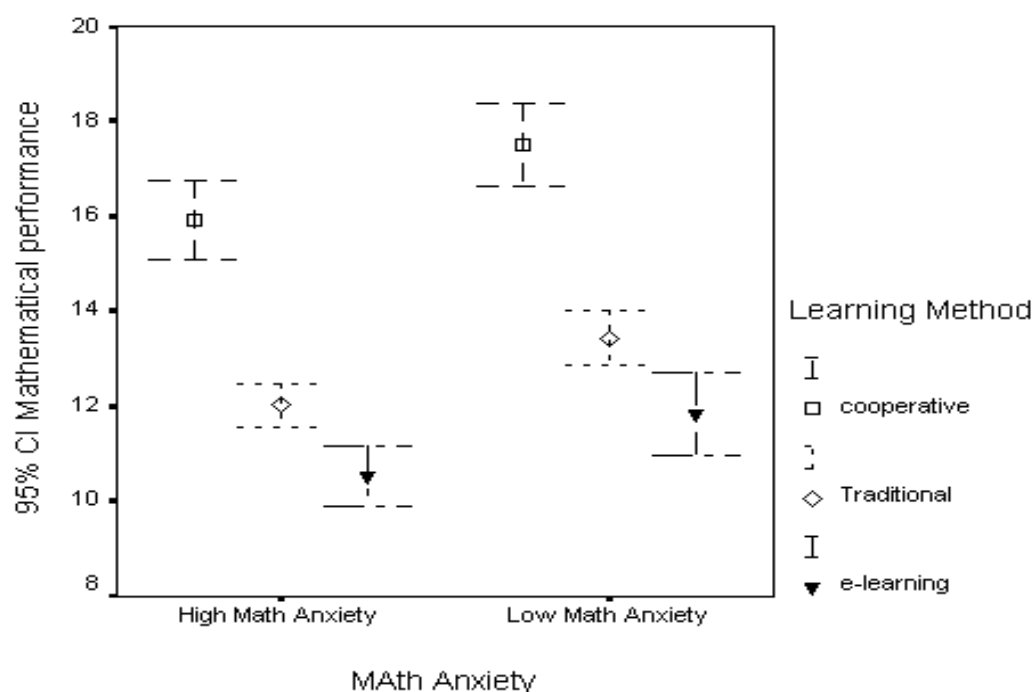


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Figure 1, interprets the mathematical performance and math anxiety over the sample based on learning methods. Students studied their lesson in cooperatively groups with whether high or low math anxiety had better performance in mathematical problem

solving. Moreover, students in e-learning method with high math anxiety had worst mathematical problem solving than another group of anxiety and learning methods.

Figure1: The students' Mathematics anxiety distribution over the sample based on learning methods



One way ANOVA found significant difference between students' math anxiety and Learning method

($P < .01$). According to the result, Students with CL method had better math anxiety than other learning methods. Moreover students with e-learning method had worst math anxiety scale.

Table4: The math anxiety means difference between learning methods

(I) Learning method	(J) Learning method	(I-J) Mean Difference	P-Value
Traditional	Cooperative	13.03	$P < .05$
Traditional	e-learning	7.61	$P < .01$
Cooperative	e-learning	20.64	$P < .05$

Univariate analysis of variance (ANOVA) indicated that the WMC and math anxiety have significantly effect on mathematical problem solving. Also There is a significantly intersection effect of WMC and math anxiety. Table 5, shows univariate analysis of variance (ANOVA) results obtained for each main effect and intersection effect of WMC and math anxiety.

In traditional class, There is significant main effect for WMC ($F(1, 35) = 31.24, p < .01$). There is significant main effect for math anxiety ($F(1, 35) =$

$24.74, P < .001$). There is a significant interaction effect of WMC and math anxiety ($F(1, 35) = 15.32, P < .01$)

In cooperated class, There is significant main effect for WMC ($F(1, 38) = 11.28, P < .05$). There is significant main effect for math anxiety ($F(1, 38) = 10.92, P < .05$). There is a significant interaction effect of WMC and math anxiety ($F(1, 38) = 12.53, P < .05$)

In e-learning method, There is significant main effect for WMC ($F(1, 38) = 42.37, P < .001$). There is