

Table 1. SAGE Schools

District	District
<i>School</i>	<i>School</i>
Adams-Friendship Area	Menomonie Area
<i>Adams Elementary</i>	<i>River Heights Elementary</i>
Beloit	Milwaukee Public Schools
<i>Robinson Elementary</i>	<i>Carleton Elementary</i>
Cudahy	<i>Fairview Elementary</i>
<i>Parkview Elementary</i>	<i>Longfellow Elementary</i>
Gilman	<i>Maple Tree Elementary</i>
<i>Gilman Elementary</i>	<i>Maryland Avenue Elementary</i>
Glidden	<i>Sherman Elementary</i>
<i>Glidden Elementary</i>	<i>Wisconsin Conservatory of Lifelong Learning</i>
Green Bay Area	Prentice
<i>Jefferson Elementary</i>	<i>Ogema Elementary</i>
Janesville	<i>Tripoli Elementary</i>
<i>Wilson Elementary</i>	Siren
Kenosha	<i>Siren Elementary</i>
<i>Durkee Elementary</i>	South Shore
Lac Du Flambeau #1	<i>South Shore Elementary (Port Wing)</i>
<i>Lac Du Flambeau Elementary</i>	Superior
LaCrosse	<i>Blaine Elementary</i>
<i>Franklin Elementary</i>	<i>Cooper Elementary</i>
<i>Hamilton Elementary</i>	Suring
Laona	<i>Mountain Elementary</i>
<i>Robinson Elementary</i>	Webster
Madison Metropolitan	<i>Webster Elementary</i>
<i>Glendale Elementary</i>	
Menominee Indian	
<i>Keshena Primary</i>	

Table 2. Characteristics of SAGE Students, Spring 1997

<i>Characteristic</i>	<i>Percent of Students</i>
Gender	
Female	48.6
Male	51.4
Race/Ethnicity	
African American	24.8
Asian	5.7
Hispanic	6.6
Native American	11.7
White	48.8
Other	1.6
Subsidized Lunch Eligibility	
Free	57.7
Reduced	10.9
Not Eligible	31.4
Repeating Grade in 1996-97	3.2
English as Second Language	8.2
Referred to M-Team	13.6
Exceptional Education Need	13.1
Individualized Education Plan	8.2

Source: Student Profiles

Table 3. SAGE Enrollment by Classroom Type and Grade, Spring 1997

	Regular		2 Teacher Team		Floating		Shared Space		Split		3 Teacher Team	
	N of Students	N of Classes	N of Students	N of Classes	N of Students	N of Classes	N of Students	N of Classes	N of Students	N of Classes	N of Students	N of Classes
Kindergarten	683	50	615	24	57	3	29	2	0	0	37	1
Grade 1	858	61	525	18	138	7	115	8	25	2	0	0
Mixed Grades	48	4	0	0	0	0	25	1	0	0	0	0
Totals	1,589	115	1,140	42	195	10	169	11	25	2	37	1

Table 7. Methods of Data Collection by Type of School and Grade

Data Collection Method	SAGE Schools		Comparison Schools	
	K	1	K	1
Student Profiles	✓	✓	✓	✓
Classroom Organization Profile	✓	✓	✓	✓
Teacher Activity Log	✓	✓		
Student Participation Questionnaire	✓	✓		
Classroom Observations *		✓		
Teacher Interviews *		✓		
Comprehensive Test of Basic Skills (CTBS)		✓		✓
Teacher Questionnaire	✓	✓		
Principal Interviews		✓		

* A sample of SAGE classrooms.

Table 38. Observed Classroom Behaviors in Selected SAGE First Grade Classrooms

Classroom Behaviors	Fall		Spring	
	Mean (%)	Frequency	Mean (%)	Frequency
<u>Individualization</u>				
11 Monitoring	12.27	36	13.39	70
12 Grouping	18.4	41	11.47	74
13 Choice	2.66	8	2.13	14
14 Help	28.13	66	29.58	174
15 Participation	21.26	46	36.24	235
16 Whole Class	15.64	25	5.72	18
All Children	1.63	3	1.48	9
<u>Total</u>	99.99	225	100.01	594
<u>Engagement</u>				
E1 Listening	38.69	243	33.94	319
E2 Practicing	14.96	73	7.01	69
E3 Reading	26.16	166	32.99	351
E4 Gaming	3.31	22	2.45	25
E5 Manipulating	3.74	28	4.22	41
E6 Creating	4.07	19	1.87	16
E7 Dialoging	1.95	13	4.29	42
E8 Problem Solving	0.76	6	5.55	54
E9 Reporting	3.03	14	4.5	45
E10 Reflecting	0.48	1	0.59	7
E11 Initiating	2.84	21	2.59	39
<u>Total</u>	99.99	608	100	1,008
<u>Management</u>				
M1 Praise	41.62	53	21.55	143
M2 Reproof	5.46	10	8.62	60
M3 Reminds	25.1	33	14.67	110
M4 Warms	15.24	17	7.36	27
M5 Cools	7.02	7	2.75	20
M8 Problem Solving	0.67	1	5.89	29
M11 Permits	4.89	10	39.16	276
<u>Total</u>	100	131	100	665
TOTALS		964		2,267

Table 39. Observed Classroom Behaviors in Four Types of Selected SAGE First Grade Classrooms

	<u>All Classes</u>	<u>15:1 Regular</u>	<u>30:2 Team</u>	<u>15:1 Shared</u>	<u>30:2 Floating</u>
Categories	n=26	n=15	n=5	n=5	n=1
<u>Individualization</u>					
11 Monitoring	13.39	12.07	12.47	18.79	10.71
12 Grouping	11.47	7.99	15.4	19.57	3.57
13 Choice	2.13	1.57	2.02	2.22	10.71
14 Help	29.57	28.67	27.26	34.11	32.14
15 Participation	36.24	39.81	39.96	20.48	42.86
16 Whole Class	5.72	8.04	1.74	3.89	0
All Children	1.48	1.86	1.15	0.95	0
<u>Total</u>	100	100.01	100	100.01	99.99
<u>Engagement</u>					
E1 Listening	33.94	32.51	37.5	34.13	36.73
E2 Practicing	7.01	4.64	9.47	12.69	2.04
E3 Reading	32.99	34.96	33.43	28.33	24.49
E4 Gaming	2.45	2.45	3.62	0.95	4.08
E5 Manipulating	4.22	3.06	3.31	7.83	8.16
E6 Creating	1.87	1.73	0.16	3.56	4.08
E7 Dialoging	4.29	2.9	3.19	7.13	16.33
E8 Problem Solving	5.55	6.95	1.77	5.38	4.08
E9 Reporting	4.5	6.98	2.43	0	0
E10 Reflecting	0.59	0.69	1.03	0	0
<u>Total</u>	100	100.01	99.98	100	99.99
<u>Management</u>					
M1 Praise	21.55	16.79	21.41	40.65	10
M2 Reproof	8.62	8.62	6.08	11.25	6.67
M3 Reminds	14.67	12.86	17.79	16.76	10
M4 Warns	7.36	5.06	18.77	4.1	3.33
M5 Cools	2.75	3.73	1.05	0	6.67
M8 Problem Solving	5.89	8.47	2.18	2.86	6.67
M11 Permits	39.16	44.48	32.72	24.39	56.67
<u>Total</u>	100	100.01	100	100.01	100.01

Table 41. Activity Log Data for Four Types of First Grade SAGE Classrooms, Logs 2 and 3

Category	<u>15:1 Regular</u>	<u>30:2 Team</u>	<u>30:2 Floating</u>	<u>15:1 Shared</u>
	n=65	n=34	n=10	n=8
<u>Time Use</u>				
Routines	0.11	0.15	0.13	0.11
Planning and Evaluation	0.18	0.16	0.2	0.12
Personal Time	0.11	0.1	0.09	0.12
Instructional Time	0.59	0.6	0.58	0.65
	1.00	1.00	1.00	1.00
<u>Grouping</u>				
Whole Group	0.52	0.49	0.44	0.48
Small Group	0.23	0.34	0.29	0.18
Individual	0.21	0.13	0.23	0.2
Combined Classes	0.05	0.03	0.04	0.13
	1.00	1.00	1.00	1.00
<u>Content</u>				
Reading/Language	0.41	0.44	0.52	0.49
Math	0.17	0.18	0.25	0.19
Integrated	0.17	0.19	0.05	0.09
Other	0.25	0.2	0.18	0.23
	1.00	1.00	1.00	1.00
<u>Learning Activities</u>				
Listening	0.15	0.17	0.16	0.15
Practicing	0.18	0.21	0.19	0.2
Creating	0.1	0.08	0.04	0.09
Receiving Help	0.1	0.09	0.13	0.12
Manipulatives	0.09	0.08	0.08	0.09
Dialoguing	0.07	0.08	0.08	0.07
Problem Solving	0.07	0.06	0.06	0.04
Receiving Critique	0.04	0.04	0.06	0.04
Reflecting	0/03	0.03	0.03	0.02
Answering	0.06	0.07	0.1	0.08
Reporting	0.04	0.04	0.05	0.05
Other	0.06	0.04	0.05	0.04
	1.00	1.00	1.00	1.00

Table 42. Perceived Effects of Reduced Student-Teacher Ratio on Student Participation by Kindergarten and First-Grade SAGE Teachers

	<u>Strongly Disagree</u>	<u>Disagree</u>	<u>Neutral</u>	<u>Agree</u>	<u>Strongly Agree</u>	<u>Mean</u>	<u>N</u>	<u>Rank</u>
1. I spent more time teaching rather than managing the classroom.	0.5	4.4	7.8	38.3	49	4.3	206	1
2. I covered content at a quicker pace.	1	6.8	19.5	42.4	30.2	3.9	205	8
3. I covered content in greater depth.	0.5	2.4	10.7	41	45.4	4.3	205	5
4. I spent more time diagnosing students' learning problems.	0	1	8.3	48.1	42.7	4.3	206	4
5. I spent more time with individual students planning and implementing learning activities.	1.0	1.5	8.7	39.3	49.5	4.4	206	2
6. I spent more time assessing students' progress.	0	1.5	6.3	39.3	52.9	4.4	206	3
7. I spent more time developing, discussing and answering students' questions.	0.0	1.0	5.9	47.8	45.4	4.4	205	7
8. I involved students in more hands-on activities.	0	1	4.9	34.5	59.7	4.5	206	2
9. I more often based activities on students' prior knowledge and interests.	0.0	0.5	22.3	47.6	29.6	4.1	206	10
10. I more often involved students in problem solving, creating and experimenting.	0.0	1.9	9.2	48.1	40.8	4.3	206	6
11. I offered students more opportunities to choose among learning activities.	0.0	3.9	12.2	42.9	41.0	4.2	205	9

Table 50. SAGE Teachers' Congruence with National Curriculum Standards

Variable	Mean	Minimum	Maximum	Congruence	N
Reading/Language Arts (Total)	3.88	2.11	4.84	0.78	211
Mathematics (Total)	3.61	1.62	4.83	0.72	211
Reading/Language Arts (Kindergarten)	3.71	2.11	4.79	0.74	88
Mathematics (Kindergarten)	3.52	1.62	4.67	0.70	88
Reading/Language Arts (1st Grade)	3.99	2.84	4.79	0.8	109
Mathematics (1st Grade)	3.66	1.79	4.71	0.73	109
Reading/Language Arts (Mixed Grade)	4.14	3.79	4.47	0.83	4
Mathematics (Mixed Grade)	3.79	3.68	3.83	0.76	4

Table 51. District Staff Development

<u>Personal Development Actions</u> Over the past school year, I have:	Have a formal professional Development Plan?		
	YES	NO	(N)
engaged in mentor relationship w/ another teacher	62.8%	57.1%	126
participated in joint planning w/other sage teachers	95.3%	90.5%	196
collaborated with other teachers in delivering lessons	87.2%	80.2%	176
collaborated with other teachers in evaluating student progress	90.7%	84.1%	184
participated in a study group or on-line network	22.1%	18.3%	42
collaborated in school-wide instructional initiatives or themes	69.8%	60.3%	136
collaborated w/other schools or institutions	39.5%	21.4%	61
conducted research connected to my teaching	39.5%	27.8%	69
attended a professional conference or skill-building workshop	93.0%	78.6%	179
attended workshops, etc. focused on diversity/human relations training	32.6%	26.2%	61
attended a workshop, etc. focused on teaching smaller classes	18.6%	12.7%	32
taken a course for graduate or CEU credit	57.0%	36.5%	95
(N)	126	86	212

Table 52. District Staff Development

Personal Development Actions	Districts' phase of Staff Development			
	Initialization	Implementation	Institutionalization	(N)
Over the past school year, I have:				
engaged in mentor rel't w/ another teacher	46.5%	63.3%	80.0%	124
participated in joint planning w/other sage teachers	88.4%	96.4%	95.0%	195
collaborated with other teachers in delivering lessons	72.1%	88.5%	85.0%	174
collaborated with/other teachers in evaluating student progress	79.1%	91.4%	90.0%	182
participated in a study group or on-line network	14.0%	21.6%	30.0%	42
collaborated in school-wide instructional initiatives or themes	39.5%	71.2%	90.0%	134
collaborated w/other schools or institutions	25.6%	28.15	55.0%	61
conducted research connected to my teaching	32.6%	34.5%	30.0%	68
attended a professional conference or skill-building workshop	88.4%	85.6%	85.0%	177
attended workshops, etc. focused on diversity/human rel't training	23.3%	27.3%	55.0%	59
attended a workshop, etc. focused on teaching smaller classes	4.7%	18.7%	20.0%	32
taken a course for graduate or CEU credit	44.2%	43.9%	60.05	92
(N)	43	139	20	202

Table 53. Lighted Schoolhouse Activities and Number of Participants in SAGE Schools

Activities	Number of Schools Offering Activity			Number of Participants in Activity		
	Pre-SAGE	Spring 1997	Difference	Pre-SAGE	Spring 1997	Difference
PTSA	1	1	0	50	600	550
Student Clubs/Sports	1	6	5	20	545	525
Community Ed.	2	8	6	62	509	447
Community Rec	14	19	5	872	1,310	438
Family Nights	1	4	3	265	642	377
Social Services	1	4	3	107	464	357
Health Clinic	4	8	4	1,078	1,393	315
Parent/Comm. Council	15	18	3	175	366	191
Parent Resource Ctr.	4	5	1	325	497	172
Adult Tech. Classes	5	4	-1	298	444	146
Head Start	6	5	-1	209	341	132
Library-community	6	5	-1	544	668	124
PTA/PTO	19	16	-3	321	434	113
Youth Group	0	2	2	0	108	108
Health Clinic	8	11	3	405	511	106
Boy Scouts	13	12	-1	277	360	83
Parent Computer	0	2	2	0	82	82
Health Center	3	3	0	45	125	80
Say No Club/ DARE	0	2	2	0	74	74
Library Hours	6	8	2	843	913	70
Summer Camp/Rec	0	1	1	0	65	65
Lunch Prog.	0	1	1	0	65	65
Parenting Classes	0	1	1	0	60	60
Technology	0	1	1	0	60	60
Girl Scouts	15	12	-3	381	432	51
Dance/Music Clubs	0	2	2	0	49	49
Literacy/ Reading	0	2	2	0	45	45
4-H	1	3	2	15	50	35
Arts/Crafts	0	1	1	0	35	35
Right Start	0	1	1	0	23	23
Mega Skills	0	1	1	0	20	20
Special Olympics	0	1	1	0	20	20
Even Start	0	1	1	0	18	18
Even Start Literacy	1	1	0	29	47	18
GED Prep	3	3	0	46	61	15
Odyssey of the Mind	0	1	1	0	13	13
Minority Excellence Org.	0	1	1	0	10	10
Parent Tutoring	0	1	1	0	10	10
Salvation Army	1	0	-1	25	0	-25
FAST	5	5	0	157	115	-42
Hunter/Snowmobile Safety	2	1	-1	60	10	-50
Tutoring	16	16	0	575	519	-56
Day Care	12	13	1	408	334	-74
Music Lessons	9	5	-4	295	191	-104
Community Rec adult	9	11	2	552	378	-174
Breakfast	15	18	3	2,626	2,349	-277
Homework Helpline	4	2	-2	385	94	-291
Totals	202	231	29	11,766	15,678	3,912

Table 4. Composite Profile of SAGE and Comparison Schools

<i>Characteristic</i>	<i>Percent of Students</i>		χ^2	<i>Prob.</i>
	<i>SAGE Schools</i>	<i>Comparison Schools</i>		
Gender			.272	.601
Female	48.6	49.4		
Male	51.4	50.6		
Race/Ethnicity				
African American	24.8	32.9	38.268	.000
Asian	5.7	5.5	.085	.770
Hispanic	6.6	8.0	3.171	.075
Native American	11.7	1.4	167.339	.000
White	48.8	49.0	.010	.918
Other	1.6	2.7	7.304	.007
Subsidized Lunch Eligibility			43.853	.000
Free	57.7	49.4		
Reduced	10.9	9.9		
Not Eligible	31.4	40.7		
Repeating Grade in 1996-97	3.2	2.6	1.409	.235
English as Second Language	8.2	4.9	19.276	.000
Referred to M-Team	13.6	9.2	21.19	.000
Exceptional Education Need	13.1	9.7	12.82	.000
Individualized Education Plan	8.2	5.5	13.048	.000

Table 5. Enrollment Changes in SAGE and Comparison Schools, 1996-97

	SAGE Schools		Comparison Schools		All Schools	
	Number of Students	Percentage of SAGE Students	Number of Students	Percentage of Comparison Students	Number of Students	Percentage of All Students
Ongoing	2,943	81.4	1,706	85.3	4,649	82.8
Withdrew	397	11	178	8.9	575	10.2
Enrolled	274	7.6	115	5.8	389	6.9

Table 6. Number of Students in SAGE and Comparison Schools by Grade, Spring 1997

	SAGE Schools	Comparison Schools	Totals
Kindergarten	1,494	820	2,314
1st Grade	1,723	1,001	2,724
Totals	3,217	1,821	5,038

Table 8. Number of Students with Valid Test Scores

	Total	SAGE	Comparison
Fall, 1996 Pre-Test			
Reading/Language Arts	2,511	1,558	953
Mathematics	2,492	1,538	954
Total	2,437	1,515	922
Spring, 1997 Post-Test			
Reading/Language Arts	2,537	1,575	941
Mathematics	2,515	1,566	928
Total	2,491	1,552	918
Pre-Test and Post-Test			
Reading/Language Arts	2,230	1,386	844
Mathematics	2,199	1,368	831
Total	2,138	1,336	802

Table 9. Descriptive Statistics on CTBS Pre-Test Results (includes SAGE and comparison school students)

Sub-Test	Scale Score		National Percentile		Number Taking Test
	Mean	Standard Deviation	Mean	Standard Deviation	
Reading	532.04	37.41	40.82	27.46	2,511
Language Arts	527.99	43.85	38.76	27.76	2,511
Mathematics	489.98	40.34	38.37	26.36	2,492
TOTAL	517.07	35.17	38.90	26.46	2,437

Notes: Maximum achievable scale scores for the level 10 test are: Reading, 626; Language Arts, 620; Mathematics, 629; Total Score, 625. A TOTAL scale score is available only for those students who completed all parts of the CTBS.

Table 10. Difference of Means Test on CTBS Pre-Test Language Arts Scale Scores

Group	Mean	Standard Deviation	N
Comparison School Students	529.15	44.27	953
SAGE School Students	527.29	43.59	1,558
Difference of Means = 1.86 t-test for Equality of Means: t = 1.03, 2-tail sig. = .30			

Table 11. Difference of Means Test on CTBS Pre-Test Reading Scale Scores

Group	Mean	Standard Deviation	N
Comparison School Students	533.66	38.24	953
SAGE School Students	531.04	36.88	1,558
Difference of Means = 2.61 t-test for Equality of Means: t = 1.68, 2-tail sig. = .09			

Table 12. Difference of Means Test on CTBS Pre-Test Mathematics Scale Scores

Group	Mean	Standard Deviation	N
Comparison School Students	489.76	40.56	954
SAGE School Students	490.12	40.21	1,538
Difference of Means = 0.36 t-test for Equality of Means: t = 0.22, 2-tail sig. = .83			

Table 13. Difference of Means Test on CTBS Pre-Test Total Scale Scores

Group	Mean	Standard Deviation	N
Comparison School Students	518.03	35.43	922
SAGE School Students	516.49	35.08	1,515
Difference of Means = 1.54 t-test for Equality of Means: t = 1.05, 2-tail sig. = .30			

Table 14. Perfect Scores on CTBS Post-Test

	All Students		SAGE Students		Comparison Students	
	Number of Perfect Scores	Percent of Perfect Scores	Number of Perfect Scores	Percent of Perfect Scores	Number of Perfect Scores	Percent of Perfect Scores
Reading	653	26.1	421	26.8	232	24.8
Language Arts	907	36.2	599	38.2	308	32.9
Mathematics	180	7.2	129	8.3	51	5.5
Total Battery	86	3.5	64	4.1	22	2.4

Table 15. Difference of Means Test on CTBS Post-Test Language Arts Scale Scores: All Cases

Group	Mean	Standard Deviation	N
Comparison School Students	575.31	42.71	875
SAGE School Students	581.09	39.45	1,451
Difference of Means = 5.78 t-test for Equality of Means: $t = 3.25$, 2-tail sig. = .001			

Table 16. Difference of Means Test on CTBS Post-Test Language Arts Scale Scores: Excluding Top Quartile on Pre-Test

Group	Mean	Standard Deviation	N
Comparison School Students	568.06	40.58	623
SAGE School Students	573.09	39.57	1,036
Difference of Means = 5.03 t-test for Equality of Means: $t = 2.48$, 2-tail sig. = .014			

Table 17. Difference of Means Test on CTBS Post-Test Reading Scale Scores: All Cases

Group	Mean	Standard Deviation	N
Comparison School Students	578.66	39.99	875
SAGE School Students	582.33	37.17	1,451
Difference of Means = 3.67 t-test for Equality of Means: $t = 2.20$, 2-tail sig. = .028			

Table 18. Difference of Means Test on CTBS Post-Test Reading Scale Scores: Excluding Top Quartile on Pre-Test

Group	Mean	Standard Deviation	N
Comparison School Students	571.76	37.96	618
SAGE School Students	576.66	35.74	1036
Difference of Means = 4.90 t-test for Equality of Means: $t = 2.64$, 2-tail sig. = .010			

Table 19. Difference of Means Test on CTBS Post-Test Mathematics Scale Scores: All Cases

Group	Mean	Standard Deviation	N
Comparison School Students	538.27	44.50	866
SAGE School Students	545.56	42.64	1,444
Difference of Means = 7.29 t-test for Equality of Means: $t = 3.87$, 2-tail sig. = .000			

Table 20. Difference of Means Test on CTBS Post-Test Mathematics Scale Scores: Excluding Top Quartile on Pre-Test

Group	Mean	Standard Deviation	N
Comparison School Students	527.64	39.88	625
SAGE School Students	534.34	39.42	1,015
Difference of Means = 6.70 t-test for Equality of Means: t = 2.01, 2-tail sig. = .001			

Table 21. Difference of Means Test on CTBS Post-Test Total Scale Scores: All Cases

Group	Mean	Standard Deviation	N
Comparison School Students	564.50	35.58	856
SAGE School Students	569.90	33.93	1,433
Difference of Means = 5.40 t-test for Equality of Means: t = 3.57, 2-tail sig. = .000			

Table 22. Difference of Means Test on CTBS Post-Test Total Scale Scores: Excluding Top Quartile on Pre-Test

Group	Mean	Standard Deviation	N
Comparison School Students	555.58	31.59	585
SAGE School Students	561.36	32.16	1,001
Difference of Means = 5.78 t-test for Equality of Means: t = 3.45, 2-tail sig. = .001			

Table 23. Change in Mean Scores from Pre-Test to Post-Test

Subtest	Change from Pre-Test to Post-Test		
	SAGE	Comparison	Difference
Language Arts	53.80	46.16	7.64
Reading	51.29	45.00	6.29
Mathematics	55.44	48.51	6.93
Total	53.41	46.47	6.94

Table 24. OLS Regression Results for Language Arts; All Cases Analyzed

Variable	BLOCK 1		BLOCK 2		BLOCK 3	
	b	t	b	t	b	t
Pretest Score	.430	22.83	.410	21.60	.410	21.63
Subsidized Lunch Eligibility	-4.771	5.55	-3.208	3.52	-3.42	3.74
Days Absent	-.476	4.88	-.422	4.28	-.419	4.24
African American			-6.085	1.12	-6.167	1.14
Asian			-2.677	.44	-2.826	.47
Hispanic			7.512	1.27	8.060	1.36
Native American			11.684	1.99	10.146	1.72
White			6.248	1.18	5.745	1.08
SAGE					3.849	2.43
Constant	361.789	34.60	367.374	31.46	365.513	31.27
Adjusted R ²	.272		.291		.293	
Standard Error of the Estimate	34.07		33.64		33.60	

Note: When t-statistic >1.96, prob. < .05

Table 25. OLS Regression Results for Language Arts; Top Quartile on Pre-Test Excluded

Variable	BLOCK 1		BLOCK 2		BLOCK 3	
	b	t	b	t	b	t
Pretest Score	.456	14.59	.428	13.69	.429	13.72
Subsidized Lunch Eligibility	-5.092	4.73	-3.505	3.06	-3.781	3.28
Days Absent	-.543	4.80	-.495	4.30	-4.490	4.26
African American			-10.201	1.50	-10.356	1.52
Asian			-7.362	.98	-7.694	1.02
Hispanic			3.654	.50	4.300	.59
Native American			8.098	1.11	6.475	.88
White			1.895	.28	1.376	.21
SAGE					4.041	2.06
Constant	349.16	21.11	362.804	20.34	360.745	20.22
Adjusted R ²	.181		.201		.203	
Standard Error of the Estimate	36.42		35.97		35.94	

Note: When t-statistic >1.96, prob. < .05

Table 26. OLS Regression Results for Reading; All Cases Analyzed

Variable	BLOCK 1		BLOCK 2		BLOCK 3	
	b	t	b	t	b	t
Pretest Score	.415	19.88	.398	18.80	.340	18.86
Subsidized Lunch Eligibility	-5.145	6.16	-4.092	4.59	-4.24	4.73
Days Absent	-.435	4.62	-.386	4.02	-.383	3.99
African American			-8.879	1.68	-8.824	1.69
Asian			-4.240	.72	-4.332	.73
Hispanic			-3.851	.67	-3.461	.60
Native American			5.854	1.02	4.760	.827
White			-.243	.05	-.611	.118
SAGE					2.743	1.77
Constant	370.236	32.04	380.157	30.04	378.141	29.77
Adjusted R ²	.228		.238		.239	
Standard Error of the Estimate	33.08		32.86		32.84	

Note: When t-statistic >1.96, prob. < .05

Table 27. OLS Regression Results for Reading: Top Quartile on Pre-Test Excluded

Variable	BLOCK 1		BLOCK 2		BLOCK 3	
	b	t	b	t	b	t
Pretest Score	.404	13.67	.378	12.58	.382	12.70
Subsidized Lunch Eligibility	-4.759	3.81	-3.767	3.54	-4.027	3.77
Days Absent	-.401	4.74	-.368	3.41	-.363	3.36
African American			-8.935	1.45	-9.133	1.50
Asian			-6.971	1.02	-7.331	1.08
Hispanic			-3.736	.56	-3.227	.48
Native American			6.518	.99	4.660	.71
White			-1.050	.17	-1.798	.30
SAGE					4.345	2.35
Constant	374.817	23.78	389.842	22.95	386.171	22.67
Adjusted R ²	.152		.164		.167	
Standard Error of the Estimate	33.97		33.74		33.69	

Note: When t-statistic >1.96, prob. < .05

Table 28. OLS Regression Results for Mathematics; All Cases Analyzed

Variable	BLOCK 1		BLOCK 2		BLOCK 3	
	b	t	b	t	b	t
Pretest Score	.66	32.25	.619	29.74	.618	29.69
Subsidized Lunch Eligibility	-2.665	3.10	-1.090	1.20	-1.315	1.45
Days Absent	-.413	4.17	-.373	3.73	-.369	3.69
African American			-12.011	2.24	-12.140	2.26
Asian			-10.013	1.67	-10.140	1.69
Hispanic			-4.812	.82	-4.189	.71
Native American			6.29	1.08	4.727	.81
White			.592	.11	.074	.01
SAGE					3.876	2.45
Constant	228.705	21.85	247.073	21.05	245.953	20.97
Adjusted R ²	.391		.406		.408	
Standard Error of the Estimate	33.73		33.30		33.26	

Note: When t-statistic >1.96, prob. < .05

Table 29. OLS Regression Results for Mathematics; Top Quartile on Pre-Test Excluded

Variable	BLOCK 1		BLOCK 2		BLOCK 3	
	b	t	b	t	b	t
Pretest Score	.591	18.91	.555	17.63	.554	17.60
Subsidized Lunch Eligibility	-3.520	3.36	-1.915	1.72	-2.241	2.00
Days Absent	-.429	3.84	-.398	3.50	-.386	3.40
African American			12.795	2.04	-13.000	2.07
Asian			-10.764	1.55	-10.944	1.58
Hispanic			-6.028	.88	-5.269	.77
Native American			5.812	.86	3.933	.58
White			-1.368	.22	-1.995	.32
SAGE					4.63	2.43
Constant	259.072	16.91	79.106	16.93	277.789	16.87
Adjusted R ²	.225		.244		.246	
Standard Error of the Estimate	35.15		34.72		34.66	

Note: When t-statistic >1.96, prob. < .05

Table 30. OLS Regression Results for Total Scale Scores; All Cases Analyzed

Variable	BLOCK 1		BLOCK 2		BLOCK 3	
	b	t	b	t	b	t
Pretest Score	.64	35.94	.61	33.81	.61	33.86
Subsidized Lunch Eligibility	-2.80	4.31	-1.97	2.89	-2.15	3.15
Days Absent	-.38	5.21	-.35	4.75	-.35	4.72
African American			-8.14	2.03	-8.19	2.04
Asian			-5.20	1.16	-5.27	1.18
Hispanic			-1.41	.32	-.86	.20
Native American			7.26	1.67	5.98	1.37
White			.027	.01	-0.37	0.10
SAGE					3.30	2.79
Constant	244.67	25.57	257.64	24.72	256.06	24.57
Adjusted R ²	.462		.476		.478	
Standard Error of the Estimate	24.90		24.58		24.54	

Note: When t-statistic >1.96, prob. < .05

Table 31. OLS Regression Results for Total Scale Scores; Top Quartile on Pre-Test Excluded

Variable	BLOCK 1		BLOCK 2		BLOCK 3	
	b	t	b	t	b	t
Pretest Score	.65	23.00	.62	21.49	.62	21.53
Subsidized Lunch Eligibility	-2.88	3.53	-2.34	2.73	-2.61	3.04
Days Absent	-.47	5.43	-.47	5.23	-.46	5.18
African American			-6.90	1.46	-7.08	1.50
Asian			-4.11	.78	-4.41	.83
Hispanic			.15	.03	1.07	.21
Native American			8.54	1.69	6.76	1.33
White			-.83	.18	-1.40	.30
SAGE					4.60	3.11
Constant	239.83	16.41	256.11	16.40	254.13	16.30
Adjusted R ²	.318		.333		.337	
Standard Error of the Estimate	26.64		26.34		26.27	

Note: When t-statistic >1.96, prob. < .05

Table 32. African American Post-Test and Change Scores, by SAGE or Comparison School

Score	SAGE	Comparison	sig.*
<i>Language Arts</i>			
Mean Post-Test Scale Score	563.3	558.7	.208
Mean Change, Pre-Test to Post-Test Scale Score	54.3	40.3	.000
<i>Reading</i>			
Mean Post-Test Scale Score	568.3	563.3	.149
Mean Change, Pre-Test to Post-Test Scale Score	52.7	43.8	.022
<i>Mathematics</i>			
Mean Post-Test Scale Score	524.2	517.0	.043
Mean Change, Pre-Test to Post-Test Scale Score	55.3	42.5	.000
<i>Total</i>			
Mean Post-Test Scale Score	552.3	546.8	.076
Mean Change, Pre-Test to Post-Test Scale Score	54.4	42.0	.000

* Analysis of Variance F-Test

Table 33. African American Post-Test and Change Scores, by SAGE or Comparison School, by Gender

Score	SAGE		Comparison	
	Male	Female	Male	Female
<i>Language Arts</i>				
Mean Post-Test Scale Score	562.9	563.7	552.3	564.2
Mean Change, Pre-Test to Post-Test Scale Score	55.3	53.5	36.4	43.8
<i>Reading</i>				
Mean Post-Test Scale Score	567.0	569.4	556.5	569.2
Mean Change, Pre-Test to Post-Test Scale Score	56.2	49.7	39.5	47.7
<i>Mathematics</i>				
Mean Post-Test Scale Score	524.8	523.6	514.7	518.9
Mean Change, Pre-Test to Post-Test Scale Score	55.5	55.2	41.0	43.9
<i>Total</i>				
Mean Post-Test Scale Score	552.7	551.8	541.2	551.8
Mean Change, Pre-Test to Post-Test Scale Score	56.0	53.0	39.4	44.5

Table 34. African Americans versus White Achievement in SAGE and Comparison Schools on Total Scale Scores

	SAGE Schools			Comparison Schools		
	African American	White	sig.*	African American	White	sig.*
ALL CASES						
Pre-Test	498	530	.000	505	531	.000
Change	54	49	.004	42	48	.006
Post-Test	552	579	.000	547	579	.000
EXCLUDING TOP QUARTILE						
Pre-Test	493	511	.000	497	513	.000
Change	56	55	.557	45	53	.001
Post-Test	550	567	.000	542	566	.000
EXCLUDING TOP TWO QUARTILES						
Pre-Test	483	497	.000	489	498	.003
Change	57	56	.745	46	57	.002
Post-Test	542	554	.000	535	554	.000

Table 35. HLM Results; All Cases Analyzed

Source	Total	Reading	Language Arts	Math
Level-1				
Pre Test	0.59	0.41	0.40	0.68
SES	-3.22	-4.44	-5.65	-2.44
Attendance	-0.21	-0.30	-0.28	-0.10
Level -2				
A Class Size	-0.88 *	-0.54 *	-0.72 *	-1.17 *
B SAGE	6.40 *	4.50	6.01	8.05 *
C Class Size	-0.80 *	-0.47	-0.63 *	-1.12 *
SAGE	1.28	1.79	3.57	1.54
D Class SES	-18.08 *	-15.99 *	-16.13 *	-21.03 *
Class Size	-0.83 *	-0.48 *	-0.68 *	-1.16 *
E Class SES	-20.35 *	-17.59 *	-18.19 *	-23.67 *
SAGE	9.75 *	7.14 *	8.97 *	12.28 *
F Class SES	-19.36 *	-17.12 *	-17.47 *	-22.42 *
Class Size	-0.61 *	-0.27	-0.45	-0.90 *
SAGE	6.07 *	5.53	6.33	6.81

* prob. < .05

Table 36. HLM Results; Top Quartile on Pre-Test Excluded

Source	Total	Reading	Language Arts	Math
Level-1				
Pre Test	0.77	0.48	0.55	0.75
SES	-2.62	-3.17	-5.46	-3.80
Attendance	-0.19	0.12	-0.22	-0.37
Level -2				
A Class Size	-0.82 *	-0.86 *	-0.91 *	-0.75 *
B SAGE	6.22	5.73	7.14	6.37
C Class Size	-0.76 *	-0.82 *	-0.84 *	-0.66 *
SAGE	1.76	0.97	1.85	2.74
D Class SES	-9.30 *	-9.73 *	-11.88 *	-8.67 *
Class Size	-0.84 *	-0.81 *	-0.88 *	-0.77 *
E Class SES	11.10 *	-11.80 *	-14.13 *	-10.47 *
SAGE	8.56 *	7.62 *	9.54 *	8.57 *
F Class SES	-10.33 *	-10.52 *	-12.95 *	-9.87 *
Class Size	-0.68 *	-0.68 *	-0.68 *	-0.59
SAGE	4.42	3.51	5.06	5.19

* prob. < .05

Table 37. Observation Analysis Categories

<i>Individualization</i>	
I1. Monitoring	T moves about room to check on progress of students' work.
I2. Grouping	T divides class into subgroups or pulls out a student for special attention.
I3. Choice	T permits students to create own learning activities, select learning centers, etc.
I4. Help	T offers feedback critique, assistance, guidance, scaffolding, help to student.
I5. Participation	T requires student participation by calling on students individually (Identify each participant S1, S2, S3, etc.)
I6. Whole Class	T provides whole-class instruction.
ALL	T enables ALL children in the class to participate in a specific activity or instruction.
<i>Management</i>	
M1. Praise	T gives oral praise, stickers, prizes, etc., for academic achievement or appropriate behavior.
M2. Reproof	T gives oral reproof, isolates a student, issues a threat for inappropriate behavior.
M3. Remind	T reminds students of class rules, procedures, etc., regarding appropriate behavior.
M4. Warms	T personalizes learning by relating topics, ideas, etc., to students' lives, telling jokes, sharing own experiences, laughing, etc.
M5. Cools	T turns students off to learning by ignoring students, making cutting comments, sarcasm, etc.
M8. Peer	T allows students to develop socialization skills in areas relating to problem solving amongst peers.
M11. Permits	T permits students to make choices regarding behavior (bathroom, water, other physical behaviors).
M11. Initiating	T allows students to make choices regarding behavior (bathroom, water, other physical behaviors.)
<i>Engagement</i>	
E1. Listening	S listen to teacher directions, demonstrations, lectures, explanations, stories, etc.
E2. Practicing	S work at their seats to complete workbook exercises, board work, worksheets, read textbooks, read trade books, use flash cards, etc.
E3. Responding	S respond orally to teacher questions, follow teacher direction to write on the chalk board, point to an object, read aloud, recite in unison, etc. (Identify each participant, e.g., S1, S2, S3.)
E4. Gaming	S play educational or recreational games, role play, dramatize, sing.
E5. Manipulating	S manipulate blocks, markers, objects, etc.
E6. Creating	S draw, paint, make displays, work on projects, write stories, etc.
E7. Dialoguing	S engage in discussion with other students and/or the teacher in which positions are stated, questioned, critiqued, clarified, etc.
E8. Problem solving	S engage in investigation, inquiry, experimentation by formulating questions, drawing conclusions, collecting data, etc.
E9. Reporting	S share, present, report on accomplishments, ideas, etc.
E10. Reflecting	S evaluate their knowledge and skill based on teacher critique, experiential feedback, etc.
E I 1. Initiating	S volunteers own idea, perception, understanding, questions to class interaction.

Table 46. Regression of Total Scale Score on Student Participation

Variable	b	t
Pretest Score	.510	21.21
Subsidized Lunch Eligibility	-1.602	2.00
Days Absent	-.293	3.19
African American	-6.206	1.21
Asian	-10.856	1.90
Hispanic	-4.510	.08
Native American	4.772	.90
White	-.724	.15
Active Learning Behavior	.346	6.42
On Task Behavior	.281	5.07
Constant	263.316	20.63
Adjusted R ²	.543	
Standard Error of the Estimate	22.929	

Note: When t-statistic >1.96, prob. < .05

Table 47. Regression of Language Arts Scale Score on Student Participation

Variable	b	t
Pretest Score	.326	13.24
Subsidized Lunch Eligibility	-3.152	2.89
Days Absent	-.252	2.12
African American	-9.433	1.34
Asian	-12.072	1.54
Hispanic	5.669	.71
Native American	3.940	.54
White	.153	.02
Active Learning Behavior	.387	5.33
On Task Behavior	.272	3.65
Constant	365.622	25.34
Adjusted R ²	.355	
Standard Error of the Estimate	31.548	

Note: When t-statistic >1.96, prob. < .05

Table 48. Regression of Reading Scale Scores on Student Participation

Variable	b	t
Pretest Score	.282	10.55
Subsidized Lunch Eligibility	-3.687	3.50
Days Absent	-1.556	1.35
African American	-11.069	1.63
Asian	-13.968	1.85
Hispanic	-6.836	.89
Native American	-.331	.05
White	-4.763	.72
Active Learning Behavior	.458	6.53
On Task Behavior	.375	5.23
Constant	379.948	24.73
Adjusted R ²	.327	
Standard Error of the Estimate	30.539	

Note: When t-statistic >1.96, prob. < .05

Table 49. Regression of Mathematics Scale Scores on Student Participation

Variable	b	t
Pretest Score	.548	20.13
Subsidized Lunch Eligibility	-.010	.09
Days Absent	-.335	2.72
African American	-5.060	.72
Asian	-13.220	1.70
Hispanic	3.860	.48
Native American	8.251	1.14
White	4.130	.61
Active Learning Behavior	.331	4.56
On Task Behavior	.372	5.02
Constant	223.532	15.19
Adjusted R ²	.464	
Standard Error of the Estimate	31.360	

Note: When t-statistic >1.96, prob. < .05

Table 43. Principal Components Analysis of Student Participation Questionnaire

Questions (This student:)	Factor Loadings	
	Factor 1	Factor 2
Q1 pays attention in class.	.80	.38
Q2 completes work on time.	.66	.46
Q3 works well with other children.	.72	.29
Q4 loses, forgets, or misplaces materials.	-.67	-.22
Q5 is frequently tardy.	-.23	-.14
Q6 attempts to do his/her work well, rather than just trying to get by.	.70	.38
Q7 acts restless, is often unable to sit still.	-.81	.00
Q8 participates actively in discussions.	.15	.88
Q9 is persistent when confronted with difficult problems.	.45	.64
Q10 doesn't seem to know what is going on in class	-.57	-.56
Q11 is withdrawn, uncommunicative.	-.05	-.74
Q12 approaches new tasks with enthusiasm.	.40	.72
Q13 asks questions to get more information.	.18	.83
Q14 talks with other children at inappropriate times.	-.81	.13
Q15 works well independently.	.71	.47
Q16 volunteers information when the teacher asks a question.	.20	.85
Eigenvalues	7.92	2.16
Percentage of Variance	49.5	13.5

Note: Factor loadings are the product of a varimax rotation.

Table 44. Student Participation Scales

<i>On Task Behavior</i>	<i>Active Learning Behavior</i>
<p>This student: pays attention in class. completes work on time. works well with other children. loses, forgets, or misplaces materials. attempts to do his/her work well, rather than just trying to get by. acts restless, is often unable to sit still. doesn't seem to know what is going on in class. talks with other children at inappropriate times. works well independently.</p>	<p>This student: participates actively in discussions. is persistent when confronted with difficult problems. doesn't seem to know what is going on in class approaches new tasks with enthusiasm. asks questions to get more information. volunteers information when the teacher asks a question.</p>
<p>Cronbach's Alpha= .9166 Scale mean: 31.72 Scale standard deviation: 7.87</p>	<p>Cronbach's Alpha= .9099 Scale mean: 24.67 Scale standard deviation: 6.17</p>

Table 45. Descriptive Statistics on Student Participation Scales

	Active Learning			On Task		
	Fall 1996	Spring 1997	Change	Fall 1996	Spring 1997	Change
Mean	69.85	78.39	8.24	70.50	77.22	6.27
Standard Deviation	17.84	16.84	14.33	17.48	16.59	12.54
N	3,189	2,887	2,828	3,189	2,880	2,820