

Statistical Analysis in the pilot study for students with effective participation

September 30, 2018

Table 1: Two-way ANOVA and Scheirer-Ray-Hare in the pilot study for students with effective participation

	Sum Sq	Df	F value	Pr(>F)	Sig	Df	Sum Sq	H	p.value	Sig
Interest/Enjoyment.(Intercept)	0.991	1	0.673	0.423						
Interest/Enjoyment.Type	6.247	1	4.243	0.055		1	90.054	2.347	0.126	
Interest/Enjoyment.CLRole	0.873	1	0.593	0.452		1	7.058	0.184	0.668	
Interest/Enjoyment.Type:CLRole	0.782	1	0.531	0.476		1	37.501	0.977	0.323	
Interest/Enjoyment.Residuals	25.028	17				17	632.888			
Perceived Choice.(Intercept)	0.004	1	0.008	0.929						
Perceived Choice.Type	1.804	1	3.419	0.082		1	42.000	1.098	0.295	
Perceived Choice.CLRole	0.367	1	0.696	0.416		1	1.458	0.038	0.845	
Perceived Choice.Type:CLRole	1.976	1	3.745	0.070		1	155.429	4.064	0.044	*
Perceived Choice.Residuals	8.968	17				17	566.113			
Pressure/Tension.(Intercept)	0.077	1	0.174	0.682						
Pressure/Tension.Type	1.293	1	2.920	0.106		1	123.429	3.242	0.072	
Pressure/Tension.CLRole	0.000	1	0.000	0.996		1	0.525	0.014	0.907	
Pressure/Tension.Type:CLRole	0.002	1	0.005	0.947		1	1.371	0.036	0.849	
Pressure/Tension.Residuals	7.526	17				17	636.175			
Effort/Importance.(Intercept)	0.286	1	0.706	0.412						
Effort/Importance.Type	0.306	1	0.756	0.397		1	15.482	0.414	0.520	
Effort/Importance.CLRole	0.040	1	0.098	0.758		1	16.858	0.450	0.502	
Effort/Importance.Type:CLRole	0.227	1	0.560	0.464		1	2.072	0.055	0.814	
Effort/Importance.Residuals	6.876	17				17	714.087			
Intrinsic Motivation.(Intercept)	0.227	1	0.550	0.469						
Intrinsic Motivation.Type	1.751	1	4.233	0.055		1	133.929	3.479	0.062	
Intrinsic Motivation.CLRole	0.119	1	0.287	0.599		1	0.233	0.006	0.938	
Intrinsic Motivation.Type:CLRole	0.150	1	0.362	0.555		1	10.688	0.278	0.598	
Intrinsic Motivation.Residuals	7.031	17				17	625.150			

Signif. codes: 0 “***” 0.01 “**” 0.05

Table 2: Summary of Pair wilcoxon in the pilot study for students with effective participation

	Group	N	Median	Mean.Ranks	Sum.Ranks	U	Z	p.value	r	magnitude
Perceived Choice.Type:CLRole.greater.1	non-gamified.Apprentice	5	0.35	5.00	25	10	1.97	0.048	0.745	large
Perceived Choice.Type:CLRole.greater.2	non-gamified.Master	2	-0.84	1.50	3	10	1.97	0.048	0.745	large
Perceived Choice.Type:CLRole.two.sided.1	non-gamified.Apprentice	5	0.35	5.00	25	10	1.97	0.048	0.745	large
Perceived Choice.Type:CLRole.two.sided.2	non-gamified.Master	2	-0.84	1.50	3	10	1.97	0.048	0.745	large
Pressure/Tension.Type.greater.1	non-gamified	7	0.35	14.43	101	73	1.80	0.038	0.393	medium
Pressure/Tension.Type.greater.2	ont-gamified	14	-0.13	9.29	130	73	1.80	0.038	0.393	medium
Intrinsic Motivation.Type.less.1	non-gamified	7	-0.12	7.43	52	24	-1.87	0.033	0.407	medium
Intrinsic Motivation.Type.less.2	ont-gamified	14	0.24	12.79	179	24	-1.87	0.033	0.407	medium