

1 Summaries of Nonparametric Statistics Analysis

Table 1: Summary of Scheirer-Ray-Hare results

	Df	Sum Sq	H	p.value	Sig
gain.theta					
gain.theta:Type	1	59.063	0.769	0.381	
gain.theta:CLRole	1	170.557	2.220	0.136	
gain.theta:Type:CLRole	1	23.332	0.304	0.582	
gain.theta:Residuals	26	1975.048			

Signif. codes: 0 ‘***’ 0.01 ‘**’ 0.05

2 Summaries of Wilcoxon Data Analysis

Table 2: Descriptive statistic of the pair wilcoxon analysis

Signif. codes: 0 '***' 0.01 '**' 0.05

Table 3: Full descriptive statistic of the pair wilcoxon analysis

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value
gain.theta.Type.non-gamified.ont-gamified.less.1	non-gamified	14	4.62	17.00	238.0	133.0	0.88	0.810
gain.theta.Type.non-gamified.ont-gamified.less.2	ont-gamified	16	2.09	14.19	227.0	133.0	0.88	0.810
gain.theta.Type.non-gamified.ont-gamified.greater.1	non-gamified	14	4.62	17.00	238.0	133.0	0.88	0.196
gain.theta.Type.non-gamified.ont-gamified.greater.2	ont-gamified	16	2.09	14.19	227.0	133.0	0.88	0.196
gain.theta.Type.non-gamified.ont-gamified.two.sided.1	non-gamified	14	4.62	17.00	238.0	133.0	0.88	0.392
gain.theta.Type.non-gamified.ont-gamified.two.sided.2	ont-gamified	16	2.09	14.19	227.0	133.0	0.88	0.392
gain.theta.Type.CLRole.non-gamified.Apprentice.non-gamified.Master.less.1	non-gamified.Apprentice	11	6.77	8.45	93.0	27.0	1.65	0.956
gain.theta.Type.CLRole.non-gamified.Apprentice.non-gamified.Master.less.2	non-gamified.Master	3	1.39	4.00	12.0	27.0	1.65	0.956
gain.theta.Type.CLRole.non-gamified.Apprentice.non-gamified.Master.greater.1	non-gamified.Apprentice	11	6.77	8.45	93.0	27.0	1.65	0.063
gain.theta.Type.CLRole.non-gamified.Apprentice.non-gamified.Master.greater.2	non-gamified.Master	3	1.39	4.00	12.0	27.0	1.65	0.063
gain.theta.Type.CLRole.non-gamified.Apprentice.non-gamified.Master.two.sided.1	non-gamified.Apprentice	11	6.77	8.45	93.0	27.0	1.65	0.124
gain.theta.Type.CLRole.non-gamified.Apprentice.non-gamified.Master.two.sided.2	non-gamified.Master	3	1.39	4.00	12.0	27.0	1.65	0.124
gain.theta.Type.CLRole.non-gamified.Apprentice.ont-gamified.Apprentice.less.1	non-gamified.Apprentice	11	6.77	12.77	140.5	74.5	0.93	0.824
gain.theta.Type.CLRole.non-gamified.Apprentice.ont-gamified.Apprentice.less.2	ont-gamified.Apprentice	11	2.80	10.23	112.5	74.5	0.93	0.824
gain.theta.Type.CLRole.non-gamified.Apprentice.ont-gamified.Apprentice.greater.1	non-gamified.Apprentice	11	6.77	12.77	140.5	74.5	0.93	0.184
gain.theta.Type.CLRole.non-gamified.Apprentice.ont-gamified.Apprentice.greater.2	ont-gamified.Apprentice	11	2.80	10.23	112.5	74.5	0.93	0.184
gain.theta.Type.CLRole.non-gamified.Apprentice.ont-gamified.Apprentice.two.sided.1	non-gamified.Apprentice	11	6.77	12.77	140.5	74.5	0.93	0.368
gain.theta.Type.CLRole.non-gamified.Apprentice.ont-gamified.Apprentice.two.sided.2	ont-gamified.Apprentice	11	2.80	10.23	112.5	74.5	0.93	0.368
gain.theta.Type.CLRole.non-gamified.Apprentice.ont-gamified.Master.less.1	non-gamified.Apprentice	11	6.77	9.45	104.0	38.0	1.20	0.884
gain.theta.Type.CLRole.non-gamified.Apprentice.ont-gamified.Master.less.2	ont-gamified.Apprentice	5	0.01	6.40	32.0	38.0	1.20	0.884
gain.theta.Type.CLRole.non-gamified.Apprentice.ont-gamified.Master.greater.1	non-gamified.Apprentice	11	6.77	9.45	104.0	38.0	1.20	0.125
gain.theta.Type.CLRole.non-gamified.Apprentice.ont-gamified.Master.greater.2	ont-gamified.Apprentice	5	0.01	6.40	32.0	38.0	1.20	0.125
gain.theta.Type.CLRole.non-gamified.Apprentice.ont-gamified.Master.two.sided.1	non-gamified.Apprentice	11	6.77	9.45	104.0	38.0	1.20	0.250
gain.theta.Type.CLRole.non-gamified.Apprentice.ont-gamified.Master.two.sided.2	ont-gamified.Apprentice	5	0.01	6.40	32.0	38.0	1.20	0.250
gain.theta.Type.CLRole.non-gamified.Master.ont-gamified.Apprentice.less.1	non-gamified.Master	3	1.39	5.67	17.0	11.0	-0.86	0.214
gain.theta.Type.CLRole.non-gamified.Master.ont-gamified.Apprentice.less.2	ont-gamified.Apprentice	11	2.80	8.00	88.0	11.0	-0.86	0.214
gain.theta.Type.CLRole.non-gamified.Master.ont-gamified.Apprentice.greater.1	non-gamified.Master	3	1.39	5.67	17.0	11.0	-0.86	0.805
gain.theta.Type.CLRole.non-gamified.Master.ont-gamified.Apprentice.greater.2	ont-gamified.Apprentice	11	2.80	8.00	88.0	11.0	-0.86	0.805
gain.theta.Type.CLRole.non-gamified.Master.ont-gamified.Apprentice.two.sided.1	non-gamified.Master	3	1.39	5.67	17.0	11.0	-0.86	0.431
gain.theta.Type.CLRole.non-gamified.Master.ont-gamified.Apprentice.two.sided.2	ont-gamified.Apprentice	11	2.80	8.00	88.0	11.0	-0.86	0.431
gain.theta.Type.CLRole.non-gamified.Master.ont-gamified.Master.less.1	non-gamified.Master	3	1.39	5.17	15.5	9.5	0.60	0.750
gain.theta.Type.CLRole.non-gamified.Master.ont-gamified.Master.less.2	ont-gamified.Master	5	0.01	4.10	20.5	9.5	0.60	0.750
gain.theta.Type.CLRole.non-gamified.Master.ont-gamified.Master.greater.1	non-gamified.Master	3	1.39	5.17	15.5	9.5	0.60	0.321
gain.theta.Type.CLRole.non-gamified.Master.ont-gamified.Master.greater.2	ont-gamified.Master	5	0.01	4.10	20.5	9.5	0.60	0.321
gain.theta.Type.CLRole.non-gamified.Master.ont-gamified.Master.two.sided.1	non-gamified.Master	3	1.39	5.17	15.5	9.5	0.60	0.625
gain.theta.Type.CLRole.non-gamified.Master.ont-gamified.Master.two.sided.2	ont-gamified.Master	5	0.01	4.10	20.5	9.5	0.60	0.625
gain.theta.Type.CLRole.ont-gamified.Apprentice.ont-gamified.Master.less.1	ont-gamified.Apprentice	11	2.80	9.14	100.5	34.5	0.79	0.789
gain.theta.Type.CLRole.ont-gamified.Apprentice.ont-gamified.Master.less.2	ont-gamified.Master	5	0.01	7.10	35.5	34.5	0.79	0.789
gain.theta.Type.CLRole.ont-gamified.Apprentice.ont-gamified.Master.greater.1	ont-gamified.Apprentice	11	2.80	9.14	100.5	34.5	0.79	0.229

Table 3: (continued)

gain.theta.Type:CLRole.ont-gamified.Apprentice:ont-gamified.Master.greater.2	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value
	ont-gamified.Master	5	0.01	7.10	35.5	34.5	0.79	0.229

Table 3: (continued)

		Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value
gain.theta.Type:CLRole.ont-gamified.Apprentice:ont-gamified.Master.two.sided.1		ont-gamified.Apprentice	11	2.80	9.14	100.5	34.5	0.79	0.460
gain.theta.Type:CLRole.ont-gamified.Apprentice:ont-gamified.Master.two.sided.2		ont-gamified.Master	5	0.01	7.10	35.5	34.5	0.79	0.460

Signif. codes: 0 '***' 0.01 '**' 0.05