Summary of nonparametric statistics analysis for Gain in Skill/Knowledge as the latent trait estimates in the second study for signed up students

October 1, 2018

Table 1: Summary of Scheirer-Ray-Hare results for Gain in Skill/Knowledge as the latent trait estimates in the second study for signed up students

	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

Table 2: Full descriptive statistic of the pair wilcoxon analysis for Gain in Skill/Knowledge as the latent trait estimates in the second study for signed up students

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type.less.1	non-gamified	29	0.00	24.21	702	267	−0.18	0.434	0.026	none
Type.less.2	ont-gamified	19	0.04	24.95	474	267	−0.18	0.434	0.026	none
Type.greater.1	non-gamified	29	0.00	24.21	702	267	−0.18	0.575	0.026	none
Type.greater.2	ont-gamified	19	0.04	24.95	474	267	−0.18	0.575	0.026	none
Type.two.sided.1	non-gamified	29	0.00	24.21	702	267	−0.18	0.867	0.026	none
Type.two.sided.2	ont-gamified	19	0.04	24.95	474	267	−0.18	0.867	0.026	none
Type:CLRole.less.1	non-gamified.Apprentice	21	0.00	14.86	312	81	−0.15	0.452	0.027	none
Type:CLRole.less.2	non-gamified.Master	8	0.00	15.38	123	81	−0.15	0.452	0.027	none
Type:CLRole.greater.1	non-gamified.Apprentice	21	0.00	14.86	312	81	−0.15	0.566	0.027	none
Type:CLRole.greater.2	non-gamified.Master	8	0.00	15.38	123	81	−0.15	0.566	0.027	none
Type:CLRole.two.sided.1	non-gamified.Apprentice	21	0.00	14.86	312	81	−0.15	0.905	0.027	none
Type:CLRole.two.sided.2	non-gamified.Master	8	0.00	15.38	123	81	−0.15	0.905	0.027	none
Type:CLRole.less.11	non-gamified.Apprentice	21	0.00	17.48	367	136	−0.37	0.364	0.063	none
Type:CLRole.less.21	ont-gamified.Apprentice	14	0.04	18.79	263	136	−0.37	0.364	0.063	none
Type:CLRole.greater.11	non-gamified.Apprentice	21	0.00	17.48	367	136	−0.37	0.649	0.063	none
Type:CLRole.greater.21	ont-gamified.Apprentice	14	0.04	18.79	263	136	−0.37	0.649	0.063	none
Type:CLRole.two.sided.11	non-gamified.Apprentice	21	0.00	17.48	367	136	−0.37	0.727	0.063	none
Type:CLRole.two.sided.21	ont-gamified.Apprentice	14	0.04	18.79	263	136	−0.37	0.727	0.063	none
Type:CLRole.less.12	non-gamified.Apprentice	21	0.00	13.76	289	58	0.36	0.647	0.070	none
Type:CLRole.less.22	ont-gamified.Master	5	−0.09	12.40	62	58	0.36	0.647	0.070	none
Type:CLRole.greater.12	non-gamified.Apprentice	21	0.00	13.76	289	58	0.36	0.376	0.070	none
Type:CLRole.greater.22	ont-gamified.Master	5	−0.09	12.40	62	58	0.36	0.376	0.070	none
Type:CLRole.two.sided.12	non-gamified.Apprentice	21	0.00	13.76	289	58	0.36	0.753	0.070	none
Type:CLRole.two.sided.22	ont-gamified.Master	5	−0.09	12.40	62	58	0.36	0.753	0.070	none
Type:CLRole.less.13	non-gamified.Master	8	0.00	10.62	85	49	−0.48	0.332	0.102	small
Type:CLRole.less.23	ont-gamified.Apprentice	14	0.04	12.00	168	49	−0.48	0.332	0.102	small
Type:CLRole.greater.13	non-gamified.Master	8	0.00	10.62	85	49	−0.48	0.692	0.102	small
Type:CLRole.greater.23	ont-gamified.Apprentice	14	0.04	12.00	168	49	−0.48	0.692	0.102	small
Type:CLRole.two.sided.13	non-gamified.Master	8	0.00	10.62	85	49	−0.48	0.664	0.102	small
Type:CLRole.two.sided.23	ont-gamified.Apprentice	14	0.04	12.00	168	49	−0.48	0.664	0.102	small
Type:CLRole.less.14	non-gamified.Master	8	0.00	7.50	60	24	0.59	0.738	0.162	small
Type:CLRole.less.24	ont-gamified.Master	5	−0.09	6.20	31	24	0.59	0.738	0.162	small
Type:CLRole.greater.14	non-gamified.Master	8	0.00	7.50	60	24	0.59	0.311	0.162	small
Type:CLRole.greater.24	ont-gamified.Master	5	−0.09	6.20	31	24	0.59	0.311	0.162	small
Type:CLRole.two.sided.14	non-gamified.Master	8	0.00	7.50	60	24	0.59	0.622	0.162	small
Type:CLRole.two.sided.24	ont-gamified.Master	5	−0.09	6.20	31	24	0.59	0.622	0.162	small
Type:CLRole.less.15	ont-gamified.Apprentice	14	0.04	10.36	145	40	0.46	0.689	0.106	small
Type:CLRole.less.25	ont-gamified.Master	5	−0.09	9.00	45	40	0.46	0.689	0.106	small
Type:CLRole.greater.15	ont-gamified.Apprentice	14	0.04	10.36	145	40	0.46	0.343	0.106	small
Type:CLRole.greater.25	ont-gamified.Master	5	−0.09	9.00	45	40	0.46	0.343	0.106	small

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type:CLRole.two.sided.15	ont-gamified.Apprentice	14	0.04	10.36	145	40	0.46	0.687	0.106	small
Type:CLRole.two.sided.25	ont-gamified.Master	5	−0.09	9.00	45	40	0.46	0.687	0.106	small