

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	6.294	0.032	0.858	
gain.theta:CLRole	1	21.855	0.112	0.738	
gain.theta:Type:CLRole	1	55.127	0.281	0.596	
gain.theta:Residuals	44	9128.724			

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	29	0.00	24.21	702	267	-0.18	0.434
gain.theta.Type:non-gamified:ont-gamified.less.2	ont-gamified	19	0.04	24.95	474	267	-0.18	0.434
gain.theta.Type:non-gamified:ont-gamified.greater.1	non-gamified	29	0.00	24.21	702	267	-0.18	0.575
gain.theta.Type:non-gamified:ont-gamified.greater.2	ont-gamified	19	0.04	24.95	474	267	-0.18	0.575
gain.theta.Type:non-gamified:ont-gamified.two.sided.1	non-gamified	29	0.00	24.21	702	267	-0.18	0.867
gain.theta.Type:non-gamified:ont-gamified.two.sided.2	ont-gamified	19	0.04	24.95	474	267	-0.18	0.867
gain.theta.Type:CLRole:non-gamified:Apprentice:non-gamified.Master.less.1	non-gamified.Apprentice	21	0.00	14.86	312	81	-0.15	0.452
gain.theta.Type:CLRole:non-gamified:Apprentice:non-gamified.Master.less.2	non-gamified.Master	8	0.00	15.38	123	81	-0.15	0.452
gain.theta.Type:CLRole:non-gamified:Apprentice:non-gamified.Master.greater.1	non-gamified.Apprentice	21	0.00	14.86	312	81	-0.15	0.566
gain.theta.Type:CLRole:non-gamified:Apprentice:non-gamified.Master.greater.2	non-gamified.Master	8	0.00	15.38	123	81	-0.15	0.566
gain.theta.Type:CLRole:non-gamified:Apprentice:non-gamified.Master.two.sided.1	non-gamified.Apprentice	21	0.00	14.86	312	81	-0.15	0.905
gain.theta.Type:CLRole:non-gamified:Apprentice:non-gamified.Master.two.sided.2	non-gamified.Master	8	0.00	15.38	123	81	-0.15	0.905
gain.theta.Type:CLRole:non-gamified:Apprentice:ont-gamified.Apprentice.less.1	non-gamified.Apprentice	21	0.00	17.48	367	136	-0.37	0.364
gain.theta.Type:CLRole:non-gamified:Apprentice:ont-gamified.Apprentice.less.2	non-gamified.Apprentice	21	0.04	18.79	263	136	-0.37	0.364
gain.theta.Type:CLRole:non-gamified:Apprentice:ont-gamified.Apprentice.greater.1	ont-gamified.Apprentice	21	0.00	17.48	367	136	-0.37	0.649
gain.theta.Type:CLRole:non-gamified:Apprentice:ont-gamified.Apprentice.greater.2	ont-gamified.Apprentice	14	0.04	18.79	263	136	-0.37	0.649
gain.theta.Type:CLRole:non-gamified:Apprentice:ont-gamified.Apprentice.two.sided.1	ont-gamified.Apprentice	21	0.00	17.48	367	136	-0.37	0.727
gain.theta.Type:CLRole:non-gamified:Apprentice:ont-gamified.Apprentice.two.sided.2	ont-gamified.Apprentice	14	0.04	18.79	263	136	-0.37	0.727
gain.theta.Type:CLRole:non-gamified:Apprentice:ont-gamified.Master.less.1	non-gamified.Apprentice	21	0.00	13.76	289	58	0.36	0.647
gain.theta.Type:CLRole:non-gamified:Apprentice:ont-gamified.Master.less.2	ont-gamified.Apprentice	5	-0.09	13.76	62	58	0.36	0.647
gain.theta.Type:CLRole:non-gamified:Apprentice:ont-gamified.Master.greater.1	non-gamified.Apprentice	21	0.00	13.76	289	58	0.36	0.376
gain.theta.Type:CLRole:non-gamified:Apprentice:ont-gamified.Master.greater.2	ont-gamified.Apprentice	5	-0.09	12.40	62	58	0.36	0.376
gain.theta.Type:CLRole:non-gamified:Apprentice:ont-gamified.Master.two.sided.1	non-gamified.Apprentice	21	0.00	13.76	289	58	0.36	0.753
gain.theta.Type:CLRole:non-gamified:Apprentice:ont-gamified.Master.two.sided.2	ont-gamified.Apprentice	5	-0.09	12.40	62	58	0.36	0.753
gain.theta.Type:CLRole:non-gamified:Master:ont-gamified.Apprentice.less.1	non-gamified.Master	8	0.00	10.62	85	49	-0.48	0.332
gain.theta.Type:CLRole:non-gamified:Master:ont-gamified.Apprentice.less.2	ont-gamified.Apprentice	14	0.04	12.00	168	49	-0.48	0.332
gain.theta.Type:CLRole:non-gamified:Master:ont-gamified.Apprentice.greater.1	non-gamified.Master	8	0.00	10.62	85	49	-0.48	0.692
gain.theta.Type:CLRole:non-gamified:Master:ont-gamified.Apprentice.greater.2	ont-gamified.Apprentice	14	0.04	12.00	168	49	-0.48	0.692
gain.theta.Type:CLRole:non-gamified:Master:ont-gamified.Apprentice.two.sided.1	non-gamified.Apprentice	8	0.00	10.62	85	49	-0.48	0.664
gain.theta.Type:CLRole:non-gamified:Master:ont-gamified.Apprentice.two.sided.2	ont-gamified.Apprentice	14	0.04	12.00	168	49	-0.48	0.664
gain.theta.Type:CLRole:non-gamified:Master:ont-gamified.Master.less.1	non-gamified.Master	8	0.00	7.50	60	24	0.59	0.738
gain.theta.Type:CLRole:non-gamified:Master:ont-gamified.Master.less.2	ont-gamified.Master	5	-0.09	6.20	31	24	0.59	0.738
gain.theta.Type:CLRole:non-gamified:Master:ont-gamified.Master.greater.1	non-gamified.Master	8	0.00	7.50	60	24	0.59	0.311
gain.theta.Type:CLRole:non-gamified:Master:ont-gamified.Master.greater.2	ont-gamified.Master	5	-0.09	6.20	31	24	0.59	0.311
gain.theta.Type:CLRole:non-gamified:Master:ont-gamified.Master.two.sided.1	non-gamified.Master	8	0.00	7.50	60	24	0.59	0.622
gain.theta.Type:CLRole:non-gamified:Master:ont-gamified.Master.two.sided.2	ont-gamified.Master	5	-0.09	6.20	31	24	0.59	0.622
gain.theta.Type:CLRole:ont-gamified:Apprentice:ont-gamified.Master.less.1	ont-gamified.Apprentice	14	0.04	10.36	145	40	0.46	0.689
gain.theta.Type:CLRole:ont-gamified:Apprentice:ont-gamified.Master.less.2	ont-gamified.Apprentice	5	-0.09	9.00	45	40	0.46	0.689
gain.theta.Type:CLRole:ont-gamified:Apprentice:ont-gamified.Master.greater.1	ont-gamified.Apprentice	14	0.04	10.36	145	40	0.46	0.343
gain.theta.Type:CLRole:ont-gamified:Apprentice:ont-gamified.Master.greater.2	ont-gamified.Apprentice	5	-0.09	9.00	45	40	0.46	0.343

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	-0.09	9.00	45	40	0.46	0.343
								0

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	14	0.04	10.36	145	40	0.46	0.687
gain.theta.Type:CLRole.ont-gamified.Apprentice:ont-gamified.Master.two.sided.2		ont-gamified.Master	5	-0.09	9.00	45	40	0.46	0.687

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