

Longitudinal/Cross-Sectional Study of the Impact of *Mathematics in Context* on Student Performance

*Standardized Test Data for the Eight Grade-Level-by-Year Studies
in 1997-1998, 1998-1999, and 1999-2000*
(Technical Report #46)

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The sample in this technical report is the total number of students who have standardized test data from the end of the year (spring).

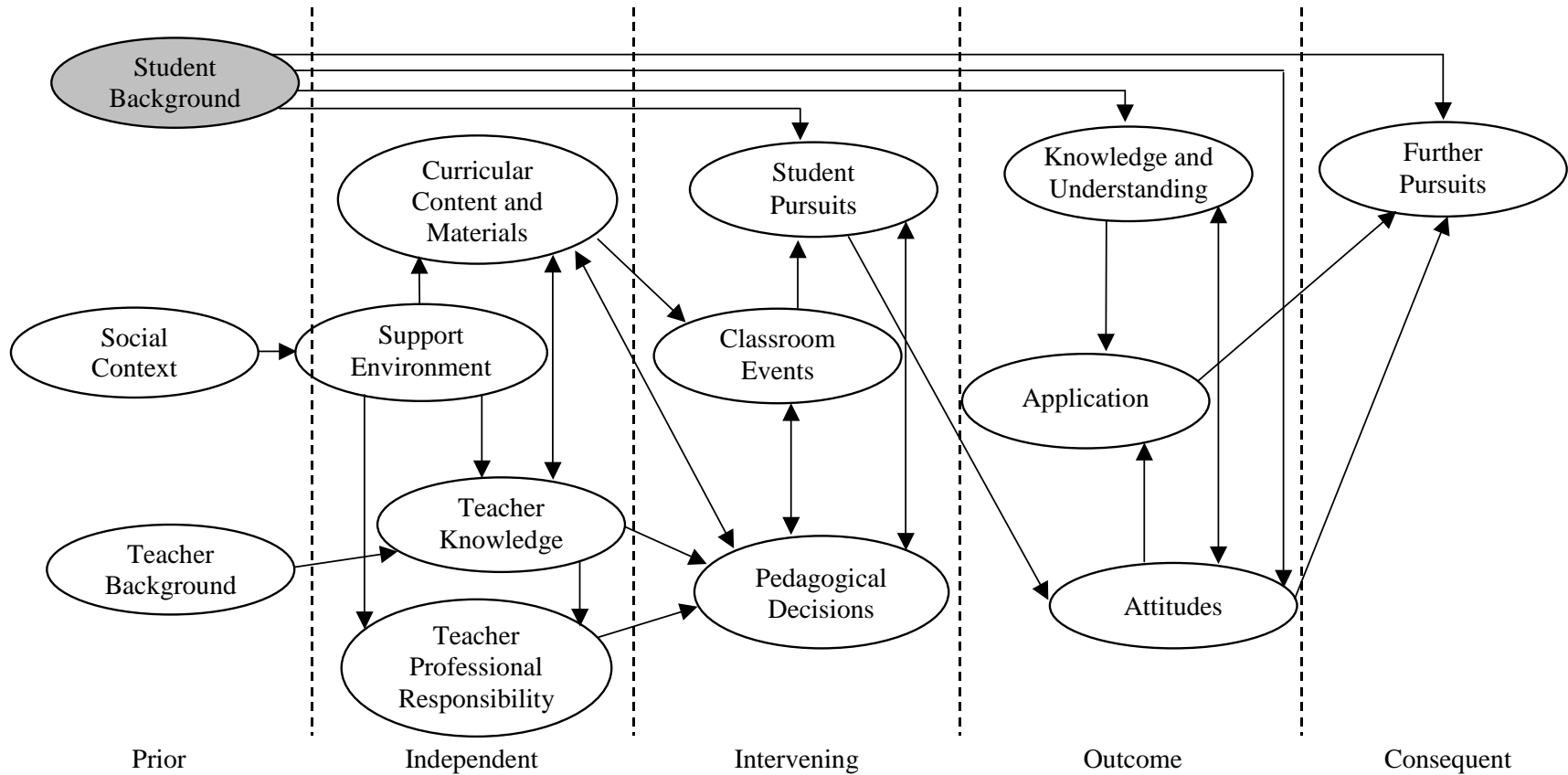


Figure 1. Revised model for the monitoring of school mathematics.

Standardized Test Scores

Table 1.1
Standardized Test Means for the Eight Grade-Level-by-Year Studies in Spring 1998, Spring 1999 and Spring 2000 in all Districts by Program

Program	Grade	(N)*	Standardi zed Test National	StDev	Score distribution percentiles			
					95%tile	75%tile	25%tile	5%tile
<i>1997-1998</i>								
MiC								
	Grade 5	448	56.13	28.97	97.00	83.25	31.00	9.00
	Grade 6	539	50.47	25.62	89.20	73.00	29.00	9.00
	Grade 7	480	53.55	26.31	94.05	75.00	34.00	10.00
Conventional								
	Grade 5	102	76.75	19.71	99.00	94.00	65.00	37.15
	Grade 6	84	41.51	23.64	80.40	58.00	19.50	8.00
	Grade 7	115	40.66	25.15	84.60	60.50	20.00	6.00
<i>1998-1999</i>								
MiC								
	Grade 6	567	53.20	28.23	96.00	78.00	30.00	10.00
	Grade 7	717	41.50	24.48	83.00	60.00	21.00	6.00
	Grade 8	192	52.26	23.38	86.45	70.00	35.00	12.00
Conventional								
	Grade 6	116	54.46	25.73	95.00	74.00	36.00	9.70
	Grade 7	109	46.53	29.99	96.00	74.00	18.00	5.00
	Grade 8	86	38.80	24.54	81.00	58.00	21.00	3.00
<i>1999-2000</i>								
MiC								
	Grade 7	259	57.56	26.99	98.00	80.00	35.50	10.00
	Grade 8	283	45.32	23.95	87.00	64.00	27.00	8.10
Conventional								
	Grade 7	37	52.46	30.29	92.80	85.00	24.00	7.80
	Grade 8	55	56.90	20.76	95.01	95.01	40.70	26.30

Table 1.2
Standardized Test National Percentile Means, for Grade 5 Students in MiC and Conventional Classrooms in 1997-1998, by Gender and by Ethnic Group in all Districts

	(N)*	Mean	StDev	Score distribution percentiles			
				95%tile	75%tile	25%tile	5%tile
<i>MiC</i>							
Overall	448	56.13	28.97	97.00	83.25	31.00	9.00
Male	227	56.84	29.05	97.00	83.00	31.00	8.00
Female	221	55.39	28.93	96.00	84.00	31.00	9.00
White	215	63.08	27.54	98.00	90.00	40.00	16.00
African American	55	37.29	25.95	79.00	54.00	20.00	5.00
Hispanic	132	50.22	27.77	92.45	76.00	25.00	9.00
Other	46	63.11	29.28	97.50	88.50	34.50	10.00
<i>Conventional</i>							
Overall	102	76.75	19.71	99.00	94.00	65.00	37.15
Male	56	77.48	20.49	99.00	95.00	64.25	36.25
Female	46	75.85	18.90	98.00	89.00	65.00	43.75
White	60	79.28	17.19	99.00	94.25	65.00	52.75
African American	5	60.00	23.53	83.00	79.00	40.00	32.80
Hispanic	25	69.36	23.26	97.00	89.00	55.00	34.00
Other	12	86.42	14.54	98.45	98.00	78.25	60.00

* The N in this table represents all of the Grade 5 students in 1997-1998 with Spring 1998 standardized test scores.

Table 1.3

Standardized Test National Percentile Means, for Grade 6 Students in MiC and Conventional Classrooms in 1997-1998, by Gender and by Ethnic Group in all Districts

	(N)*	Mean	StDev	Score distribution percentiles			
				95%tile	75%tile	25%tile	5%tile
<i>MiC</i>							
Overall	539	50.47	25.62	89.20	73.00	29.00	9.00
Male	247	49.15	26.01	88.40	72.00	28.00	8.00
Female	292	51.58	25.28	91.00	73.00	31.75	12.55
White	385	52.58	24.81	89.00	73.00	34.00	12.00
African American	61	46.07	26.82	87.00	73.00	25.00	7.00
Hispanic	30	46.07	28.86	94.55	66.75	17.00	11.90
Other	63	43.90	26.43	87.00	59.50	18.00	7.20
<i>Conventional</i>							
Overall	84	41.51	23.64	80.40	58.00	19.50	8.00
Male	51	41.59	24.23	83.00	57.50	19.00	7.00
Female	33	41.39	23.06	70.40	58.00	21.00	8.00
White	19	48.32	20.71	81.40	60.00	35.00	17.50
African American	23	36.43	24.78	90.40	47.50	18.00	6.20
Hispanic	34	43.65	24.14	74.40	65.50	24.75	8.00
Other	8	30.88	21.94	62.70	41.25	13.75	6.10

* The N in this table represents all of the Grade 6 students in 1997-1998 with Spring 1998 standardized test scores.

Table 1.4

Standardized Test National Percentile Means, for Grade 7 Students in MiC and Conventional Classrooms in 1997-1998, by Gender and by Ethnic Group in all Districts

	(N)*	Mean	StDev	Score distribution percentiles			
				95%tile	75%tile	25%tile	5%tile
<i>MiC</i>							
Overall	480	53.55	26.31	94.05	75.00	34.00	10.00
Male	242	56.97	28.20	97.00	81.00	33.25	10.00
Female	238	50.07	23.80	88.15	66.75	34.00	10.00
White	198	59.63	25.00	96.15	80.75	38.50	16.00
African American	60	48.48	26.70	91.20	69.50	30.00	5.00
Hispanic	147	44.93	25.35	88.00	62.00	24.00	6.00
Other	75	58.45	26.27	91.60	78.00	38.50	11.40
<i>Conventional</i>							
Overall	115	40.66	25.15	84.60	60.50	20.00	6.00
Male	49	38.02	25.47	82.20	53.00	17.00	6.00
Female	66	42.62	24.93	85.50	61.00	20.50	10.50
White	49	49.22	21.35	87.20	66.00	33.00	20.60
African American	28	30.36	22.93	71.65	39.75	13.00	6.70
Hispanic	28	32.79	25.62	75.20	53.00	16.25	1.00
Other	8	52.88	34.58	85.30	83.25	16.00	13.40

* The N in this table represents all of the Grade 7 students in 1997-1998 with Spring 1998 standardized test scores.

Table 1.5

Standardized Test National Percentile Means, for Grade 6 Students in MiC and Conventional Classrooms in 1998-1999, by Gender and by Ethnic Group in all Districts

	(N)*	Mean	StDev	Score distribution percentiles			
				95%tile	75%tile	25%tile	5%tile
<i>MiC</i>							
Overall	567	53.20	28.23	96.00	78.00	30.00	10.00
Male	249	53.53	29.09	96.00	80.00	29.00	10.00
Female	318	52.95	27.59	96.00	76.00	30.00	9.00
White	222	64.45	27.08	98.00	89.00	43.00	16.05
African American	150	35.75	23.32	78.00	50.00	17.00	4.45
Hispanic	49	54.02	25.68	94.60	73.00	37.00	13.00
Other	146	53.77	26.59	96.00	76.75	32.00	13.00
<i>Conventional</i>							
Overall	116	54.46	25.73	95.00	73.50	36.00	9.75
Male	57	55.79	26.63	95.40	75.00	36.00	9.40
Female	59	53.17	25.00	92.30	71.00	33.50	13.50
White	41	55.59	26.40	95.00	79.00	38.00	12.00
African American	18	45.44	23.35	74.35	59.25	37.75	6.25
Hispanic	46	60.00	22.47	97.00	78.00	38.25	26.75
Other	11	41.82	34.05	92.00	70.50	15.50	4.50

* The N in this table represents all of the Grade 6 students in 1998-1999 with Spring 1999 standardized test scores.

Table 1.6
Standardized Test National Percentile Means, for Grade 7 Students in MiC and Conventional Classrooms in 1998-1999, by Gender and by Ethnic Group in all Districts

	(N)*	Mean	StDev	Score distribution percentiles			
				95%tile	75%tile	25%tile	5%tile
<i>MiC</i>							
Overall	717	41.50	24.48	83.00	60.00	21.00	6.00
Male	342	41.78	24.27	83.00	59.75	23.00	6.00
Female	375	41.24	24.70	81.60	60.00	20.00	6.00
White	259	45.99	25.06	85.20	68.00	27.00	8.00
African American	201	32.33	21.35	70.00	44.00	14.00	4.00
Hispanic	116	44.67	23.66	85.00	60.00	28.50	7.50
Other	141	43.70	25.03	81.00	65.00	23.00	8.00
<i>Conventional</i>							
Overall	109	46.53	29.99	96.00	74.00	18.00	5.00
Male	61	43.70	30.71	96.00	68.00	18.00	3.00
Female	48	50.13	28.97	96.00	74.00	26.25	5.00
White	61	61.21	26.80	96.00	83.00	44.00	13.00
African American	28	18.96	15.37	39.25	27.00	10.00	3.05
Hispanic	12	29.00	19.21	55.95	43.00	14.50	3.00
Other	8	57.38	25.51	92.00	72.25	42.50	25.00

* The N in this table represents all of the Grade 7 students in 1998-1999 with Spring 1999 standardized test scores.

Table 1.7

Standardized Test National Percentile Means, for Grade 8 Students in MiC and Conventional Classrooms in 1998-1999, by Gender and by Ethnic Group in all Districts

	(N)*	Mean	StDev	Score distribution percentiles			
				95%tile	75%tile	25%tile	5%tile
<i>MiC</i>							
Overall	192	52.26	23.38	86.45	70.00	35.00	12.00
Male	87	52.94	24.46	85.00	74.00	34.00	10.60
Female	105	51.69	22.55	86.80	70.00	37.00	13.40
White	107	55.02	22.77	86.70	74.00	38.00	13.60
African American	29	45.69	20.74	75.80	62.00	31.00	13.20
Hispanic	33	44.27	24.00	80.20	66.00	27.00	6.60
Other	23	59.13	24.99	93.60	80.50	44.00	16.60
<i>Conventional</i>							
Overall	86	38.80	24.54	81.00	58.00	21.00	3.00
Male	30	36.90	26.38	76.20	61.00	13.00	3.00
Female	56	39.82	23.69	83.25	55.00	23.50	4.50
White	34	49.53	22.08	83.75	65.00	29.25	17.30
African American	24	28.79	20.96	70.00	36.50	13.00	3.45
Hispanic	24	27.58	20.57	57.40	43.00	10.50	3.00
Other	4	75.00	15.10	88.20	81.00	72.00	57.60

* The N in this table represents all of the Grade 8 students in 1998-1999 with Spring 1999 standardized test scores.

Table 1.8

Standardized Test National Percentile Means, for Grade 7 Students in MiC and Conventional Classrooms in 1999-2000, by Gender and by Ethnic Group in all Districts

	(N)*	Mean	StDev	Score distribution percentiles			
				95%tile	75%tile	25%tile	5%tile
<i>MiC</i>							
Overall	259	57.56	26.99	98.00	80.00	35.50	10.00
Male	114	56.03	28.05	98.00	80.00	30.50	10.00
Female	145	58.77	26.17	97.00	80.00	38.00	12.00
White	148	708.29	24.87	97.65	81.00	43.50	20.35
African American	36	37.94	25.67	82.00	53.50	15.00	5.25
Hispanic	26	59.23	28.37	93.75	82.75	36.50	12.50
Other	49	58.10	27.83	99.00	80.00	30.00	16.20
<i>Conventional</i>							
Overall	37	52.46	30.29	92.80	85.00	24.00	7.80
Male	20	51.05	33.00	92.20	86.25	21.75	7.90
Female	17	54.12	27.67	91.40	68.00	26.00	11.80
White	17	52.00	26.80	90.40	68.00	32.00	12.00
African American	3	22.67	28.01	50.20	31.00	6.50	6.10
Hispanic	6	52.83	33.92	94.00	80.00	24.25	21.75
Other	11	61.09	32.75	94.00	90.00	30.50	14.50

* The N in this table represents all of the Grade 7 students in 1999-2000 with Spring 2000 standardized test scores.

Table 1.9

Standardized Test National Percentile Means, for Grade 8 Students in MiC and Conventional Classrooms in 1999-2000, by Gender and by Ethnic Group in all Districts

	(N)*	Mean	StDev	Score distribution percentiles			
				95%tile	75%tile	25%tile	5%tile
<i>MiC</i>							
Overall	283	45.32	23.95	87.00	64.00	27.00	8.10
Male	145	46.10	24.30	89.40	64.00	28.00	8.20
Female	138	44.50	23.64	87.00	63.75	27.00	8.70
White	136	1759.88	24.06	90.75	68.00	34.50	9.00
African American	67	36.48	20.75	76.40	49.00	22.00	12.00
Hispanic	34	40.12	21.52	75.70	52.25	19.00	8.95
Other	46	45.30	25.55	87.25	65.00	28.00	5.00
<i>Conventional</i>							
Overall	55	56.90	20.76	95.01	95.01	40.70	26.30
Male	26	57.35	21.57	91.70	91.70	40.70	26.30
Female	29	56.50	20.38	94.16	94.16	43.60	29.26
White	44	57.40	20.10	98.15	98.15	42.88	30.70
African American	3	47.27	25.96	70.96	70.96	34.05	24.25
Hispanic	3	31.10	8.31	39.26	39.26	26.30	26.30
Other	5	73.82	13.19	86.90	86.90	63.50	59.18

* The N in this table represents all of the Grade 8 students in 1999-2000 with Spring 2000 standardized test scores.

Table 1. 10
*Standardized Test National Percentile Means for Students in MiC and
 Conventional Grade 5 Classrooms in 1997-1998, Overall and by District*

	N	Mean	SD
<i>MiC</i>			
Overall	448	56.13	28.97
District 1	156	57.70	31.21
District 2	160	53.98	27.82
District 3	132	56.88	27.60
<i>Conventional</i>			
Overall	102	76.75	19.71
District 1	43	83.53	15.89
District 2	59	71.80	20.84

Table 1. 11
*Standardized Test National Percentile Means for Students in MiC and
 Conventional Grade 6 Classrooms in 1997-1998, Overall and by District*

	N	Mean	SD
<i>MiC</i>			
Overall	539	50.47	25.62
District 1	145	41.65	22.97
District 2	165	44.08	25.60
District 3	161	60.02	24.07
District 4	68	62.13	22.86
<i>Conventional</i>			
Overall	84	41.51	23.64
District 1	28	45.36	20.63
District 2	56	39.59	24.96

Table 1. 12
*Standardized Test National Percentile Means for Students in MiC and
 Conventional Grade 7 Classrooms in 1997-1998, Overall and by District*

	N	Mean	SD
<i>MiC</i>			
Overall	480	53.55	26.31
District 1	46	48.33	23.08
District 2	184	43.41	24.64
District 3	133	64.95	23.35
District 4	117	58.59	26.95
<i>Conventional</i>			
Overall	115	40.66	25.15
District 1	61	50.23	23.64
District 2	54	29.85	22.44

Table 1. 13
*Standardized Test National Percentile Means for Students in MiC and
 Conventional Grade 6 Classrooms in 1998-1999, Overall and by District*

	N	Mean	SD
<i>MiC</i>			
Overall	567	53.20	28.23
District 1	174	64.57	29.76
District 2	187	40.59	26.05
District 3	120	60.57	26.33
District 4	86	47.37	17.97
<i>Conventional</i>			
Overall	116	54.46	25.73
District 1	37	37.95	21.43
District 2	79	62.19	23.97

Table 1. 14
*Standardized Test National Percentile Means for Students in MiC and
 Conventional Grade 7 Classrooms in 1998-1999, Overall and by District*

	N	Mean	SD
<i>MiC</i>			
Overall	717	41.50	24.48
District 1	166	33.07	22.60
District 2	228	34.25	23.98
District 3	136	53.92	25.60
District 4	187	48.51	20.00
<i>Conventional</i>			
Overall	109	46.53	29.99
District 1	87	53.64	28.49
District 2	22	18.41	16.21

Table 1. 15
*Standardized Test National Percentile Means for Students in MiC and
 Conventional Grade 8 Classrooms in 1998-1999, Overall and by District*

	N	Mean	SD
<i>MiC</i>			
Overall	192	52.26	23.38
District 1	31	48.58	24.49
District 2	89	47.30	24.04
District 3	72	59.96	20.11
District 4	na		
<i>Conventional</i>			
Overall	86	38.80	24.54
District 1	38	55.29	20.68
District 2	48	25.75	18.94

Table 1. 16
*Standardized Test National Percentile Means for Students in MiC and
 Conventional Grade 7 Classrooms in 1999-2000, Overall and by District*

	N	Mean	SD
<i>MiC</i>			
Overall	259	57.56	26.99
District 1	89	57.97	29.05
District 2	69	54.75	28.16
District 3	101	59.12	24.29
District 4	na		
<i>Conventional</i>			
Overall	37	52.46	30.29
District 1	14	25.1	17.7
District 2	23	69.1	23.5

Table 1. 17
*Standardized Test National Percentile Means for Students in MiC and
 Conventional Grade 8 Classrooms in 1999-2000, Overall and by District*

	N	Mean	SD
<i>MiC</i>			
Overall	283	45.32	23.95
District 1	120	44.37	24.44
District 2	109	45.12	23.74
District 3	54	47.85	23.53
District 4	na		
<i>Conventional</i>			
Overall	55	56.90	20.76
District 1	55	56.90	20.76
District 2	(none)		

Table 1. 18
*Standardized Test National Percentile Means for Students in MiC and Conventional
 Grade 5 Classrooms in 1997-1998, Overall and by Teacher*

District/ Teacher ID	(N)	Mean	SD
MiC			
District 1			
4	19	49.00	24.98
14	53	42.28	25.88
19	26	79.50	17.72
27	16	46.06	30.27
31	31	90.81	8.63
49	11	19.09	14.72
District 2			
2	27	59.48	27.53
12	43	42.88	26.35
22	24	63.08	24.30
26	66	55.64	28.37
District 3			
3	19	65.68	25.35
7	23	59.74	27.53
23	23	50.17	23.02
25	21	58.57	28.50
41	23	43.83	29.42
48	23	64.96	27.36
Conventional			
District 1			
17	13	83.00	17.65
42	30	83.77	15.39
District 2			
43	59	71.80	20.84

Table 1. 19
*Standardized Test National Percentile Means for Students in MiC and Conventional
 Grade 6 Classrooms in 1997-1998, Overall and by Teacher*

District/ Teacher ID	(N)	Mean	SD
<i>MiC</i>			
District 1			
30	51	41.25	18.57
33	50	42.42	24.29
38	44	41.23	26.33
District 2			
37	52	41.48	23.78
45	41	58.37	24.36
51	40	44.68	24.37
52	32	29.28	22.71
District 3			
6	24	66.50	27.01
15	43	64.58	21.91
39	44	61.89	21.87
40	43	56.37	22.38
50	7	20.57	10.74
District 4			
29	41	53.73	22.39
46	27	74.89	17.17
<i>Conventional</i>			
District 1			
18	7	63.86	18.59
32	21	39.19	17.65
District 2			
10	29	28.41	21.77
21	27	51.59	22.76

Table 1. 20
*Standardized Test National Percentile Means for Students in MiC and Conventional
 Grade 7 Classrooms in 1997-1998, Overall and by Teacher*

District/ Teacher ID	(N)	Mean	SD
<i>MiC</i>			
District 1			
8	28	45.64	21.45
44	18	52.50	25.47
District 2			
11	49	36.86	21.41
20	48	52.52	22.91
35	43	46.51	29.80
47	44	37.75	21.13
District 3			
16	133	64.95	23.35
District 4			
28	38	41.50	27.17
34	32	60.16	24.92
36	47	71.34	20.24
<i>Conventional</i>			
District 1			
13	34	62.09	21.33
53	27	35.30	17.24
District 2			
5	32	19.16	13.97
24	22	45.41	23.56

Table 1. 21
*Standardized Test National Percentile Means for Students in MiC and Conventional
 Grade 6 Classrooms in 1998-1999, Overall and by Teacher*

District/ Teacher ID	(N)	Mean	SD
<i>MiC</i>			
District 1			
33	38	61.58	31.98
38	43	76.21	24.91
67	22	52.91	29.49
73	45	56.02	31.75
78	26	74.35	21.72
District 2			
52	40	35.10	18.78
69	48	64.52	24.08
83	52	28.60	22.18
85	47	34.09	21.84
District 3			
6	40	69.45	25.30
15	40	58.33	22.79
40	35	59.14	26.83
50	5	17.40	3.44
District 4			
29	23	44.91	18.63
46	29	54.52	19.24
65	34	42.94	14.73
<i>Conventional</i>			
District 1			
79	37	37.95	21.43
District 2			
21	44	61.30	20.99
82	35	63.31	27.54

Table 1. 22
*Standardized Test National Percentile Means for Students in MiC and Conventional
 Grade 7 Classrooms in 1998-1999, Overall and by Teacher*

District/ Teacher ID	(N)	Mean	SD
<i>MiC</i>			
District 1			
8	34	23.97	13.56
64	17	28.00	15.23
74	66	40.47	26.73
88	49	32.22	20.16
District 2			
45	33	45.33	25.72
62	66	33.18	24.23
70	74	28.46	21.65
80	55	36.67	23.59
District 3			
9	7	12.43	5.35
16	129	56.17	24.30
District 4			
28	59	38.36	18.36
36	63	56.05	20.39
81	65	50.42	17.29
<i>Conventional</i>			
District 1			
13	19	45.74	31.02
76	17	24.29	13.98
77	51	66.37	22.48
District 2			
5	22	18.4	16.2

Table 1. 23
*Standardized Test National Percentile Means for Students in MiC and Conventional
 Grade 8 Classrooms in 1998-1999, Overall and by Teacher*

District/ Teacher ID	(N)	Mean	SD
<i>MiC</i>			
District 1			
75	6	47.50	23.72
87	25	48.84	25.14
District 2			
20	40	55.43	24.31
47	49	40.67	21.89
District 3			
71	72	59.96	20.11
District 4			
66*	na		
68	na		
89	na		
<i>Conventional</i>			
District 1			
60	4	41.00	19.30
86	34	56.97	20.45
District 2			
5	33	22.52	18.48
24	15	32.87	18.57

Table 1. 24
*Standardized Test National Percentile Means for Students in MiC and Conventional
 Grade 7 Classrooms in 1999-2000, Overall and by Teacher*

District/ Teacher ID	(N)	Mean	SD
<i>MiC</i>			
District 1			
13	7	40.57	24.23
74	47	56.89	30.10
90	35	62.89	27.67
District 2			
52	15	29.47	20.51
69	35	69.63	24.32
94	19	47.32	23.00
District 3			
9	2	26.50	4.95
16	99	59.78	24.08
District 4			
28	na		
81	na		
93	na		
<i>Conventional</i>			
District 1			
77	14	25.14	17.68
District 2			
82	23	69.09	23.51

Table 1. 25
*Standardized Test National Percentile Means for Students in MiC and Conventional
 Grade 8 Classrooms in 1999-2000, Overall and by Teacher*

District/ Teacher ID	Sample	Mean	SD
<i>MiC</i>			
District 1			
75	41	42.71	23.56
91	24	37.33	20.81
87	55	48.67	26.03
District 2			
45	20	60.20	19.41
62	21	57.24	24.92
70	51	39.71	20.98
95	17	28.65	18.64
District 3			
9	7	11.00	7.30
71	47	53.34	19.84
District 4			
29	na		
66	na		
89	na		
<i>Conventional</i>			
District 1			
86	49	63.10	25.12
92	6	28.00	27.66
District 2			
(none)			