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

	Df	Sum Sq	H	p.value	Sig
Type					
Type:Type	1	171.295	0.776	0.378	
Type:CLRole	1	2.231	0.010	0.920	
Type:Type:CLRole	1	278.265	1.261	0.262	
Type:Residuals	47	10584.709			

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 second study for students with effective participation

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type.less.1	non-gamified	30	0.04	24.47	734.0	269.0	−0.88	0.192	0.123	small
Type.less.2	ont-gamified	21	0.10	28.19	592.0	269.0	−0.88	0.192	0.123	small
Type.greater.1	non-gamified	30	0.04	24.47	734.0	269.0	−0.88	0.810	0.123	small
Type.greater.2	ont-gamified	21	0.10	28.19	592.0	269.0	−0.88	0.810	0.123	small
Type.two.sided.1	non-gamified	30	0.04	24.47	734.0	269.0	−0.88	0.384	0.123	small
Type.two.sided.2	ont-gamified	21	0.10	28.19	592.0	269.0	−0.88	0.384	0.123	small
Type:CLRole.less.1	non-gamified.Apprentice	19	−0.13	14.87	282.5	92.5	−0.52	0.309	0.094	none
Type:CLRole.less.2	non-gamified.Master	11	0.16	16.59	182.5	92.5	−0.52	0.309	0.094	none
Type:CLRole.greater.1	non-gamified.Apprentice	19	−0.13	14.87	282.5	92.5	−0.52	0.698	0.094	none
Type:CLRole.greater.2	non-gamified.Master	11	0.16	16.59	182.5	92.5	−0.52	0.698	0.094	none
Type:CLRole.two.sided.1	non-gamified.Apprentice	19	−0.13	14.87	282.5	92.5	−0.52	0.618	0.094	none
Type:CLRole.two.sided.2	non-gamified.Master	11	0.16	16.59	182.5	92.5	−0.52	0.618	0.094	none
Type:CLRole.less.11	non-gamified.Apprentice	19	−0.13	14.61	277.5	87.5	−1.38	0.086	0.244	small
Type:CLRole.less.21	ont-gamified.Apprentice	13	0.10	19.27	250.5	87.5	−1.38	0.086	0.244	small
Type:CLRole.greater.11	non-gamified.Apprentice	19	−0.13	14.61	277.5	87.5	−1.38	0.917	0.244	small
Type:CLRole.greater.21	ont-gamified.Apprentice	13	0.10	19.27	250.5	87.5	−1.38	0.917	0.244	small
Type:CLRole.two.sided.11	non-gamified.Apprentice	19	−0.13	14.61	277.5	87.5	−1.38	0.172	0.244	small
Type:CLRole.two.sided.21	ont-gamified.Apprentice	13	0.10	19.27	250.5	87.5	−1.38	0.172	0.244	small
Type:CLRole.less.12	non-gamified.Apprentice	19	−0.13	13.66	259.5	69.5	−0.35	0.372	0.067	none
Type:CLRole.less.22	ont-gamified.Master	8	−0.05	14.81	118.5	69.5	−0.35	0.372	0.067	none
Type:CLRole.greater.12	non-gamified.Apprentice	19	−0.13	13.66	259.5	69.5	−0.35	0.637	0.067	none
Type:CLRole.greater.22	ont-gamified.Master	8	−0.05	14.81	118.5	69.5	−0.35	0.637	0.067	none
Type:CLRole.two.sided.12	non-gamified.Apprentice	19	−0.13	13.66	259.5	69.5	−0.35	0.745	0.067	none
Type:CLRole.two.sided.22	ont-gamified.Master	8	−0.05	14.81	118.5	69.5	−0.35	0.745	0.067	none
Type:CLRole.less.13	non-gamified.Master	11	0.16	11.59	127.5	61.5	−0.58	0.289	0.118	small
Type:CLRole.less.23	ont-gamified.Apprentice	13	0.10	13.27	172.5	61.5	−0.58	0.289	0.118	small
Type:CLRole.greater.13	non-gamified.Master	11	0.16	11.59	127.5	61.5	−0.58	0.720	0.118	small
Type:CLRole.greater.23	ont-gamified.Apprentice	13	0.10	13.27	172.5	61.5	−0.58	0.720	0.118	small
Type:CLRole.two.sided.13	non-gamified.Master	11	0.16	11.59	127.5	61.5	−0.58	0.578	0.118	small
Type:CLRole.two.sided.23	ont-gamified.Apprentice	13	0.10	13.27	172.5	61.5	−0.58	0.578	0.118	small
Type:CLRole.less.14	non-gamified.Master	11	0.16	10.59	116.5	50.5	0.54	0.707	0.123	small
Type:CLRole.less.24	ont-gamified.Master	8	−0.05	9.19	73.5	50.5	0.54	0.707	0.123	small
Type:CLRole.greater.14	non-gamified.Master	11	0.16	10.59	116.5	50.5	0.54	0.307	0.123	small
Type:CLRole.greater.24	ont-gamified.Master	8	−0.05	9.19	73.5	50.5	0.54	0.307	0.123	small
Type:CLRole.two.sided.14	non-gamified.Master	11	0.16	10.59	116.5	50.5	0.54	0.613	0.123	small
Type:CLRole.two.sided.24	ont-gamified.Master	8	−0.05	9.19	73.5	50.5	0.54	0.613	0.123	small
Type:CLRole.less.15	ont-gamified.Apprentice	13	0.10	12.00	156.0	65.0	0.94	0.827	0.206	small
Type:CLRole.less.25	ont-gamified.Master	8	−0.05	9.38	75.0	65.0	0.94	0.827	0.206	small
Type:CLRole.greater.15	ont-gamified.Apprentice	13	0.10	12.00	156.0	65.0	0.94	0.182	0.206	small
Type:CLRole.greater.25	ont-gamified.Master	8	−0.05	9.38	75.0	65.0	0.94	0.182	0.206	small

Table 2: *(continued)*

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type:CLRole.two.sided.15	ont-gamified.Apprentice	13	0.10	12.00	156.0	65.0	0.94	0.364	0.206	small
Type:CLRole.two.sided.25	ont-gamified.Master	8	−0.05	9.38	75.0	65.0	0.94	0.364	0.206	small

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type:CLRole.two.sided.15	ont-gamified.Apprentice	13	0.10	12.00	156.0	65.0	0.94	0.364	0.206	small
Type:CLRole.two.sided.25	ont-gamified.Master	8	−0.05	9.38	75.0	65.0	0.94	0.364	0.206	small