

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

	Df	Sum Sq	H	p.value	Sig
Type					
Type:Type	1	49.884	0.316	0.574	
Type:CLRole	1	284.759	1.806	0.179	
Type:Type:CLRole	1	353.033	2.239	0.135	
Type:Residuals	39	5934.325			

Signif. codes: 0 “***” 0.01 “**” 0.05

Table 2: Descriptive statistic of the pair wilcoxon analysis for the latent trait estimates of Intrinsic Motivation in the third study for students with effective participation

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type:CLRole.less.1	ont-gamified.Apprentice	15	0.03	10.40	156	36	-1.88	0.032	0.383	medium
Type:CLRole.less.2	ont-gamified.Master	9	0.46	16.00	144	36	-1.88	0.032	0.383	medium
Type:CLRole.greater.1	ont-gamified.Master	9	0.46	9.67	87	42	1.77	0.044	0.456	medium
Type:CLRole.greater.2	w/o-gamified.Master	6	0.07	5.50	33	42	1.77	0.044	0.456	medium

Table 3: Full descriptive statistic of the pair wilcoxon analysis for the latent trait estimates of Intrinsic 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	24	0.28	22.96	551	251	0.56	0.715	0.086	none
Type.less.2	w/o-gamified	19	0.07	20.79	395	251	0.56	0.715	0.086	none
Type.greater.1	ont-gamified	24	0.28	22.96	551	251	0.56	0.293	0.086	none
Type.greater.2	w/o-gamified	19	0.07	20.79	395	251	0.56	0.293	0.086	none
Type.two.sided.1	ont-gamified	24	0.28	22.96	551	251	0.56	0.586	0.086	none
Type.two.sided.2	w/o-gamified	19	0.07	20.79	395	251	0.56	0.586	0.086	none
Type:CLRole.less.1	ont-gamified.Apprentice	15	0.03	10.40	156	36	-1.88	0.032	0.383	medium
Type:CLRole.less.2	ont-gamified.Master	9	0.46	16.00	144	36	-1.88	0.032	0.383	medium
Type:CLRole.greater.1	ont-gamified.Apprentice	15	0.03	10.40	156	36	-1.88	0.972	0.383	medium
Type:CLRole.greater.2	ont-gamified.Master	9	0.46	16.00	144	36	-1.88	0.972	0.383	medium
Type:CLRole.two.sided.1	ont-gamified.Apprentice	15	0.03	10.40	156	36	-1.88	0.064	0.383	medium
Type:CLRole.two.sided.2	ont-gamified.Master	9	0.46	16.00	144	36	-1.88	0.064	0.383	medium
Type:CLRole.less.11	ont-gamified.Apprentice	15	0.03	13.73	206	86	-0.53	0.309	0.100	small
Type:CLRole.less.21	w/o-gamified.Apprentice	13	0.07	15.38	200	86	-0.53	0.309	0.100	small
Type:CLRole.greater.11	ont-gamified.Apprentice	15	0.03	13.73	206	86	-0.53	0.707	0.100	small
Type:CLRole.greater.21	w/o-gamified.Apprentice	13	0.07	15.38	200	86	-0.53	0.707	0.100	small
Type:CLRole.two.sided.11	ont-gamified.Apprentice	15	0.03	13.73	206	86	-0.53	0.618	0.100	small
Type:CLRole.two.sided.21	w/o-gamified.Apprentice	13	0.07	15.38	200	86	-0.53	0.618	0.100	small
Type:CLRole.less.12	ont-gamified.Apprentice	15	0.03	10.87	163	43	-0.16	0.455	0.034	none
Type:CLRole.less.22	w/o-gamified.Master	6	0.07	11.33	68	43	-0.16	0.455	0.034	none
Type:CLRole.greater.12	ont-gamified.Apprentice	15	0.03	10.87	163	43	-0.16	0.575	0.034	none
Type:CLRole.greater.22	w/o-gamified.Master	6	0.07	11.33	68	43	-0.16	0.575	0.034	none
Type:CLRole.two.sided.12	ont-gamified.Apprentice	15	0.03	10.87	163	43	-0.16	0.910	0.034	none
Type:CLRole.two.sided.22	w/o-gamified.Master	6	0.07	11.33	68	43	-0.16	0.910	0.034	none
Type:CLRole.less.13	ont-gamified.Master	9	0.46	13.89	125	80	1.44	0.928	0.306	medium
Type:CLRole.less.23	w/o-gamified.Apprentice	13	0.07	9.85	128	80	1.44	0.928	0.306	medium
Type:CLRole.greater.13	ont-gamified.Master	9	0.46	13.89	125	80	1.44	0.082	0.306	medium
Type:CLRole.greater.23	w/o-gamified.Apprentice	13	0.07	9.85	128	80	1.44	0.082	0.306	medium
Type:CLRole.two.sided.13	ont-gamified.Master	9	0.46	13.89	125	80	1.44	0.164	0.306	medium
Type:CLRole.two.sided.23	w/o-gamified.Apprentice	13	0.07	9.85	128	80	1.44	0.164	0.306	medium
Type:CLRole.less.14	ont-gamified.Master	9	0.46	9.67	87	42	1.77	0.967	0.456	medium
Type:CLRole.less.24	w/o-gamified.Master	6	0.07	5.50	33	42	1.77	0.967	0.456	medium
Type:CLRole.greater.14	ont-gamified.Master	9	0.46	9.67	87	42	1.77	0.044	0.456	medium
Type:CLRole.greater.24	w/o-gamified.Master	6	0.07	5.50	33	42	1.77	0.044	0.456	medium
Type:CLRole.two.sided.14	ont-gamified.Master	9	0.46	9.67	87	42	1.77	0.088	0.456	medium
Type:CLRole.two.sided.24	w/o-gamified.Master	6	0.07	5.50	33	42	1.77	0.088	0.456	medium
Type:CLRole.less.15	w/o-gamified.Apprentice	13	0.07	10.08	131	40	0.09	0.551	0.020	none
Type:CLRole.less.25	w/o-gamified.Master	6	0.07	9.83	59	40	0.09	0.551	0.020	none
Type:CLRole.greater.15	w/o-gamified.Apprentice	13	0.07	10.08	131	40	0.09	0.483	0.020	none
Type:CLRole.greater.25	w/o-gamified.Master	6	0.07	9.83	59	40	0.09	0.483	0.020	none

Table 3: *(continued)*

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type:CLRole.two.sided.15	w/o-gamified.Apprentice	13	0.07	10.08	131	40	0.09	0.966	0.020	none
Type:CLRole.two.sided.25	w/o-gamified.Master	6	0.07	9.83	59	40	0.09	0.966	0.020	none