

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

	Df	Sum Sq	H	p.value	Sig
Type					
Type:Type	1	918.000	4.154	0.042	*
Type:CLRole	1	404.833	1.832	0.176	
Type:Type:CLRole	1	273.961	1.240	0.266	
Type:Residuals	47	9453.205			

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 signed up students

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type.greater.1	ont-gamified	24	0.28	30.50	732	432	2.04	0.021	0.285	small
Type.greater.2	w/o-gamified	27	-0.08	22.00	594	432	2.04	0.021	0.285	small
Type.two.sided.1	ont-gamified	24	0.28	30.50	732	432	2.04	0.042	0.285	small
Type.two.sided.2	w/o-gamified	27	-0.08	22.00	594	432	2.04	0.042	0.285	small
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	19.78	178	133	2.34	0.009	0.442	medium
Type:CLRole.greater.2	w/o-gamified.Apprentice	19	-0.25	12.00	228	133	2.34	0.009	0.442	medium
Type:CLRole.two.sided.1	ont-gamified.Master	9	0.46	19.78	178	133	2.34	0.019	0.442	medium
Type:CLRole.two.sided.2	w/o-gamified.Apprentice	19	-0.25	12.00	228	133	2.34	0.019	0.442	medium
Type:CLRole.greater.11	ont-gamified.Master	9	0.46	11.56	104	59	2.21	0.014	0.537	large
Type:CLRole.greater.21	w/o-gamified.Master	8	0.01	6.12	49	59	2.21	0.014	0.537	large
Type:CLRole.two.sided.11	ont-gamified.Master	9	0.46	11.56	104	59	2.21	0.027	0.537	large
Type:CLRole.two.sided.21	w/o-gamified.Master	8	0.01	6.12	49	59	2.21	0.027	0.537	large

Table 3: Full descriptive statistic of the pair wilcoxon analysis for the latent trait estimates of Intrinsic 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	24	0.28	30.50	732	432	2.04	0.980	0.285	small
Type.less.2	w/o-gamified	27	-0.08	22.00	594	432	2.04	0.980	0.285	small
Type.greater.1	ont-gamified	24	0.28	30.50	732	432	2.04	0.021	0.285	small
Type.greater.2	w/o-gamified	27	-0.08	22.00	594	432	2.04	0.021	0.285	small
Type.two.sided.1	ont-gamified	24	0.28	30.50	732	432	2.04	0.042	0.285	small
Type.two.sided.2	w/o-gamified	27	-0.08	22.00	594	432	2.04	0.042	0.285	small
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	19.40	291	171	0.99	0.841	0.170	small
Type:CLRole.less.21	w/o-gamified.Apprentice	19	-0.25	16.00	304	171	0.99	0.841	0.170	small
Type:CLRole.greater.11	ont-gamified.Apprentice	15	0.03	19.40	291	171	0.99	0.168	0.170	small
Type:CLRole.greater.21	w/o-gamified.Apprentice	19	-0.25	16.00	304	171	0.99	0.168	0.170	small
Type:CLRole.two.sided.11	ont-gamified.Apprentice	15	0.03	19.40	291	171	0.99	0.336	0.170	small
Type:CLRole.two.sided.21	w/o-gamified.Apprentice	19	-0.25	16.00	304	171	0.99	0.336	0.170	small
Type:CLRole.less.12	ont-gamified.Apprentice	15	0.03	12.60	189	69	0.58	0.726	0.121	small
Type:CLRole.less.22	w/o-gamified.Master	8	0.01	10.88	87	69	0.58	0.726	0.121	small
Type:CLRole.greater.12	ont-gamified.Apprentice	15	0.03	12.60	189	69	0.58	0.295	0.121	small
Type:CLRole.greater.22	w/o-gamified.Master	8	0.01	10.88	87	69	0.58	0.295	0.121	small
Type:CLRole.two.sided.12	ont-gamified.Apprentice	15	0.03	12.60	189	69	0.58	0.591	0.121	small
Type:CLRole.two.sided.22	w/o-gamified.Master	8	0.01	10.88	87	69	0.58	0.591	0.121	small
Type:CLRole.less.13	ont-gamified.Master	9	0.46	19.78	178	133	2.34	0.992	0.442	medium
Type:CLRole.less.23	w/o-gamified.Apprentice	19	-0.25	12.00	228	133	2.34	0.992	0.442	medium
Type:CLRole.greater.13	ont-gamified.Master	9	0.46	19.78	178	133	2.34	0.009	0.442	medium
Type:CLRole.greater.23	w/o-gamified.Apprentice	19	-0.25	12.00	228	133	2.34	0.009	0.442	medium
Type:CLRole.two.sided.13	ont-gamified.Master	9	0.46	19.78	178	133	2.34	0.019	0.442	medium
Type:CLRole.two.sided.23	w/o-gamified.Apprentice	19	-0.25	12.00	228	133	2.34	0.019	0.442	medium
Type:CLRole.less.14	ont-gamified.Master	9	0.46	11.56	104	59	2.21	0.990	0.537	large
Type:CLRole.less.24	w/o-gamified.Master	8	0.01	6.12	49	59	2.21	0.990	0.537	large
Type:CLRole.greater.14	ont-gamified.Master	9	0.46	11.56	104	59	2.21	0.014	0.537	large
Type:CLRole.greater.24	w/o-gamified.Master	8	0.01	6.12	49	59	2.21	0.014	0.537	large
Type:CLRole.two.sided.14	ont-gamified.Master	9	0.46	11.56	104	59	2.21	0.027	0.537	large
Type:CLRole.two.sided.24	w/o-gamified.Master	8	0.01	6.12	49	59	2.21	0.027	0.537	large
Type:CLRole.less.15	w/o-gamified.Apprentice	19	-0.25	13.68	260	70	-0.32	0.387	0.061	none

Table 3: *(continued)*

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type:CLRole.less.25	w/o-gamified.Master	8	0.01	14.75	118	70	-0.32	0.387	0.061	none
Type:CLRole.greater.15	w/o-gamified.Apprentice	19	-0.25	13.68	260	70	-0.32	0.632	0.061	none
Type:CLRole.greater.25	w/o-gamified.Master	8	0.01	14.75	118	70	-0.32	0.632	0.061	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	19	-0.25	13.68	260	70	-0.32	0.775	0.061	none
Type:CLRole.two.sided.25	w/o-gamified.Master	8	0.01	14.75	118	70	-0.32	0.775	0.061	none