Summary of nonparametric statistics analysis for the scores of Intrinsic Motivation in the third study for students with effective participation

Table 1: Summary of Scheirer-Ray-Hare results for the scores of Intrinsic Motivation in the third study for students with effective participation

	Df	Sum Sq	H	p.value	Sig
Type					
Type:Type	1	35.857	0.227	0.633	
Type:CLRole	1	343.885	2.181	0.140	
Type:Type:CLRole	1	360.444	2.286	0.131	
Type:Residuals	39	5880.815			

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

Table 2: Descriptive statistic of the pair wilcoxon analysis for the scores of Intrinsic Motivation in the third study for students with effective participation

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Type:CLRole.less.1	ont-gamified.Apprentice	15	4.31	10.20	153	33	−2.06	0.020	0.42	medium
Type:CLRole.less.2	ont-gamified.Master	9	5.01	16.33	147	33	−2.06	0.020	0.42	medium
Type:CLRole.two.sided.1	ont-gamified.Apprentice	15	4.31	10.20	153	33	−2.06	0.039	0.42	medium
Type:CLRole.two.sided.2	ont-gamified.Master	9	5.01	16.33	147	33	−2.06	0.039	0.42	medium

Table 3: Full descriptive statistic of the pair wilcoxon analysis for the scores of Intrinsic Motivation 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	4.57	22.81	547.5	247.5	0.48	0.684	0.073	none
Type.less.2	w/o-gamified	19	4.30	20.97	398.5	247.5	0.48	0.684	0.073	none
Type.greater.1	ont-gamified	24	4.57	22.81	547.5	247.5	0.48	0.321	0.073	none
Type.greater.2	w/o-gamified	19	4.30	20.97	398.5	247.5	0.48	0.321	0.073	none
Type.two.sided.1	ont-gamified	24	4.57	22.81	547.5	247.5	0.48	0.641	0.073	none
Type.two.sided.2	w/o-gamified	19	4.30	20.97	398.5	247.5	0.48	0.641	0.073	none
Type:CLRole.less.1	ont-gamified.Apprentice	15	4.31	10.20	153.0	33.0	−2.06	0.020	0.420	medium
Type:CLRole.less.2	ont-gamified.Master	9	5.01	16.33	147.0	33.0	−2.06	0.020	0.420	medium
Type:CLRole.greater.1	ont-gamified.Apprentice	15	4.31	10.20	153.0	33.0	−2.06	0.982	0.420	medium
Type:CLRole.greater.2	ont-gamified.Master	9	5.01	16.33	147.0	33.0	−2.06	0.982	0.420	medium
Type:CLRole.two.sided.1	ont-gamified.Apprentice	15	4.31	10.20	153.0	33.0	−2.06	0.039	0.420	medium
Type:CLRole.two.sided.2	ont-gamified.Master	9	5.01	16.33	147.0	33.0	−2.06	0.039	0.420	medium
Type:CLRole.less.11	ont-gamified.Apprentice	15	4.31	13.57	203.5	83.5	−0.65	0.266	0.122	small
Type:CLRole.less.21	w/o-gamified.Apprentice	13	4.42	15.58	202.5	83.5	−0.65	0.266	0.122	small
Type:CLRole.greater.11	ont-gamified.Apprentice	15	4.31	13.57	203.5	83.5	−0.65	0.741	0.122	small
Type:CLRole.greater.21	w/o-gamified.Apprentice	13	4.42	15.58	202.5	83.5	−0.65	0.741	0.122	small
Type:CLRole.two.sided.11	ont-gamified.Apprentice	15	4.31	13.57	203.5	83.5	−0.65	0.532	0.122	small
Type:CLRole.two.sided.21	w/o-gamified.Apprentice	13	4.42	15.58	202.5	83.5	−0.65	0.532	0.122	small
Type:CLRole.less.12	ont-gamified.Apprentice	15	4.31	10.87	163.0	43.0	−0.16	0.448	0.034	none
Type:CLRole.less.22	w/o-gamified.Master	6	4.30	11.33	68.0	43.0	−0.16	0.448	0.034	none
Type:CLRole.greater.12	ont-gamified.Apprentice	15	4.31	10.87	163.0	43.0	−0.16	0.568	0.034	none
Type:CLRole.greater.22	w/o-gamified.Master	6	4.30	11.33	68.0	43.0	−0.16	0.568	0.034	none
Type:CLRole.two.sided.12	ont-gamified.Apprentice	15	4.31	10.87	163.0	43.0	−0.16	0.896	0.034	none
Type:CLRole.two.sided.22	w/o-gamified.Master	6	4.30	11.33	68.0	43.0	−0.16	0.896	0.034	none
Type:CLRole.less.13	ont-gamified.Master	9	5.01	14.11	127.0	82.0	1.57	0.945	0.335	medium
Type:CLRole.less.23	w/o-gamified.Apprentice	13	4.42	9.69	126.0	82.0	1.57	0.945	0.335	medium
Type:CLRole.greater.13	ont-gamified.Master	9	5.01	14.11	127.0	82.0	1.57	0.063	0.335	medium
Type:CLRole.greater.23	w/o-gamified.Apprentice	13	4.42	9.69	126.0	82.0	1.57	0.063	0.335	medium
Type:CLRole.two.sided.13	ont-gamified.Master	9	5.01	14.11	127.0	82.0	1.57	0.126	0.335	medium
Type:CLRole.two.sided.23	w/o-gamified.Apprentice	13	4.42	9.69	126.0	82.0	1.57	0.126	0.335	medium
Type:CLRole.less.14	ont-gamified.Master	9	5.01	9.33	84.0	39.0	1.41	0.928	0.365	medium
Type:CLRole.less.24	w/o-gamified.Master	6	4.30	6.00	36.0	39.0	1.41	0.928	0.365	medium
Type:CLRole.greater.14	ont-gamified.Master	9	5.01	9.33	84.0	39.0	1.41	0.091	0.365	medium
Type:CLRole.greater.24	w/o-gamified.Master	6	4.30	6.00	36.0	39.0	1.41	0.091	0.365	medium
Type:CLRole.two.sided.14	ont-gamified.Master	9	5.01	9.33	84.0	39.0	1.41	0.181	0.365	medium
Type:CLRole.two.sided.24	w/o-gamified.Master	6	4.30	6.00	36.0	39.0	1.41	0.181	0.365	medium
Type:CLRole.less.15	w/o-gamified.Apprentice	13	4.42	10.08	131.0	40.0	0.09	0.551	0.020	none
Type:CLRole.less.25	w/o-gamified.Master	6	4.30	9.83	59.0	40.0	0.09	0.551	0.020	none
Type:CLRole.greater.15	w/o-gamified.Apprentice	13	4.42	10.08	131.0	40.0	0.09	0.483	0.020	none
Type:CLRole.greater.25	w/o-gamified.Master	6	4.30	9.83	59.0	40.0	0.09	0.483	0.020	none

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	4.42	10.08	131.0	40.0	0.09	0.966	0.020	none
Type:CLRole.two.sided.25	w/o-gamified.Master	6	4.30	9.83	59.0	40.0	0.09	0.966	0.020	none