Summary of nonparametric statistics analysis for the latent trait estimates of Pressure/Tension in the third study for students with effective participation

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Table 1: Summary of Scheirer-Ray-Hare results for the latent trait estimates of Pressure/Tension in the third study for students with effective participation

	Df	Sum Sq	H	p.value	Sig
Type					
Type:Type	1	226.410	1.450	0.228	
Type:CLRole	1	1088.221	6.970	0.008	**
Type:Type:CLRole	1	64.669	0.414	0.520	
Type:Residuals	39	5177.700			

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

Table 2: Descriptive statistic of the pair wilcoxon analysis for the latent trait estimates of Pressure/Tension in the third study for students with effective participation

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type:CLRole.greater.1	ont-gamified.Apprentice	15	0.35	15.10	226.5	106.5	2.33	0.009	0.476	medium
Type:CLRole.greater.2	ont-gamified.Master	9	−0.46	8.17	73.5	106.5	2.33	0.009	0.476	medium
Type:CLRole.two.sided.1	ont-gamified.Apprentice	15	0.35	15.10	226.5	106.5	2.33	0.018	0.476	medium
Type:CLRole.two.sided.2	ont-gamified.Master	9	−0.46	8.17	73.5	106.5	2.33	0.018	0.476	medium
Type:CLRole.greater.11	ont-gamified.Apprentice	15	0.35	12.90	193.5	73.5	2.23	0.012	0.487	medium
Type:CLRole.greater.21	w/o-gamified.Master	6	−1.60	6.25	37.5	73.5	2.23	0.012	0.487	medium
Type:CLRole.two.sided.11	ont-gamified.Apprentice	15	0.35	12.90	193.5	73.5	2.23	0.024	0.487	medium
Type:CLRole.two.sided.21	w/o-gamified.Master	6	−1.60	6.25	37.5	73.5	2.23	0.024	0.487	medium

Table 3: Full descriptive statistic of the pair wilcoxon analysis for the latent trait estimates of Pressure/Tension in the third study for students with effective participation

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type.less.1	ont-gamified	24	0.10	24.04	577.0	277.0	1.20	0.886	0.184	small
Type.less.2	w/o-gamified	19	−0.12	19.42	369.0	277.0	1.20	0.886	0.184	small
Type.greater.1	ont-gamified	24	0.10	24.04	577.0	277.0	1.20	0.117	0.184	small
Type.greater.2	w/o-gamified	19	−0.12	19.42	369.0	277.0	1.20	0.117	0.184	small
Type.two.sided.1	ont-gamified	24	0.10	24.04	577.0	277.0	1.20	0.233	0.184	small
Type.two.sided.2	w/o-gamified	19	−0.12	19.42	369.0	277.0	1.20	0.233	0.184	small
Type:CLRole.less.1	ont-gamified.Apprentice	15	0.35	15.10	226.5	106.5	2.33	0.992	0.476	medium
Type:CLRole.less.2	ont-gamified.Master	9	−0.46	8.17	73.5	106.5	2.33	0.992	0.476	medium
Type:CLRole.greater.1	ont-gamified.Apprentice	15	0.35	15.10	226.5	106.5	2.33	0.009	0.476	medium
Type:CLRole.greater.2	ont-gamified.Master	9	−0.46	8.17	73.5	106.5	2.33	0.009	0.476	medium
Type:CLRole.two.sided.1	ont-gamified.Apprentice	15	0.35	15.10	226.5	106.5	2.33	0.018	0.476	medium
Type:CLRole.two.sided.2	ont-gamified.Master	9	−0.46	8.17	73.5	106.5	2.33	0.018	0.476	medium
Type:CLRole.less.11	ont-gamified.Apprentice	15	0.35	16.83	252.5	132.5	1.62	0.948	0.306	medium
Type:CLRole.less.21	w/o-gamified.Apprentice	13	−0.01	11.81	153.5	132.5	1.62	0.948	0.306	medium
Type:CLRole.greater.11	ont-gamified.Apprentice	15	0.35	16.83	252.5	132.5	1.62	0.054	0.306	medium
Type:CLRole.greater.21	w/o-gamified.Apprentice	13	−0.01	11.81	153.5	132.5	1.62	0.054	0.306	medium
Type:CLRole.two.sided.11	ont-gamified.Apprentice	15	0.35	16.83	252.5	132.5	1.62	0.109	0.306	medium
Type:CLRole.two.sided.21	w/o-gamified.Apprentice	13	−0.01	11.81	153.5	132.5	1.62	0.109	0.306	medium
Type:CLRole.less.12	ont-gamified.Apprentice	15	0.35	12.90	193.5	73.5	2.23	0.989	0.487	medium
Type:CLRole.less.22	w/o-gamified.Master	6	−1.60	6.25	37.5	73.5	2.23	0.989	0.487	medium
Type:CLRole.greater.12	ont-gamified.Apprentice	15	0.35	12.90	193.5	73.5	2.23	0.012	0.487	medium
Type:CLRole.greater.22	w/o-gamified.Master	6	−1.60	6.25	37.5	73.5	2.23	0.012	0.487	medium
Type:CLRole.two.sided.12	ont-gamified.Apprentice	15	0.35	12.90	193.5	73.5	2.23	0.024	0.487	medium
Type:CLRole.two.sided.22	w/o-gamified.Master	6	−1.60	6.25	37.5	73.5	2.23	0.024	0.487	medium
Type:CLRole.less.13	ont-gamified.Master	9	−0.46	9.39	84.5	39.5	−1.28	0.106	0.272	small
Type:CLRole.less.23	w/o-gamified.Apprentice	13	−0.01	12.96	168.5	39.5	−1.28	0.106	0.272	small
Type:CLRole.greater.13	ont-gamified.Master	9	−0.46	9.39	84.5	39.5	−1.28	0.901	0.272	small
Type:CLRole.greater.23	w/o-gamified.Apprentice	13	−0.01	12.96	168.5	39.5	−1.28	0.901	0.272	small
Type:CLRole.two.sided.13	ont-gamified.Master	9	−0.46	9.39	84.5	39.5	−1.28	0.212	0.272	small
Type:CLRole.two.sided.23	w/o-gamified.Apprentice	13	−0.01	12.96	168.5	39.5	−1.28	0.212	0.272	small
Type:CLRole.less.14	ont-gamified.Master	9	−0.46	8.50	76.5	31.5	0.55	0.717	0.141	small
Type:CLRole.less.24	w/o-gamified.Master	6	−1.60	7.25	43.5	31.5	0.55	0.717	0.141	small
Type:CLRole.greater.14	ont-gamified.Master	9	−0.46	8.50	76.5	31.5	0.55	0.315	0.141	small
Type:CLRole.greater.24	w/o-gamified.Master	6	−1.60	7.25	43.5	31.5	0.55	0.315	0.141	small
Type:CLRole.two.sided.14	ont-gamified.Master	9	−0.46	8.50	76.5	31.5	0.55	0.616	0.141	small
Type:CLRole.two.sided.24	w/o-gamified.Master	6	−1.60	7.25	43.5	31.5	0.55	0.616	0.141	small
Type:CLRole.less.15	w/o-gamified.Apprentice	13	−0.01	11.04	143.5	52.5	1.20	0.887	0.275	small
Type:CLRole.less.25	w/o-gamified.Master	6	−1.60	7.75	46.5	52.5	1.20	0.887	0.275	small
Type:CLRole.greater.15	w/o-gamified.Apprentice	13	−0.01	11.04	143.5	52.5	1.20	0.123	0.275	small

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type:CLRole.greater.25	w/o-gamified.Master	6	−1.60	7.75	46.5	52.5	1.20	0.123	0.275	small

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	13	−0.01	11.04	143.5	52.5	1.20	0.249	0.275	small
Type:CLRole.two.sided.25	w/o-gamified.Master	6	−1.60	7.75	46.5	52.5	1.20	0.249	0.275	small