.5	45.5	0.57	0.593	0.131	small
Type:CLRole.two.sided.25	w/o-gamified.Master	6	0.08	8.92	53.5	45.5	0.57	0.593	0.131	small

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type:CLRole.two.sided.15	w/o-gamified.Apprentice	13	0.03	10.50	136.5	45.5	0.57	0.593	0.131	small
Type:CLRole.two.sided.25	w/o-gamified.Master	6	0.08	8.92	53.5	45.5	0.57	0.593	0.131	small