

Appendix D

Results of the Wilcoxon Rank Sum Test on TPACK in 2019 to Compare the Gender Variable

Component	Test	Gender	<i>M</i>	<i>SD</i>	Ranks			Test Statistics			
					<i>N</i>	Mean Rank	Sum of Ranks	Mann Whitney <i>U</i>	Wilcoxon <i>W</i>	<i>Z</i>	Asymp. Sig. (2-tailed)
TK	Pre	M	2.9063	1.02662	224	387.60	86823.00	43433.000	153648.000	-3.890	.000***
		F	2.5991	.86558	469	327.61	153648.00				
		Total	2.6984	.93113	693						
	Post	M	3.5517	1.02495	203	356.26	72320.50	46434.500	163320.500	-1.154	.248
		F	3.4658	.89511	483	338.14	163320.50				
		Total	3.4913	.93547	686						
CK of Math	Pre	M	3.4583	.84501	96	171.84	16497.00	7455.000	27756.000	-3.361	.001**
		F	3.0846	.88194	201	138.09	27756.00				
		Total	3.2054	.88621	297						
	Post	M	3.5402	.84640	87	153.51	13355.00	8482.000	30010.000	-.842	.400
		F	3.4686	.80516	207	144.98	30010.00				
		Total	3.4898	.81678	294						
CK of Social Studies	Pre	M	3.4063	.90121	96	163.67	15712.00	8240.000	28541.000	-2.170	.030*
		F	3.1692	.82537	201	142.00	28541.00				
		Total	3.2458	.85633	297						
	Post	M	3.7126	.90101	87	168.78	14684.00	7153.000	28681.000	-2.970	.003**
		F	3.3816	.79088	207	138.56	28681.00				
		Total	3.4796	.83723	294						
CK of Science	Pre	M	2.9479	.87503	96	163.76	15721.00	8231.000	28532.000	-2.179	.029*
		F	2.7512	.82329	201	141.95	28532.00				
		Total	2.8148	.84393	297						
	Post	M	3.5287	.79004	87	162.85	14168.00	7669.000	29197.000	-2.183	.029*
		F	3.3575	.78067	207	141.05	29197.00				
		Total	3.4082	.78601	294						

Component	Test	Gender	<i>M</i>	<i>SD</i>	Ranks			Test Statistics			
					<i>N</i>	Mean Rank	Sum of Ranks	Mann Whitney <i>U</i>	Wilcoxon <i>W</i>	<i>Z</i>	Asymp. Sig. (2-tailed)
TPACK	Pre	M	2.7891	1.06386	256	368.61	94363.50	61467.500	94363.500	-2.537	.011**
		F	3.0560	.75172	536	409.82	219664.50				
		Total	2.9697	.87331	792						
	Post	M	3.5991	.74357	232	372.09	86325.50	59297.500	86325.500	-1.808	.071
		F	3.7101	.69693	552	401.08	221394.50				
		Total	3.6773	.71238	784						

Note. M = Male, F = Female
p*<.05, *p*<.01, ****p*<.001