Table Summary of Analyses:
Comparison of QuarkNet Program Components across Program Exposure and Outcomes

	Program Exposure and Teacher and Student Outcomes																	
QN Program Component	Core Strategies[a] (A)			Approach to Teaching[b] (B)			QN's Influence on Teaching[c] (C)			Student Engagement[d] (D)			QN's Influence on Student Engagement[e] (E)			Long-term Oucomes[f] (F)		
	Score Range 12-60			Score Range 12-60			Score Range 12-60			Score Range 5-25			Score Range 5-25			Score Range 4-20		
Data Camp																		
	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	N
No	53.38	7.57	285	**41.47[b]**	**8.58**	**273**	47.57	9.82	193	18.02	3.82	213	19.43	4.04	168	**17.10**	**2.76**	**272**
Yes	55.25	5.72	179	**44.85[b]**	**7.81**	**174**	48.99	8.81	149	18.59	3.00	152	20.37	3.34	146	**18.17**	**2.08**	**176**
Variety of Workshops																		
No	**53.63[a]**	**8.34**	**185**	**41.30[b]**	**8.26**	**177**	**45.72[c]**	**10.58**	**116**	**17.95[d]**	**3.41**	**130**	19.19	3.74	103	**16.95**	**2.93**	**176**
One Workshop	**54.79[a]**	**5.90**	**134**	**41.98[b]**	**9.06**	**129**	**48.37[c]**	**9.41**	**98**	**18.12[d]**	**3.97**	**106**	19.95	3.71	88	**17.50**	**2.59**	**128**
Two or More	**55.82[a]**	**5.23**	**145**	**45.39[b]**	**7.49**	**141**	**50.28[c]**	**7.65**	**128**	**19.72[d]**	**3.07**	**129**	20.37	3.74	123	**18.23**	**1.78**	**144**
Masterclasses																		
No	53.29	7.45	308	41.62	8.67	294	47.07	10.19	200	**17.90[d]**	**3.70**	**222**	**19.25[e]**	**3.87**	**175**	**17.07**	**2.70**	**292**
One or More	55.71	5.58	156	45.02	7.52	153	49.76	7.94	142	**19.66[d]**	**3.06**	**143**	**20.65[e]**	**3.46**	**139**	**18.37**	**2.05**	**156**

Note: This table summarizes the results of a series of ANOVA analyses where each of the listed QuarkNet program components are treated *simultaneously* as independent variables; where in separate analyses Core Strategies, Approach to Teaching; QN's Influence on Teaching, Student Engagement, QN's Influence on Student Engagement and Long-term Outcomes each is treated as the dependent variable. **Bold face comparisons (and shaded) reflect statistically significant findings**. Student Engagement/QN Influence on Student Engagement and Long-term Outcomes measured on a different scale. [For columns A-C, range of scores is 12 to 60; for columns D and E the range of scores is 5 to 25; and the range of possible scores for column F is 4 to 20.]

[a]**Core Strategies**
When an Analysis of Variance (ANOVA) analysis was conducted with Data Camp, Variety of Workshops, and Masterclass simultaneously analyzed with Core Strategies as the dependent variable, with unequal variance based on Levene's Test [$F_{(11, 452)} = 5.09$, $p < .001$], the experience of two or more workshops was statistically related to higher Core Strategies scores [$F_{(2, 452)} = 3.68$, $p < .03$].

[b]**Approach to Teaching**
When an Analysis of Variance (ANOVA) analysis was conducted with Data Camp, Variety of Workshops, and Masterclass simultaneously analyzed with Approach to Teaching as the dependent variable, Data Camp [$F_{(1, 435)} = 7.47$, $p < .01$] and the experience of two or more workshops [$F_{(2, 435)} = 5.24$, $p < .03$].were statistically related to higher Approach to Teaching scores.

[c]**QN's Influence on Teaching**
When an Analysis of Variance (ANOVA) analysis was conducted with Data Camp, Variety of Workshops, and Masterclass simultaneously analyzed with QN's Influence on Teaching as the dependent variable, with unequal variance based on Levene's Test [$F_{(11, 330)} = 2.39$, $p < .01$], the experience of two or more workshop was statistically related to higher QN's Influence on Teaching [$F_{(2, 330)} = 4.269$, $p < .02$].

[d]**Student Engagement**
When an Analysis of Variance (ANOVA) analysis was conducted with Data Camp, Variety of Workshops, and Masterclass simultaneously analyzed with Student Engagement as the dependent variable, the experience of two or more workshops [$F_{(2, 353)} = 4.37$, $p < .02$] , and the experience of Masterclass (one or more) [$F_{(1, 353)} = 7.65$, $p < .01$] were statistically related to higher Student Engagement scores.

[e]**QN's Influence on Student Engagement**
When an Analysis of Variance (ANOVA) analysis was conducted with Data Camp, Variety of Workshops, and Masterclass simultaneously analyzed with QN's Influence on Student Engagement as the dependent variable the experience of Masterclass (one or more) [$F_{(1, 302)} = 6.45$, $p < .02$] was statistically related to higher QN's Influence on Student Engagement scores.

[f]**Long-term Outcomes**
When an Analysis of Variance (ANOVA) analysis was conducted with Data Camp, Variety of Workshops, and Masterclass simultaneously analyzed with Long-term Outcomes as the dependent variable, with unequal variance based on Levene's Test [$F_{(11, 436)} = 5.29$, $p < .001$, Data Camp [$F_{(1, 4363)} = 7.65$, $p < .02$], the experience of two or more workshops [$F_{(2, 436)} = 3.62$, $p < .03$], and the experience of Masterclass [$F_{(1, 436)} = 8.917$, $p < .01$] were statistically related to higher Long-term Outcomes scores.