
Longitudinal PACT Performance

SC Education Oversight
Committee

September 18, 2003

Improvement

- The scores of students scoring at the Below Basic 1, Below Basic 2, and Basic levels must increase over time and the scores of students currently scoring Proficient or Advanced must not drop if we are to meet the 2010 goal and fulfill the requirements of No Child Left Behind.
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What are the achievement patterns when students are studied for three years?

- Improvement index measures change over one year
 - Requires two test scores – pretest & posttest
 - Change over two years requires three test scores
 - 1999-2000 (Pretest)
 - 2000-2001
 - 2001-2002 (Posttest)
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What grades and tests were matched?

- PACT ELA and Math data matched
 - Grades matched
 - 3 – 4 – 5
 - 4 – 5 – 6
 - 5 – 6 – 7
 - 6 – 7 – 8
 - Students tested in same district all 3 years
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What was the progress of students initially scoring Below Basic? (Table 4)

- Students scoring just below the Basic cutoff (Below Basic 2) were much more likely to score Basic or higher at the end of the three year period than students initially scoring Below Basic 1.
 - Less than one-third of the students initially failing the test passed it at the end of the three years studied.
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How did the students initially scoring at the lowest level (Below Basic I) progress? (Table 5)

- Approximately 4 out of 10 scored Below Basic I all three years
 - ELA – 11,234 students (40.3%)
 - Math – 12,525 students (38.9%)
 - Group represents approximately 7% of all students tested
 - Presents a significant challenge to system
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How did the students initially scoring Basic do? (Table 6)

- Three categories of students who initially scored Basic in 1999-2000 were identified:
 - Students whose scores neither increased nor decreased (e. g., also scored Basic in 2001-2002);
 - Students whose scores in 2001-2002 were above Basic (e. g., Proficient or Advanced);
 - Students whose scores in 2001-2002 had fallen below Basic.
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Students initially scoring Basic (Table 6)

- Most scored Basic all three years
 - ELA = 65.8%, Math = 59.1%
 - More increased their Math performance (20.1%) than ELA (13.5%)
 - 1 in 5 students scored lower (ELA = 20.7%, Math = 20.7%)
 - Students more likely to have lower than higher ELA performance
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How did the students initially scoring Proficient or Advanced do?

- Two groups were identified among the students who initially scored Proficient or Advanced:
 - Students who maintained at least Proficient scores between 1999-2000 and 2001-2002;
 - Students whose scores dropped below Proficient by 2001-2002.
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Students initially scoring Proficient or Advanced (Table 7)

- Approximately three-fourths of the students initially scoring Proficient or Advanced in Math scored Proficient or higher at the end of three years.
 - Math scores dropped below Proficient for about one-fourth of the students.
 - Almost two-thirds of the students initially scoring Proficient or Advanced in ELA scored Proficient or higher at the end of three years.
 - ELA scores dropped below Proficient for over one-third of the students.
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How did students from different demographic groups do? (Table 8)

- ❑ The percentages of students initially scoring Below Basic in ELA whose scores improved were larger than the percentages in Math for most groups.
 - ❑ The percentages of students initially scoring Proficient or Advanced in Math who maintained their high scores were higher than those for ELA.
 - ❑ The percentages of students initially scoring Basic in Math who improved their scores was also higher than for ELA.
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**Table 8: Statewide Analysis of Three Year Longitudinal Data By Student Demographic Group
PACT ELA and Math
1999-2000 – 2001-2002**

Student Group	% Students Initially Scoring BB1 Who Improved By 2001-2002		% Students Initially Scoring BB2 Who Improved By 2001-2002		% Students Initially Scoring Proficient or Advanced Who Maintained High Scores		% Students Initially Scoring Basic Whose Scores Were Higher Than Basic in 2001-2002		% Students Initially Scoring Basic Whose Scores Dropped Below Basic	
	ELA	Math	ELA	Math	ELA	Math	ELA	Math	ELA	Math
All Students	23.6	19.4	46.2	43.6	64.6	75.2	13.5	20.1	20.7	20.7
Free/Reduced Lunch	22.2	18.2	42.6	40.1	47.6	61.8	9.3	14.5	25.9	26.9
Pay Lunch	27.9	23.1	54.4	50.3	70.5	78.8	18.1	25.0	14.9	15.3
African-American	20.3	16.1	41.3	38.5	47.9	60.6	8.7	13.1	26.2	28.0
White	31.1	26.7	53.6	50.6	68.9	77.7	17.2	24.4	16.3	16.3
African-American Free/Reduced Lunch	20.1	16.0	40.4	37.5	42.4	55.5	7.7	11.8	28.1	30.2
White Free/Reduced Lunch	30.2	25.9	48.2	46.8	52.7	66.2	12.0	18.7	22.0	22.1
African-American Pay Lunch	21.4	16.8	46.6	43.4	57.4	68.5	12.2	17.3	19.5	21.3
White Pay Lunch	31.9	27.3	57.7	53.3	71.9	79.5	19.6	26.6	13.7	14.0

Questions from the data

- ❑ How can remediation be more effective?
 - ❑ How can we help students maintain Proficient and Advanced performance levels?
 - ❑ How can achievement be raised and gaps eliminated?
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Example District Report 3 Year Longitudinal Data

**Partial improvement results for EXAMPLE (9999) School District
This information is based on 1119 matched (3-year) student records
which represents 82.7% of Fall 99 ADM (grades 3-6) of 1353**

of instances where district outperformed SC in ELA=1 ,in math=0

of instances where district underperformed SC in ELA=8 ,in math=8

of instances where district and SC not stat. diff. in ELA=53 ,in math=55

**# of instances where no comparison possible (small N)
in ELA=3 ,in math=2**

NOTE:

n all = total # of students

n low1 = # scoring BB1 in 1999-2000: % low1 = % scoring BB1 in 1999-2000

% imp1 = % BB1 students scoring Basic or above in 2001-2002

% SC = % statewide for comparison purposes

n low2 = # scoring BB2 in 1999-2000: % low2 = % scoring BB2 in 1999-2000

% imp2 = % BB2 students scoring Basic or above in 2001-2002

n high = # scoring Proficient or Advanced in 1999-2000

% high = % scoring Proficient or Advanced in 1999-2000

% main = % who continued to score Proficient or Advanced in 2001-2002

n mid = # scoring Basic in 1999-2000: % mid = % scoring Basic in 1999-2000

% midf = % initially scoring Basic who scored above Basic in 2001-2002

% midb = % initially scoring Basic who dropped below Basic in 2001-2002

1-TOTAL = all students

10-GR_5 = 5th grade students in 2001-2002: 11-GR_6 = 6th grade students in 2001-2002

12-GR_7 = 7th grade students in 2001-2002: 13-GR_8 = 8th grade students in 2001-2002

2-FRLCH = students participating in federal free/reduced lunch program

3-NOLCH = students paying for their lunch (not participating in lunch program)

4-BLACK = African-American students: 5-WHITE = White students

6-FR_BL = African-American students participating in lunch program

7-FR_WH = White students participating in lunch program

8-NO_BL = African-American students not participating in lunch program

9-NO_WH = White students not participating in lunch program

+ = Significantly higher than state

- = Significantly lower than state: NOTE-this is a positive for midb

N = Too few students to determine comparison vs. state

Panel 1: BB1 to Basic or Above

Student Group	English Language Arts					Mathematics				
	n all	n low1	% low1	% imp1	% SC	n all	n low1	% low1	% imp1	% SC
1-TOTAL	1089	173	15.9	23.7	23.6	1088	199	18.3	15.6	19.4
10-GR_5	305	32	10.5	37.5	27.8	305	34	11.1	20.6	23.6
11-GR_6	229	28	12.2	3.6-	22.5	229	27	11.8	3.7-	23.3
12-GR_7	279	42	15.1	26.2	25.5	280	61	21.8	18.0	15.7
13-GR_8	276	71	25.7	23.9	19.8	274	77	28.1	15.6	17.0

Panel 1: BB1 to Basic or Above

Student Group	English Language Arts					Mathematics				
	n all	n low1	% low1	% imp1	% SC	n all	n low1	% low1	% imp1	% SC
2-FRLCH	593	142	23.9	25.4	22.2	593	154	26.0	13.0	18.2
3-NOLCH	496	31	6.3	16.1	27.9	495	45	9.1	24.4	23.1
4-BLACK	565	147	26.0	24.5	20.3	563	164	29.1	10.4	16.1
5-WHITE	514	25	4.9	20.0	31.1	514	34	6.6	41.2	26.6
6-FR_BL	456	127	27.9	26.0	20.1	455	139	30.5	10.1	16.0
7-FR_WH	131	14	10.7	21.4N	30.2	131	14	10.7	42.9N	25.9
8-NO_BL	109	20	18.3	15.0N	21.4	108	25	23.1	12.0N	16.8
9NO_WH	383	11	2.9	18.2N	31.9	383	20	5.2	40.0	27.3

Panel 2: BB2 to Basic or Above

Student Group	English Language Arts					Mathematics				
	n all	n low2	% low2	% imp2	% SC	n all	n low2	% low2	% imp2	% SC
1-TOTAL	1089	121	11.1	48.8	46.2	1088	187	17.2	41.7	43.6
10-GR_5	305	27	8.9	55.6	45.8	305	39	12.8	43.6	46.6
11-GR_6	229	24	10.5	25.0	43.7	229	49	21.4	46.9	50.7
12-GR_7	279	37	13.3	48.6	48.0	280	55	19.6	45.5	38.8
13-GR_8	276	33	12.0	60.6	46.7	274	44	16.1	29.5	38.6

Panel 2: BB2 to Basic or Above

Student Group	English Language Arts					Mathematics				
	n all	n low2	% low2	% imp2	% SC	n all	n low2	% low2	% imp2	% SC
2-FRLCH	593	98	16.5	44.9	42.7	593	131	22.1	37.4	40.1
3-NOLCH	496	23	4.6	65.2	54.4	495	56	11.3	51.8	50.3
4-BLACK	565	91	16.1	44.0	41.4	563	124	22.0	34.7	38.6
5-WHITE	514	30	5.8	63.3	53.5	514	61	11.9	54.1	50.6
6-FR_BL	456	80	17.5	42.5	40.5	455	102	22.4	33.3	37.5
7-FR_WH	131	18	13.7	55.6	48.2	131	28	21.4	50.0	46.8
8-NO_BL	109	11	10.1	54.5	46.6	108	22	20.4	40.9	43.4
9NO_WH	383	12	3.1	75.0	57.7	383	33	8.6	57.6	53.3

Panel 3: Maintenance of Proficient or Advanced

Student Group	English Language Arts					Mathematics				
	n all	n high	% high	% main	% SC	n all	n high	% high	% main	% SC
1-TOTAL	1089	376	34.5	55.9-	64.6	1088	237	21.8	69.6-	75.2
10-GR_5	305	137	44.9	43.1	51.1	305	78	25.6	71.8	72.9
11-GR_6	229	93	40.6	57.0-	71.9	229	60	26.2	68.3-	80.2
12-GR_7	279	73	26.2	74.0	71.4	280	49	17.5	81.6	82.8
13-GR_8	276	73	26.4	60.3	67.9	274	50	18.2	56.0	66.4

Panel 3: Maintenance of Proficient or Advanced

Student Group	English Language Arts					Mathematics				
	n all	n high	% high	% main	% SC	n all	n high	% high	% main	% SC
2-FRLCH	593	115	19.4	44.3	47.6	593	63	10.6	52.4	61.8
3-NOLCH	496	261	52.6	60.9-	70.5	495	174	35.2	75.9	78.8
4-BLACK	565	109	19.3	45.0	47.9	563	59	10.5	54.2	60.6
5-WHITE	514	261	50.8	59.8-	68.9	514	173	33.7	75.1	77.7
6-FR_BL	456	78	17.1	39.7	42.5	455	37	8.1	45.9	55.5
7-FR_WH	131	34	26.0	50.0	52.7	131	23	17.6	65.2	66.2
8-NO_BL	109	31	28.4	58.1	57.4	108	22	20.4	68.2	68.5
9NO_WH	383	227	59.3	61.2-	71.9	383	150	39.2	76.7	79.5

Panel 4: Students Initially Scoring Basic

Student Group	English Language Arts						Mathematics					
	n mid	% mid	% midf	% SC	% midb	% SC	n mid	% mid	% midf	% SC	% midb	% SC
1-TOTAL	419	38.5	11.5	13.5	19.3	20.7	465	42.7	14.6-	20.1	20.0	20.7
10-GR_5	109	35.7	4.6	8.4	24.8	25.3	154	50.5	13.0-	20.6	18.2	20.8
11-GR_6	84	36.7	3.6-	17.6	34.5+	23.0	93	40.6	18.3	24.4	16.1	15.8
12-GR_7	127	45.5	15.7	16.0	10.2	16.4	115	41.1	21.7	25.6	22.6	23.2
13-GR_8	99	35.9	20.2+	11.2	12.1	19.2	103	37.6	5.8	9.0	23.3	22.8

Panel 4: Students Initially Scoring Basic

Student Group	English Language Arts						Mathematics					
	n mid	% mid	% midf	% SC	% midb	% SC	n mid	% mid	% Midf	% SC	% midb	% SC
2-FRLCH	238	40.1	7.1	9.3	23.1	25.9	245	41.3	9.4 -	14.5	27.3	26.9
3-NOLCH	181	36.5	17.1	18.1	14.4	14.9	220	44.4	20.5	25.0	11.8	15.3
4-BLACK	218	38.6	8.3	8.7	21.6	26.2	216	38.4	7.4 -	13.1	28.7	28.0
5-WHITE	198	38.5	15.2	17.2	16.2	16.3	246	47.9	21.1	24.4	12.6	16.3
6-FR_BL	171	37.5	5.8	7.7	24.0	28.1	177	38.9	6.8 -	11.8	30.5	30.2
7-FR_WH	65	49.6	10.8	12.0	18.5	22.0	66	50.4	16.7	18.7	19.7	22.1
8-NO_BL	47	43.1	17.0	12.2	12.8	19.5	39	36.1	10.3	17.3	20.5	21.3
9NO_WH	133	34.7	17.3	19.6	15.0	13.7	180	47.0	22.8	26.6	10.0	14.0

School Names and Organizations

BEDS	School Name	PSEUDO Name	ORG01	ORG00	ORG99
9999001	PLATINA EL	PLATINA EL	12345	12345	12345
9999002	MOREKIDS EL	MOREKIDS E	12345	12345	12345
9999003	RESPONSIVE EL	RESPONSIVE	12345	12345	12345
9999004	HARBINGER ELEM	HARBINELEM	12345	12345	12345
9999005	EFFECTIVE MIDDLE SC	EFFECTIVEM	678	678	678
9999006	PLAYHOUSE MIDDLE SC	PLAYHOUSEM	678	678	678

School Combination	English Language Arts					Mathematics				
	n al	n low	% low	% impl	% DA	n al	n low	% low	% im	% DA
PLATINA EL/PLATINA EL/PLATINA EL	34	13	38.2	38.5	23.7	34	12	35.3	8.3	15.6
PLATINA EL/PLATINA EL/EFFECTIVEM	29	11	37.9	9.1	23.7	29	8	27.6	12.5	15.6
PLATINA EL/EFFECTIVEM/EFFECTIVEM	34	7	20.6	28.6	23.7	34	13	38.2	30.8	15.6
MOREKIDS E/MOREKIDS E/MOREKIDS E	52	6	11.5	50.0	23.7	52	5	9.6	0.0	15.6
MOREKIDS E/MOREKIDS E/EFFECTIVEM	54	5	9.3	0.0	23.7	54	7	13.0	0.0	15.6
MOREKIDS E/EFFECTIVEM/EFFECTIVEM	81	18	22.2	22.2	23.7	81	32	39.5	6.3	15.6
EFFECTIVEM/EFFECTIVEM/EFFECTIVEM	185	57	30.8	22.8	23.7	183	67	36.6	11.9	15.6

School Combination	English Language Arts					Mathematics				
	n All	n low 2	% low2	% imp2	% DA	n all	n low 2	% low2	% imp2	% DA
PLATINA EL/PLATINA EL/PLATINA EL	34	3	8.8	100.0	48.8	34	5	14.7	0.0	41.7
PLATINA EL/PLATINA EL/EFFECTIVEM	29	3	10.3	33.3	48.8	29	8	27.6	37.5	41.7
PLATINA EL/EFFECTIVEM/EFFECTIVEM	34	5	14.7	20.0	48.8	34	9	26.5	55.6	41.7
MOREKIDS E/MOREKIDS E/MOREKIDS E	52	5	9.6	20.0	48.8	52	9	17.3	33.3	41.7
MOREKIDS E/MOREKIDS E/EFFECTIVEM	54	10	18.5	20.0	48.8	54	12	22.2	58.3	41.7
MOREKIDS E/EFFECTIVEM/EFFECTIVEM	81	18	22.2	50.0	48.8	81	20	24.7	40.0	41.7
EFFECTIVEM/EFFECTIVEM/EFFECTIVEM	185	23	12.4	56.5	48.8	183	30	16.4	13.3	41.7

School Combination	English Language Arts					Mathematics				
	n All	n high	% high	% main	% DA	n all	n high	% high	% main	% DA
PLATINA EL/PLATINA EL/PLATINA EL	34	11	32.4	45.5	55.9	34	3	8.8	33.3	69.6
PLATINA EL/PLATINA EL/EFFECTIVEM	29	3	10.3	66.7	55.9	29	3	10.3	33.3	69.6
PLATINA EL/EFFECTIVEM/EFFECTIVEM	34	6	17.6	50.0	55.9	34	1	2.9	100.0	69.6
MOREKIDS E/MOREKIDS E/MOREKIDS E	52	17	32.7	29.4	55.9	52	7	13.5	57.1	69.6
MOREKIDS E/MOREKIDS E/EFFECTIVEM	54	22	40.7	59.1	55.9	54	16	29.6	56.3	69.6
MOREKIDS E/EFFECTIVEM/EFFECTIVEM	81	8	9.9	87.5	55.9	81	7	8.6	85.7	69.6
EFFECTIVEM/EFFECTIVEM/EFFECTIVEM	185	36	19.5	63.9	55.9	183	20	10.9	65.0	69.6

School Combination	English Language Arts						Mathematics					
	n Mid	% mid	% mid f	% DA	% mid b	% DA	n mid	% mid	% mid f	% DA	% mid b	% DA
PLATINA EL/PLATINA EL/PLATINA EL	7	20.6	0.0	11.5	0.0	19.3	14	41.2	7.1	14.6	14.3	20.0
PLATINA EL/PLATINA EL/EFFECTIVEM	12	41.4	8.3	11.5	25.0	19.3	10	34.5	10.0	14.6	40.0	20.0
PLATINA EL/EFFECTIVEM/EFFECTIVEM	16	47.1	0.0	11.5	25.0	19.3	11	32.4	0.0	14.6	36.4	20.0
MOREKIDS E/MOREKIDS E/MOREKIDS E	24	46.2	4.2	11.5	29.2	19.3	31	59.6	6.5	14.6	29.0	20.0
MOREKIDS E/MOREKIDS E/EFFECTIVEM	17	31.5	0.0	11.5	47.1	19.3	19	35.2	21.1	14.6	15.8	20.0
MOREKIDS E/EFFECTIVEM/EFFECTIVEM	37	45.7	21.6	11.5	5.4	19.3	22	27.2	18.2	14.6	13.6	20.0
EFFECTIVEM/EFFECTIVEM/EFFECTIVEM	69	37.3	24.6	11.5	11.6	19.3	66	36.1	9.1	14.6	27.3	20.0

What's next?

- How can the data be used to encourage and raise achievement?
-