

Summary of nonparametric statistics analysis for the scores of Intrinsic Motivation in the third study for signed up students

Table 1: Summary of Scheirer-Ray-Hare results for the scores of Intrinsic Motivation in the third study for signed up students

	Df	Sum Sq	H	p.value	Sig
Type					
Type:Type	1	926.520	4.193	0.041	*
Type:CLRole	1	479.489	2.170	0.141	
Type:Type:CLRole	1	251.422	1.138	0.286	
Type:Residuals	47	9391.570			

Signif. codes: 0 ‘***’ 0.01 ‘**’ 0.05

Table 2: Descriptive statistic of the pair wilcoxon analysis for the scores 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	4.57	30.52	732.5	432.5	2.05	0.020	0.287	small
Type.greater.2	w/o-gamified	27	4.08	21.98	593.5	432.5	2.05	0.020	0.287	small
Type.two.sided.1	ont-gamified	24	4.57	30.52	732.5	432.5	2.05	0.040	0.287	small
Type.two.sided.2	w/o-gamified	27	4.08	21.98	593.5	432.5	2.05	0.040	0.287	small
Type.CLRole.less.1	ont-gamified.Apprentice	15	4.31	10.20	153.0	33.0	-2.06	0.020	0.420	medium
Type.CLRole.less.2	ont-gamified.Master	9	5.01	16.33	147.0	33.0	-2.06	0.020	0.420	medium
Type.CLRole.two.sided.1	ont-gamified.Apprentice	15	4.31	10.20	153.0	33.0	-2.06	0.039	0.420	medium
Type.CLRole.two.sided.2	ont-gamified.Master	9	5.01	16.33	147.0	33.0	-2.06	0.039	0.420	medium
Type.CLRole.greater.1	ont-gamified.Master	9	5.01	20.00	180.0	135.0	2.43	0.007	0.460	medium
Type.CLRole.greater.2	w/o-gamified.Apprentice	19	3.94	11.89	226.0	135.0	2.43	0.007	0.460	medium
Type.CLRole.two.sided.11	ont-gamified.Master	9	5.01	20.00	180.0	135.0	2.43	0.014	0.460	medium
Type.CLRole.two.sided.21	w/o-gamified.Apprentice	19	3.94	11.89	226.0	135.0	2.43	0.014	0.460	medium
Type.CLRole.greater.11	ont-gamified.Master	9	5.01	11.22	101.0	56.0	1.92	0.030	0.467	medium
Type.CLRole.greater.21	w/o-gamified.Master	8	4.25	6.50	52.0	56.0	1.92	0.030	0.467	medium

Table 3: Full descriptive statistic of the pair wilcoxon analysis for the scores 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	4.57	30.52	732.5	432.5	2.05	0.980	0.287	small
Type.less.2	w/o-gamified	27	4.08	21.98	593.5	432.5	2.05	0.980	0.287	small
Type.greater.1	ont-gamified	24	4.57	30.52	732.5	432.5	2.05	0.020	0.287	small
Type.greater.2	w/o-gamified	27	4.08	21.98	593.5	432.5	2.05	0.020	0.287	small
Type.two.sided.1	ont-gamified	24	4.57	30.52	732.5	432.5	2.05	0.040	0.287	small
Type.two.sided.2	w/o-gamified	27	4.08	21.98	593.5	432.5	2.05	0.040	0.287	small
Type.CLRole.less.1	ont-gamified.Apprentice	15	4.31	10.20	153.0	33.0	-2.06	0.020	0.420	medium
Type.CLRole.less.2	ont-gamified.Master	9	5.01	16.33	147.0	33.0	-2.06	0.020	0.420	medium
Type.CLRole.greater.1	ont-gamified.Apprentice	15	4.31	10.20	153.0	33.0	-2.06	0.982	0.420	medium
Type.CLRole.greater.2	ont-gamified.Master	9	5.01	16.33	147.0	33.0	-2.06	0.982	0.420	medium
Type.CLRole.two.sided.1	ont-gamified.Apprentice	15	4.31	10.20	153.0	33.0	-2.06	0.039	0.420	medium
Type.CLRole.two.sided.2	ont-gamified.Master	9	5.01	16.33	147.0	33.0	-2.06	0.039	0.420	medium
Type.CLRole.less.11	ont-gamified.Apprentice	15	4.31	19.43	291.5	171.5	1.01	0.843	0.173	small
Type.CLRole.less.21	w/o-gamified.Apprentice	19	3.94	15.97	303.5	171.5	1.01	0.843	0.173	small
Type.CLRole.greater.11	ont-gamified.Apprentice	15	4.31	19.43	291.5	171.5	1.01	0.162	0.173	small
Type.CLRole.greater.21	w/o-gamified.Apprentice	19	3.94	15.97	303.5	171.5	1.01	0.162	0.173	small
Type.CLRole.two.sided.11	ont-gamified.Apprentice	15	4.31	19.43	291.5	171.5	1.01	0.323	0.173	small
Type.CLRole.two.sided.21	w/o-gamified.Apprentice	19	3.94	15.97	303.5	171.5	1.01	0.323	0.173	small
Type.CLRole.less.12	ont-gamified.Apprentice	15	4.31	12.67	190.0	70.0	0.65	0.742	0.135	small
Type.CLRole.less.22	w/o-gamified.Master	8	4.25	10.75	86.0	70.0	0.65	0.742	0.135	small
Type.CLRole.greater.12	ont-gamified.Apprentice	15	4.31	12.67	190.0	70.0	0.65	0.269	0.135	small
Type.CLRole.greater.22	w/o-gamified.Master	8	4.25	10.75	86.0	70.0	0.65	0.269	0.135	small
Type.CLRole.two.sided.12	ont-gamified.Apprentice	15	4.31	12.67	190.0	70.0	0.65	0.538	0.135	small
Type.CLRole.two.sided.22	w/o-gamified.Master	8	4.25	10.75	86.0	70.0	0.65	0.538	0.135	small
Type.CLRole.less.13	ont-gamified.Master	9	5.01	20.00	180.0	135.0	2.43	0.994	0.460	medium
Type.CLRole.less.23	w/o-gamified.Apprentice	19	3.94	11.89	226.0	135.0	2.43	0.994	0.460	medium
Type.CLRole.greater.13	ont-gamified.Master	9	5.01	20.00	180.0	135.0	2.43	0.007	0.460	medium
Type.CLRole.greater.23	w/o-gamified.Apprentice	19	3.94	11.89	226.0	135.0	2.43	0.007	0.460	medium
Type.CLRole.two.sided.13	ont-gamified.Master	9	5.01	20.00	180.0	135.0	2.43	0.014	0.460	medium
Type.CLRole.two.sided.23	w/o-gamified.Apprentice	19	3.94	11.89	226.0	135.0	2.43	0.014	0.460	medium
Type.CLRole.less.14	ont-gamified.Master	9	5.01	11.22	101.0	56.0	1.92	0.977	0.467	medium
Type.CLRole.less.24	w/o-gamified.Master	8	4.25	6.50	52.0	56.0	1.92	0.977	0.467	medium
Type.CLRole.greater.14	ont-gamified.Master	9	5.01	11.22	101.0	56.0	1.92	0.030	0.467	medium
Type.CLRole.greater.24	w/o-gamified.Master	8	4.25	6.50	52.0	56.0	1.92	0.030	0.467	medium
Type.CLRole.two.sided.14	ont-gamified.Master	9	5.01	11.22	101.0	56.0	1.92	0.059	0.467	medium
Type.CLRole.two.sided.24	w/o-gamified.Master	8	4.25	6.50	52.0	56.0	1.92	0.059	0.467	medium
Type.CLRole.less.15	w/o-gamified.Apprentice	19	3.94	13.58	258.0	68.0	-0.42	0.348	0.082	none
Type.CLRole.less.25	w/o-gamified.Master	8	4.25	15.00	120.0	68.0	-0.42	0.348	0.082	none
Type.CLRole.greater.15	w/o-gamified.Apprentice	19	3.94	13.58	258.0	68.0	-0.42	0.671	0.082	none
Type.CLRole.greater.25	w/o-gamified.Master	8	4.25	15.00	120.0	68.0	-0.42	0.671	0.082	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	3.94	13.58	258.0	68.0	-0.42	0.696	0.082	none
Type:CLRole.two.sided.25	w/o-gamified.Master	8	4.25	15.00	120.0	68.0	-0.42	0.696	0.082	none