

Fullerton School District

2007 Benchmark/CST Correlation Analysis: Mathematics & English Language Arts

A Spearman (*rho*) correlation coefficient was calculated for the relationship between students 2007 CST Math Proficiency Level and 2007 local benchmark proficiency level. A strong positive correlation was found, indicating a significant relationship between the two variables (*rho* greater than 0.7 is considered strong). Students that score high on the CST tend to also score high on the local benchmark. This is true by grade level as well as the district overall.

Background – The Spearman correlation coefficient determines the *strength* of the relationship between two variables. A coefficient of zero indicates a weak relationship, while values close to 1.0 or -1.0 represent a strong relationship.

Correlations- MATH (ALL STUDENTS)

			2007 CST Math Proficiency Level	Math BMK Avg
Spearman's rho	2007 CST Math Proficiency Level	Correlation Coefficient	1.000	.790(**)
		Sig. (2-tailed)	.	.000
		N	9013	9013
Math BMK Avg	Math BMK Avg	Correlation Coefficient	.790(**)	1.000
		Sig. (2-tailed)	.000	.
		N	9013	9013

** Correlation is significant at the 0.01 level (2-tailed).

Number of Students, By Grade/Test (Mathematics)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1278	14.2	14.2	14.2
	3	1329	14.7	14.7	28.9
	4	1389	15.4	15.4	44.3
	5	1444	16.0	16.0	60.4
	6	1467	16.3	16.3	76.6
	7	1377	15.3	15.3	91.9
	Algebra	729	8.1	8.1	100.0
Total		9013	100.0	100.0	

Results for Grades 2-7 and Algebra

Grade Level = 2

Correlations(a)

			2007 CST Math Proficiency Level	Math BMK Avg
Spearman's rho	2007 CST Math Proficiency Level	Correlation Coefficient	1.000	.798(**)
		Sig. (2-tailed)	.	.000
		N	1278	1278
Math BMK Avg	Math BMK Avg	Correlation Coefficient	.798(**)	1.000
		Sig. (2-tailed)	.000	.
		N	1278	1278

** Correlation is significant at the 0.01 level (2-tailed).

a Grade Level = 2

Grade Level = 3

Correlations(a)

			2007 CST Math Proficiency Level	Math BMK Avg
Spearman's rho	2007 CST Math Proficiency Level	Correlation Coefficient	1.000	.811(**)
		Sig. (2-tailed)	.	.000
		N	1329	1329
Math BMK Avg	Math BMK Avg	Correlation Coefficient	.811(**)	1.000
		Sig. (2-tailed)	.000	.
		N	1329	1329

** Correlation is significant at the 0.01 level (2-tailed).

a Grade Level = 3

Grade Level = 4

Correlations(a)

			2007 CST Math Proficiency Level	Math BMK Avg
Spearman's rho	2007 CST Math Proficiency Level	Correlation Coefficient	1.000	.825(**)
		Sig. (2-tailed)	.	.000
		N	1389	1389
Math BMK Avg	Math BMK Avg	Correlation Coefficient	.825(**)	1.000
		Sig. (2-tailed)	.000	.
		N	1389	1389

** Correlation is significant at the 0.01 level (2-tailed).

a Grade Level = 4

Grade Level = 5

Correlations(a)

			2007 CST Math Proficiency Level	Math BMK Avg
Spearman's rho	2007 CST Math Proficiency Level	Correlation Coefficient	1.000	.841(**)
		Sig. (2-tailed)	.	.000
		N	1444	1444
Math BMK Avg		Correlation Coefficient	.841(**)	1.000
		Sig. (2-tailed)	.000	.
		N	1444	1444

** Correlation is significant at the 0.01 level (2-tailed).

a Grade Level = 5

Grade Level = 6

Correlations(a)

			2007 CST Math Proficiency Level	Math BMK Avg
Spearman's rho	2007 CST Math Proficiency Level	Correlation Coefficient	1.000	.845(**)
		Sig. (2-tailed)	.	.000
		N	1467	1467
Math BMK Avg		Correlation Coefficient	.845(**)	1.000
		Sig. (2-tailed)	.000	.
		N	1467	1467

** Correlation is significant at the 0.01 level (2-tailed).

a Grade Level = 6

Grade Level = 7

Correlations(a)

			2007 CST Math Proficiency Level	Math BMK Avg
Spearman's rho	2007 CST Math Proficiency Level	Correlation Coefficient	1.000	.853(**)
		Sig. (2-tailed)	.	.000
		N	1377	1377
Math BMK Avg		Correlation Coefficient	.853(**)	1.000
		Sig. (2-tailed)	.000	.
		N	1377	1377

** Correlation is significant at the 0.01 level (2-tailed).

a Grade Level = 7

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Grade Level = Algebra

Correlations(a)

			2007 CST Math Proficiency Level	Math BMK Avg
Spearman's rho	2007 CST Math Proficiency Level	Correlation Coefficient	1.000	.841(**)
		Sig. (2-tailed)	.	.000
		N	729	729
	Math BMK Avg	Correlation Coefficient	.841(**)	1.000
		Sig. (2-tailed)	.000	.
		N	729	729

** Correlation is significant at the 0.01 level (2-tailed).

a Grade Level = Algebra

Results for Grades 2-8 English Language Arts

Correlations – ELA (ALL STUDENTS)

			2007 CST ELA Proficiency Level	Avg BMK Prof Level
Spearman's rho	2007 CST ELA Proficiency Level	Correlation Coefficient	1.000	.831(**)
		Sig. (2-tailed)	.	.000
		N	9747	9747
	Avg BMK Prof Level	Correlation Coefficient	.831(**)	1.000
		Sig. (2-tailed)	.000	.
		N	9747	9747

** Correlation is significant at the 0.01 level (2-tailed).

Grade Level

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 2	1275	13.1	13.1	13.1
3	1321	13.6	13.6	26.6
4	1389	14.3	14.3	40.9
5	1460	15.0	15.0	55.9
6	1466	15.0	15.0	70.9
7	1492	15.3	15.3	86.2
8	1344	13.8	13.8	100.0
Total	9747	100.0	100.0	

Correlations – Grade 2

			2007 CST ELA Proficiency Level	Avg BMK Prof Level
Spearman's rho	2007 CST ELA Proficiency Level	Correlation Coefficient	1.000	.852(**)
		Sig. (2-tailed)	.	.000
		N	1275	1275
	Avg BMK Prof Level	Correlation Coefficient	.852(**)	1.000
		Sig. (2-tailed)	.000	.
		N	1275	1275

** Correlation is significant at the 0.01 level (2-tailed).

Correlations – Grade 3

			2007 CST ELA Proficiency Level	Avg BMK Prof Level
Spearman's rho	2007 CST ELA Proficiency Level	Correlation	1.000	.850(**)
		Coefficient		
		Sig. (2-tailed)		
	Avg BMK Prof Level	N	1321	1321
		Correlation	.850(**)	1.000
		Coefficient		
Sig. (2-tailed)				
N	1321	1321		

** Correlation is significant at the 0.01 level (2-tailed).

Correlations – Grade 4

			2007 CST ELA Proficiency Level	Avg BMK Prof Level
Spearman's rho	2007 CST ELA Proficiency Level	Correlation	1.000	.874(**)
		Coefficient		
		Sig. (2-tailed)		
	Avg BMK Prof Level	N	1389	1389
		Correlation	.874(**)	1.000
		Coefficient		
Sig. (2-tailed)				
N	1389	1389		

** Correlation is significant at the 0.01 level (2-tailed).

Correlations – Grade 5

			2007 CST ELA Proficiency Level	Avg BMK Prof Level
Spearman's rho	2007 CST ELA Proficiency Level	Correlation	1.000	.851(**)
		Coefficient		
		Sig. (2-tailed)		
	Avg BMK Prof Level	N	1460	1460
		Correlation	.851(**)	1.000
		Coefficient		
Sig. (2-tailed)				
N	1460	1460		

** Correlation is significant at the 0.01 level (2-tailed).

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Correlations – Grade 6

			2007 CST ELA Proficiency Level	Avg BMK Prof Level
Spearman's rho	2007 CST ELA Proficiency Level	Correlation	1.000	.861(**)
		Coefficient		
		Sig. (2-tailed)		
	Avg BMK Prof Level	N	1466	1466
		Correlation	.861(**)	1.000
		Coefficient		
Sig. (2-tailed)				
N	1466	1466		

** Correlation is significant at the 0.01 level (2-tailed).

Correlations – Grade 7

			2007 CST ELA Proficiency Level	Avg BMK Prof Level
Spearman's rho	2007 CST ELA Proficiency Level	Correlation	1.000	.855(**)
		Coefficient		
		Sig. (2-tailed)		
	Avg BMK Prof Level	N	1492	1492
		Correlation	.855(**)	1.000
		Coefficient		
Sig. (2-tailed)				
N	1492	1492		

** Correlation is significant at the 0.01 level (2-tailed).

Correlations – Grade 8

			2007 CST ELA Proficiency Level	Avg BMK Prof Level
Spearman's rho	2007 CST ELA Proficiency Level	Correlation	1.000	.843(**)
		Coefficient		
		Sig. (2-tailed)		
	Avg BMK Prof Level	N	1344	1344
		Correlation	.843(**)	1.000
		Coefficient		
Sig. (2-tailed)				
N	1344	1344		

** Correlation is significant at the 0.01 level (2-tailed).