Summary of nonparametric statistics analysis for differences of scores in the pilot study for students with effective participation

Table 1: Summary of Scheirer-Ray-Hare results for differences of scores in the pilot study for students with effective participation

	Df	Sum Sq	H	p.value	Sig
difScore					
difScore:Type	1	0.454	0.012	0.913	
difScore:CLRole	1	141.968	3.709	0.054	
difScore:Type:CLRole	1	11.136	0.291	0.590	
difScore:Residuals	17	611.942			

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

Table 2: Full descriptive statistic of the pair wilcoxon analysis for differences of scores in the pilot study for students with effective participation

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type.less.1	non-gamified	8	2.5	10.81	86.5	50.5	−0.11	0.464	0.024	none
Type.less.2	ont-gamified	13	4.0	11.12	144.5	50.5	−0.11	0.464	0.024	none
Type.greater.1	non-gamified	8	2.5	10.81	86.5	50.5	−0.11	0.550	0.024	none
Type.greater.2	ont-gamified	13	4.0	11.12	144.5	50.5	−0.11	0.550	0.024	none
Type.two.sided.1	non-gamified	8	2.5	10.81	86.5	50.5	−0.11	0.928	0.024	none
Type.two.sided.2	ont-gamified	13	4.0	11.12	144.5	50.5	−0.11	0.928	0.024	none
Type:CLRole.less.1	non-gamified.Apprentice	5	4.0	5.20	26.0	11.0	1.05	0.857	0.371	medium
Type:CLRole.less.2	non-gamified.Master	3	2.0	3.33	10.0	11.0	1.05	0.857	0.371	medium
Type:CLRole.greater.1	non-gamified.Apprentice	5	4.0	5.20	26.0	11.0	1.05	0.179	0.371	medium
Type:CLRole.greater.2	non-gamified.Master	3	2.0	3.33	10.0	11.0	1.05	0.179	0.371	medium
Type:CLRole.two.sided.1	non-gamified.Apprentice	5	4.0	5.20	26.0	11.0	1.05	0.357	0.371	medium
Type:CLRole.two.sided.2	non-gamified.Master	3	2.0	3.33	10.0	11.0	1.05	0.357	0.371	medium
Type:CLRole.less.11	non-gamified.Apprentice	5	4.0	5.90	29.5	14.5	−0.81	0.233	0.225	small
Type:CLRole.less.21	ont-gamified.Apprentice	8	5.5	7.69	61.5	14.5	−0.81	0.233	0.225	small
Type:CLRole.greater.11	non-gamified.Apprentice	5	4.0	5.90	29.5	14.5	−0.81	0.796	0.225	small
Type:CLRole.greater.21	ont-gamified.Apprentice	8	5.5	7.69	61.5	14.5	−0.81	0.796	0.225	small
Type:CLRole.two.sided.11	non-gamified.Apprentice	5	4.0	5.90	29.5	14.5	−0.81	0.458	0.225	small
Type:CLRole.two.sided.21	ont-gamified.Apprentice	8	5.5	7.69	61.5	14.5	−0.81	0.458	0.225	small
Type:CLRole.less.12	non-gamified.Apprentice	5	4.0	7.00	35.0	20.0	1.57	0.944	0.497	medium
Type:CLRole.less.22	ont-gamified.Master	5	−3.0	4.00	20.0	20.0	1.57	0.944	0.497	medium
Type:CLRole.greater.12	non-gamified.Apprentice	5	4.0	7.00	35.0	20.0	1.57	0.063	0.497	medium
Type:CLRole.greater.22	ont-gamified.Master	5	−3.0	4.00	20.0	20.0	1.57	0.063	0.497	medium
Type:CLRole.two.sided.12	non-gamified.Apprentice	5	4.0	7.00	35.0	20.0	1.57	0.127	0.497	medium
Type:CLRole.two.sided.22	ont-gamified.Master	5	−3.0	4.00	20.0	20.0	1.57	0.127	0.497	medium
Type:CLRole.less.13	non-gamified.Master	3	2.0	3.83	11.5	5.5	−1.33	0.109	0.401	medium
Type:CLRole.less.23	ont-gamified.Apprentice	8	5.5	6.81	54.5	5.5	−1.33	0.109	0.401	medium
Type:CLRole.greater.13	non-gamified.Master	3	2.0	3.83	11.5	5.5	−1.33	0.915	0.401	medium
Type:CLRole.greater.23	ont-gamified.Apprentice	8	5.5	6.81	54.5	5.5	−1.33	0.915	0.401	medium
Type:CLRole.two.sided.13	non-gamified.Master	3	2.0	3.83	11.5	5.5	−1.33	0.206	0.401	medium
Type:CLRole.two.sided.23	ont-gamified.Apprentice	8	5.5	6.81	54.5	5.5	−1.33	0.206	0.401	medium
Type:CLRole.less.14	non-gamified.Master	3	2.0	5.50	16.5	10.5	0.90	0.839	0.318	medium
Type:CLRole.less.24	ont-gamified.Master	5	−3.0	3.90	19.5	10.5	0.90	0.839	0.318	medium
Type:CLRole.greater.14	non-gamified.Master	3	2.0	5.50	16.5	10.5	0.90	0.232	0.318	medium
Type:CLRole.greater.24	ont-gamified.Master	5	−3.0	3.90	19.5	10.5	0.90	0.232	0.318	medium
Type:CLRole.two.sided.14	non-gamified.Master	3	2.0	5.50	16.5	10.5	0.90	0.464	0.318	medium
Type:CLRole.two.sided.24	ont-gamified.Master	5	−3.0	3.90	19.5	10.5	0.90	0.464	0.318	medium
Type:CLRole.less.15	ont-gamified.Apprentice	8	5.5	8.12	65.0	29.0	1.32	0.911	0.366	medium
Type:CLRole.less.25	ont-gamified.Master	5	−3.0	5.20	26.0	29.0	1.32	0.911	0.366	medium
Type:CLRole.greater.15	ont-gamified.Apprentice	8	5.5	8.12	65.0	29.0	1.32	0.104	0.366	medium
Type:CLRole.greater.25	ont-gamified.Master	5	−3.0	5.20	26.0	29.0	1.32	0.104	0.366	medium

Table 2: *(continued)*

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type:CLRole.two.sided.15	ont-gamified.Apprentice	8	5.5	8.12	65.0	29.0	1.32	0.205	0.366	medium
Type:CLRole.two.sided.25	ont-gamified.Master	5	−3.0	5.20	26.0	29.0	1.32	0.205	0.366	medium

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type:CLRole.two.sided.15	ont-gamified.Apprentice	8	5.5	8.12	65.0	29.0	1.32	0.205	0.366	medium
Type:CLRole.two.sided.25	ont-gamified.Master	5	−3.0	5.20	26.0	29.0	1.32	0.205	0.366	medium