

Appendix A

Description of the Norm- and Criterion-Referenced Tests Considered in the Study

In this appendix, the various norm- and criterion-referenced tests that yielded results considered in this study are described. The norm-referenced tests include the Iowa Test of Basic Skills, the Metropolitan Achievement Test, and the Stanford Achievement Test. The criterion-referenced tests are all state-mandated tests, except for one district-mandated test. These tests are part of state or district assessment programs. Below the various tests are listed and briefly described. For ease of reference, we have listed them in alphabetical order.

Colorado Student Assessment Program

The Colorado Student Assessment Program (CSAP) was mandated by the state legislature in 1993. The first statewide assessments of reading and writing were implemented in April 1997. These criterion-referenced tests were developed to assess achievement in relation to state content area standards.

As of Fall 1999, CSAP is assessing reading and writing at grades 3, 4, and 7 and math at grade 5. Assessments in math and science were scheduled to begin at grade 8 in 2000; and reading, writing, and math assessments are scheduled for grade 10 beginning in 2001. State reports of results provide information regarding the percentage of students achieving at each of four performance levels in each test area. In addition, breakdowns by gender, race/ethnicity, disability, and district are available (Colorado Department of Education, 1997).

Five Edison schools administer the CSAP as a tool to measure student achievement, and one of these is included in our study: Roosevelt-Edison Charter School.

District Achievement Levels Tests

The District Achievement Levels Tests (DALT) are a series of tests designed to assess student achievement in specific areas of a district's curriculum. Curriculum areas covered by these tests include reading, language, and mathematics. The tests are designed to determine students' mastery at specific achievement levels and are used to monitor student progress in learning the established curriculum. These tests are administered at the beginning and end of each school year. The DALT's validity is enhanced by the use of Rasch scaling, which is a statistical method that employs test items representing narrow bands of increasing difficulty. Progress is monitored through the use of growth scores referred to as Rasch units or, more simply, RIT scores. The DALT is required for all schools in the Colorado Springs school district. Therefore, Roosevelt-Edison Charter School participates in this criterion-referenced test.

Florida Comprehensive Assessment Test

Florida Comprehensive Assessment Test (FCAT) is a statewide assessment program designed to measure challenging learning milestones for elementary, middle, and high school levels in Florida. FCAT measures the first four standards of Goal 3 of Florida's System of School Improvement and Accountability, with an emphasis on reading and mathematics as defined by the Sunshine State Standards.

FCAT was administered for the first time in January and February 1998 in order to establish baseline information on the achievement of Florida students and schools. The second FCAT administration took place during January and February 1999. The FCAT is administered in grade 4 (reading), grade 5 (mathematics), and grades 8 and 10 (reading and mathematics). Scores on the FCAT can range from 100 to 500. Five student achievement levels categorize students based on the scale score ranges. Level 5 is the highest level and Level 1 is the lowest (Florida Department of Education, 2000a). State, district, and school results are available on-line at <<http://www.firn.edu/doe/sas/fcat.htm>>.

Henry E.S. Reeves Elementary School, a school included in our study, is currently the only Edison school that has taken part in the FCAT.

Florida Writing Assessment

The Florida Writing Assessment, also known as Florida Writes, was mandated by the state legislature in 1990 and was first implemented in the spring of 1995. The test is administered to students in grades 4, 8, and 10. Scores of students with identified disabilities are not included in the test reports. This criterion-referenced test is a performance assessment with levels determined in relationship to proficiency in four areas: focus, organization, support, and conventions. According to the Florida Department of Education, the results of the Florida Writing Assessment are best used to identify strengths and weaknesses in writing instruction programs, rather than individual student achievement (Florida Department of Education, 2000a). State, district, and school results are available on-line at <<http://www.firn.edu/doe/sas/fwaphome.htm>>.

Students are required to read, plan, and respond independently to a specified topic within a 45-minute time frame. Fourth grade students receive a prompt directing them to Write to Tell a Story or to Write to Explain, while eighth and tenth grade students are prompted to Write to Explain or Write to Convince. Student responses are scored by readers who are trained to use Florida's holistic scoring method to evaluate a piece of writing for its overall quality while considering four elements: focus, organization, support (i.e., quality of details), and conventions (i.e., punctuation, capitalization, spelling, etc.). The writing is scored on a 6-point scale, with the best writing samples receiving a 6 and those writing samples not meeting expectations in the four areas of consideration receiving a 1.

One Edison school in our study, Henry E.S. Reeves Elementary School, participates in the Florida Writing Assessment.

Iowa Test of Basic Skills

The Iowa Test of Basic Skills (ITBS) has been available since 1955 (Murphy, Impara, & Plake, 1999). The ITBS, a norm-referenced test, is designed to assess student achievement in basic skills, covering grades K-9. In our analyses, we considered the following results from this test: grade equivalents, standard scores, national percentiles, and normal curve equivalents. The ITBS is available in three forms: Complete Battery, Core Battery, and Survey Battery. The Complete Battery assesses major objectives expected at each grade level. The Core Battery consists of the entire tests in reading, language, and mathematics found in the Complete Battery. The Survey Battery contains select questions from the Complete Battery and provides scores in reading, language, and mathematics (Hoover et al., 1993). Reviews of ITBS can be located in *The Thirteenth Mental Measurements Yearbook* (Impara & Plake, 1998).

At least four of the ten schools included in our study use the ITBS. For two of these schools, Roosevelt-Edison Charter School and Dr. Martin Luther King Jr. Academy, we received data sets from Edison that contained individual student results on the ITBS so that we could analyze individual student gains.

Kansas Assessment Program

The Kansas Assessment Program includes criterion-referenced tests in math, reading, writing, science, and social studies. These tests are based on state curriculum standards. These tests are reviewed and redesigned on a yearly basis by a committee of educators, representing specific content areas, selected from local nominations. The only three subject area tests considered in our analyses are the reading, math, and writing assessments. The reading test is administered at grades 3, 7, and 10. Math assessments are administered at grades 4, 7, and 10; and the writing assessments are administered to grades 5, 8, and 11. Scores are reported for each student and summarized by grade for each building and district (Poggio, 1999).

Four Edison schools currently list the Kansas Reading and Math Assessments as a tool used to measure student achievement. Two of those schools are included in our study: Dodge-Edison Elementary School and Jardine-Edison Junior Academy.

Massachusetts Comprehensive Assessment System

The Massachusetts Comprehensive Assessment System (MCAS) was mandated by the Education Reform Law of 1993. MCAS tests in English language arts, mathematics, and science and technology were implemented at grades 4, 8, and 10 in May 1998. MCAS is a criterion-referenced test based on the Massachusetts Curriculum Frameworks for each content area covered. The Education Reform Law of 1993 requires all students to participate in the MCAS testing, although the results for students with special needs and/or students who have limited English proficiency are reported separately from the totals for any given school. The Education Reform Law requires that students pass the grade 10 tests in order to receive a high school diploma. This requirement will be implemented beginning with the class of 2003 (Massachusetts Department of Education, 1999).

Student results on the MCAS tests are reported according to four performance levels: Advanced, Proficient, Needs Improvement, and Failing. The Massachusetts Department of Education (2000) has elaborated descriptions of what is expected for each performance level by grade and subject. The performance level descriptions were used as a basis for determining the minimum score for each performance level on each MCAS test. The descriptions are meant to help teachers, students, parents, and others understand the meaning of the MCAS results. The general performance level definitions are as follows:

Advanced. Students at this level demonstrate a comprehensive and in-depth understanding of rigorous subject matter and provide sophisticated solutions to complex problems.

Proficient. Students at this level demonstrate a solid understanding of challenging subject matter and solve a wide variety of problems.

Needs improvement. Students at this level demonstrate a partial understanding of subject matter and solve some simple problems.

Failing. Students at this level demonstrate a minimal understanding of subject matter and do not solve even simple problems.

Two Edison schools currently list the MCAS as a tool used to measure student achievement. Both schools are included in our study: Boston Renaissance Charter School and Seven Hills Charter School.

Metropolitan Achievement Tests, 7th Edition

The Metropolitan Achievement Tests (MAT) series has been in publication since 1931 (Murphy, Impara, and Plake, 1999). The seventh edition (MAT-7) is a norm-referenced series of tests designed to provide achievement data on students in grades K-12. Skill and content areas covered by MAT-7 include reading, mathematics, language, science, and social studies. The MAT-7 emphasizes critical thinking skills for solving problems in realistic contexts. Guidelines from the National Council of Teachers of Mathematics Curriculum and Evaluation Standards for School Mathematics were used to develop subtests in mathematics relevant to either traditional or progressive instructional objectives (Balow, 1992). Reviews of MAT-7 are contained in *The Twelfth Mental Measurements Yearbook* (Conoley & Impara, 1995).

Among the many Edison schools that list the MAT-7 as a tool to measure student achievement, six are included in our study. We received data sets from Edison containing the individual student results for three of these schools: Dodge Edison Elementary, Seven-Hills Charter School, and Mid-Michigan Public School Academy. For Jardine-Edison, Boston Renaissance, and Martin Luther King Academy, the other three schools in our study that administer the MAT-7, we included grade level averages on these tests if the results were available in a verifying form.

Michigan Educational Assessment Program

The Michigan Educational Assessment Program (MEAP) originated in 1969. From 1969 to 1973 the program used commercially produced norm-referenced tests to measure student achievement at the fourth and eighth grade levels. In 1973, the MEAP began using criterion-referenced tests, developed by teachers and curriculum specialists, in the areas of reading and mathematics for grades 4 and 7; grade 10 was added in 1979. The first objective-referenced test in science was developed in 1986. These objective-referenced tests were designed to measure student achievement of basic skills. Beginning in 1989, new tests designed to measure skills in context were implemented. The Essential Skills Reading Test for grades 4, 7, and 10 was implemented in 1989. The Essential Skills Mathematics Test was implemented for grades 4, 7, and 10 in 1991. High School Proficiency Tests in mathematics, science, and communication arts (reading and writing) were implemented in the spring of 1996. In the spring of 1998, the communication arts endorsement was divided into separate reading and writing components. Students graduating from Michigan public schools can earn endorsements in mathematics, science, reading, and/or writing by scoring at any of the top three levels of the individual proficiency examinations. These endorsements are recorded on the students' permanent transcripts. (Michigan Department of Education, 1998).

MEAP is a criterion-referenced testing program based on specific criteria set by Michigan educators. Criteria for each test are based on what students should have learned up to the grade that the test is administered.

The *MEAP Handbook* (MEAP, 1999) suggests that while the results should not be compared across grade levels, comparing MEAP trends over time within a grade is an excellent use of the data. The fact that subject tests are not administered in consecutive grades is one of the main constraints for making such comparisons across grades. In our own analysis, we used consecutive class cohorts as suggested by the Michigan Educational Assessment Program.

Fourteen Edison schools currently list the MEAP as a tool used to measure student achievement. Three of those schools are included in our study: (1) Martin Luther King Jr. Academy, (2) Mount Clemens Secondary Academy, and (3) Mid-Michigan Public School Academy.

Stanford Achievement Test Series, 9th Edition

The Stanford Achievement Test series (SAT) has been in publication since 1923 (Murphy, Impara, & Plake, 1999). The 9th edition (SAT-9) is a norm-referenced series of tests designed to provide achievement data on students in grades K-13. The series includes both multiple-choice and open-ended subtests that can be used independently or in combinations. Areas covered by the multiple-choice subtests include reading, mathematics, language, spelling, study skills, listening, science, and social science. Areas covered by the open-ended subtests include reading, mathematics, science, social science, and language. The open-ended subtests are designed for those instructional objectives that are more accurately measured using performance-based or student-generated responses (Psychological Corp., 1999). Available: <http://ericae.net/tc2/TCO19831.htm>. Reviews of SAT-9

are contained in *The Thirteenth Mental Measurements Yearbook* (Impara & Plake, 1998; see test 292).

Among the many Edison schools that list SAT-9 as a tool used to measure student achievement, three are included in our study: (1) Henry E. S. Reeves Elementary School, (2) Boston Renaissance Charter School, and (3) Seven Hills Charter School.

Texas Assessment of Academic Skills (TAAS)

The Texas Assessment of Academic Skills (TAAS) was first administered during the 1990-91 school year. The TAAS is a criterion-referenced test designed to measure student mastery of the statewide curriculum in reading, writing, and mathematics. Students are assessed in reading and mathematics in grades 3 through 8, writing in grades 4 and 8, and all three areas at the exit level (Texas Assessment, 1998). Available: <http://Erica.net/ericdc/ED4244260.htm>). In 1994, science and social studies assessments were added to the TAAS series. These tests are normally administered in grades 4, 8, and exit level. Tests for Biology I and Algebra I were “benchmarked” (a standard-setting process) in 1994. The Algebra I test was rebenchmarked in the spring of 1995, and both the Biology I and Algebra I end-of-course tests were given to eligible students in the fall of 1995. In the spring of 1998 the U.S. History and English II end-of-course tests were benchmarked. In 1996, the Texas Education Agency contracted with Harcourt Brace Educational Measurement to obtain national comparative data in the subject areas assessed. The Metropolitan Achievement Tests, Seventh Edition were used to collect data using a stratified classroom sampling design. Results of this study can be obtained from the Texas Education Agency.¹ According to the Texas Education Agency, results from the TAAS are “useful for providing a snapshot of individual student performance, an indicator of areas in which further diagnosis is warranted, and a mechanism for providing a ‘level playing field’ for comparing the performance of campuses and districts” (Texas Education Agency, 1999).²

Seven Edison schools currently list TAAS as a tool used to measure student achievement. One of those schools was included in the ten under study: Washington Elementary.

¹ The URL is <<http://www.tea.state.tx.us/student.assessment/results/studies/ncds.htm>>

² The URL is <<http://www.tea.stte.tx.us/student.assessment/techdig/chap1.pdf>>

Appendix B

Normal Curve Equivalents Based on National Percentile Ranks

Percentile Rank	NCE	Percentile Rank	NCE	Percentile Rank	NCE	Percentile Rank	NCE
99	99	74	64	49	49	24	35
98	93	73	63	48	49	23	34
97	90	72	62	47	48	22	34
96	87	71	62	46	48	21	33
95	85	70	61	45	47	20	32
94	83	69	60	44	47	19	32
93	81	68	60	43	46	18	31
92	80	67	59	42	46	17	30
91	78	66	59	41	45	16	29
90	77	65	58	40	45	15	28
89	76	64	58	39	44	14	27
88	75	63	57	38	44	13	26
87	74	62	56	37	43	12	25
86	73	61	56	36	42	11	24
85	72	60	55	35	42	10	23
84	71	59	55	34	41	9	22
83	70	58	54	33	41	8	20
82	69	57	54	32	40	7	19
81	68	56	53	31	40	6	17
80	68	55	53	30	39	5	15
79	67	54	52	29	38	4	13
78	66	53	52	28	38	3	10
77	66	52	51	27	37	2	7
76	65	51	51	26	36	1	1
75	64	50	50	25	36		

Source: U.S. Department of Education (1999)
<http://www.ed.gov/offices/OERI/BlueRibbonSchools/nce.html>)

Appendix C

Criteria for Rating Student Achievement Trends Presented by Edison and AFT

Peterson (1998) was asked by The Edison Project to compare the results presented by AFT and Edison. In his analysis, he used the following categories to rate the designs behind each trend presented by Edison and AFT (Peterson, 1998, pp. 4-8):

1. *Gold Medal: Randomized Experiments.* Studies designed as randomized experiments win the Gold Medal. Subjects are randomly assigned to test and control groups. The two groups are followed over time to see if differences appear. Any differences may reasonably be attributed to the test, because the two groups can be assumed to be similar in all other respects. Unfortunately, the Gold Standard, though often achieved in medical research, is seldom realized in the field of education.
2. *Silver Medal: Matched Comparison Group.* The Silver Medal goes to designs that compare treatment groups with a comparison group that initially is similar to the treatment group in all identifiable respects. In education, baseline data are needed to determine average initial test scores, ethnicity, family education, and other family characteristics. Statistical adjustments can be made for minor differences in initial conditions. Still, this design does not win the Gold Medal, because the two groups may differ in some unknown respect.
3. *Bronze Medal: Similar Groups, Statistical Controls.* The Bronze Medal is given to studies designed to compare a treatment group with a comparison group that is broadly similar (though not matched on key characteristics). Although the two groups do not match, statistical analyses may be able to adjust for differences in initial conditions, if differences between the two groups are moderate. However, to the extent that the two groups differ in both known and unknown characteristics, comparisons may be biased.
4. *Changes by individuals over time, comparisons with a similar group but with no statistical control.* Fourth place goes to designs that compare changes in the performances of the same individuals to changes over the same time period of similar individuals, but with no statistical controls for such differences. Such a study assumes that the individuals' initial characteristics do not affect the changes over time. This is a problematic assumption. This type of study also assumes that attrition from the sample does not systematically differ between test and control group.

5. *Changes by individuals over time, comparisons with a dissimilar group without appropriate statistical control.* The quality of studies with design 4, as with designs 6, 7, and 8, depends upon the groups of individuals being compared. If the group is different, the comparison is less likely to be valid. Edison has often been asked to administer schools that are in trouble. If Edison schools are compared with state or national norms or with schools in other parts of the country, any differences in gains may underestimate Edison school effects.
6. *Changes of cohorts over time, no statistical control.* In sixth place, one finds studies that assess the gains in the performance of a cohort of students (as compared with students in another location or to national or state norms) from one year to the next. This design provides information on many of the same students from one time period to the next, but it also includes newcomers to the school and excludes those who have left the school. To the extent that the students are not the same, this study design has less validity than design 5 studies. The rate of turnover is especially high in low-income neighborhoods.
7. *Changes in successive cohorts, similar comparison group.* Next are designs that compare the gains made by a succession of cohorts in a treatment place to the gains made by a succession of students in a similar comparison place, with no statistical adjustments for differences in the initial characteristics of the two groups. Although this analytical technique is widely practiced in estimating the effects of a school, it has many defects. Most seriously, the gains or losses of successive cohorts in either the treatment or comparison places are not gains or losses realized by the same individuals. To show that successive cohorts of students have gained or lost may only show that the composition of that cohort has changed. As economist Eric Hanushek has pointed out, “approaches that do not concentrate on individual gains give very . . . inferior estimates of school performance.”
8. *Changes in successive cohorts, comparison group not similar.* In eighth place, one finds studies that compare a cross-section of individuals in a treatment place to a prior cross-section of students in that same place. The only comparison groups are district, state, or national norms. These are highly problematic studies. As Robert Meyer has pointed out, “indicators other than the value-added performance indicator [gain scores] convey potentially inaccurate information about school quality and therefore could severely harm the policymaking process and distort the school choices of students and families.”
9. *Performance levels, no change information.* Finally, we find studies that compare the level of performance of a test group of students with those of some other group or with state or national standards at any point in time. The test is deemed successful if the standard is matched. This widely used method of estimating school effects is profoundly misleading, because the characteristics of the test group may be dramatically different from those of the comparison group.

Appendix D

Results Provided by Edison for Dillingham Intermediate School, Sherman, TX

Edison Students at Dillingham Intermediate School

Texas Assessment of Academic Skills				
<i>Percentage of Students Met Minimum Expectations (1998-1999)</i>				
Grade \ Year	Reading		Mathematics	
	Spring 98	Spring 99	Spring 98	Spring 99
5	84.3%	83.0%	73.9%	84.4%
6	76.1%	84.7%	57.0%	73.0%

Texas Assessment of Academic Skills				
<i>Percentage of Students Met Minimum Expectations (1997-1998)</i>				
Grade \ Year	Reading		Mathematics	
	1996-97	1997-98	1996-97	1997-98
5	78%	85%	71%	53%
6	82%	82%	63%	77%

All Students at Dillingham Intermediate School

Texas Assessment of Academic Skills				
<i>Percentage of Students Met Minimum Expectations (1998-1999)</i>				
Grade \ Year	Reading		Mathematics	
	Spring 98	Spring 99	Spring 98	Spring 99
5	83.2%	76.0%	70.8%	71.8%
6	81.2%	87.1%	71.4%	82.4%

Appendix E Chi Square Tables

Roosevelt Charter School (Colorado Springs,CO) Chi square results from CSAP

2x4	Level				Row total	
	Unsatisfactory	Partial	Proficient	Advanced		
Roosevelt	34	27	48	3	112	Grade 3 Reading 1998
%	30.36	24.11	42.86	2.68		
District	310	529	1,462	182	2483	$\chi^2 (3, N=2,595) = 34.196, p < .001$
%	12.48	21.3	58.88	7.33		
State	6,251	10,448	30,328	4,187	51,214	$\chi^2 (3, N=51,326) = 40.013, p < .001$
%	12.21	20.4	59.22	8.18		

2x2	Level		Row total	
	Failed	Passed		
Roosevelt	61	51	112	Grade 3 Reading 1998
%	54.46	45.54		
District	839	1644	2,483	$\chi^2 (1, N=2595) = 20.220, p < .001$
%	33.79	66.21		
State	16,699	34,515	51,214	$\chi^2 (1, N=51326) = 24.280, p < .001$
%	32.61	67.39		

2x4	Level				Row total	
	Unsatisfactory	Partial	Proficient	Advanced		
Roosevelt	22	32	50	2	106	Grade 3 Reading 1999
%	20.75	30.19	47.17	1.89		
District	449	1067	787	76	2379	$\chi^2 (3, N=2485) = 11.655, p = .009$
%	18.87	44.85	33.08	3.19		
State	5919	10769	31274	4319	52,281	$\chi^2 (3, N=52387) = 21.062, p < .001$
%	11.32	20.6	59.82	8.26		

2x2	Level		Row total	
	Failed	Passed		
Roosevelt	54	52	106	Grade 3 Reading 1999
%	50.94	49.06		
District	1516	863	2,379	$\chi^2 (1, N=2485) = 7.126, p = .008$
%	63.72	36.28		
State	16,688	35,593	52,281	$\chi^2 (1, N=52387) = 17.606, p < .001$
%	31.92	68.08		

2x4	Level				Row total	
	Unsatisfactory	Partial	Proficient	Advanced		
Roosevelt	20	33	40	2	95	Grade 4 Reading 1997
%	21.05	34.74	42.11	2.11		
State	5516	14561	24619	1024	45720	$\chi^2 (3, N=45815) = 9.022, p = .029$
%	11.32	20.6	59.82	8.26		

2x2	Level		Row total
	Failed	Passed	
Roosevelt	53	42	95
%	55.79	44.21	
State	20077	25643	45,720
%	43.91	56.09	

$\chi^2 (1, N=45815) = 5.429, p = .020$

**Grade 4 Reading
1997**

2x4	Level				Row total
	Unsatisfactory	Partial	Proficient	Advanced	
Roosevelt	25	55	33	1	114
%	21.93	48.25	28.95	0.88	
District	227	700	1300	150	2377
%	9.55	29.45	54.69	6.31	
State	5182	15565	26520	3123	50,390
%	10.28	30.89	52.63	6.2	

$\chi^2 (3, N=2491) = 47.931, p < .001$
 $\chi^2 (3, N=50504) = 43.830, p < .001$

**Grade 4 Reading
1998**

2x2	Level		Row total
	Failed	Passed	
Roosevelt	80	34	114
%	70.18	29.82	
District	927	1450	2,377
%	39	61	
State	20,747	29,643	50,390
%	41.17	58.83	

$\chi^2 (1, N=2491) = 43.904, p < .001$
 $\chi^2 (1, N=50504) = 39.482, p < .001$

**Grade 4 Reading
1998**

2x4	Level				Row total
	Unsatisfactory	Partial	Proficient	Advanced	
Roosevelt	25	46	40	3	114
%	21.93	40.35	35.09	2.63	
District	205	746	1289	150	2390
%	8.58	31.21	53.93	6.28	
State	5314	15436	27721	3734	52,205
%	10.18	29.57	53.1	7.15	

$\chi^2 (3, N=2504) = 33.639, p < .001$
 $\chi^2 (3, N=52319) = 30.072, p < .001$

**Grade 4 Reading
1999**

2x2	Level		Row total
	Failed	Passed	
Roosevelt	71	43	114
%	62.28	37.72	
District	951	1439	2,390
%	39.79	60.21	
State	20,750	31,455	52,205
%	39.75	60.25	

$\chi^2 (1, N=2504) = 22.783, p < .001$
 $\chi^2 (1, N=52319) = 24.107, p < .001$

**Grade 4 Reading
1999**

2x4	Level				Row total
	Unsatisfactory	Partial	Proficient	Advanced	
Roosevelt	41	34	18	0	93
%	44.09	36.56	19.35	0	
District					
%					
State	10896	21343	13902	1491	47,632
%	22.88	45.81	29	3	

$\chi^2 (3, N=47725) = 25.619, p < .001$

**Grade 4 Writing
1997**

2x2	Level		Row total	
	Failed	Passed		
Roosevelt	75	18	93	
%	80.65	19.35		
District				
%				
State	32,239	15,393	47,632	$\chi^2 (1, N=47725) = 7.132, p = .008$
%	67.68	32.32		

Grade 4 Writing
1997

2x4	Level				Row total	
	Unsatisfactory	Partial	Proficient	Advanced		
Roosevelt	35	54	18	3	110	
%	31.82	49.09	16.36	2.73		
District	417	1000	735	148	2300	$\chi^2 (3, N=2410) = 21.715, p < .001$
%	10.18	29.57	53.1	7.15		
State	10890	21275	15589	3118	50,872	$\chi^2 (3, N=50982) = 16.326, p < .001$
%	18.13	43.48	31.96	6.43		

Grade 4 Writing
1998

2x2	Level		Row total	
	Failed	Passed		
Roosevelt	89	21	110	
%	80.91	19.09		
District	1417	883	2,300	$\chi^2 (1, N=2410) = 16.683, p < .001$
%	61.61	38.39		
State	32,165	18,707	50,872	$\chi^2 (1, N=50982) = 14.766, p < .001$
%	63.23	36.77		

Grade 4 Writing
1998

2x4	Level				Row total	
	Unsatisfactory	Partial	Proficient	Advanced		
Roosevelt	26	36	20	1	83	
%	31.33	43.37	24.1	1.2		
District	383	1138	451	50	2022	$\chi^2 (3, N=2105) = 9.318, p = .025$
%	18.94	56.28	22.3	2.47		
State	8516	23427	16530	1601	50,074	$\chi^2 (3, N=50157) = 13.207, p = .004$
%	17.01	46.78	33.01	3.2		

Grade 4 Writing
1999

2x2	Level		Row total	
	Failed	Passed		
Roosevelt	62	21	83	
%	74.7	25.3		
District	1521	501	2,022	$\chi^2 (1, N=2105) = 0.012, p = .914$
%	75.22	24.78		
State	31,943	18,131	50,074	$\chi^2 (1, N=50157) = 4.269, p = .039$
%	63.79	36.21		

Grade 4 Writing
1999

2x4	Level				Row total	
	Unsatisfactory	Partial	Proficient	Advanced		
Roosevelt	34	58	23	5	120	
%	28.33	48.33	19.17	4.17		
District	302	1,057	856	252	2,467	$\chi^2 (3, N=2,587) = 35.952, p < .001$
%	12.24	42.85	34.7	10.21		
State	6,892	21,049	18,709	7,051	53,701	$\chi^2 (3, N=53,821) = 40.688, p < .001$
%	12.83	39.2	34.84	13.13		

Grade 5 Math
1999

2x2	Level		Row total	
	Failed	Passed		
Roosevelt	92	58	120	
%	76.67	23.33		
District	1,359	1,108	2,467	$\chi^2 (1, N=2,587) = 21.636, p < .001$
%	55.09	44.91		
State	27,941	25,760	53,701	$\chi^2 (1, N=53,821) = 29.118, p < .001$
%	47.97	7		

**Grade 5 Math
1999**

2x4	Level				Row total	
	Unsatisfactory	Partial	Proficient	Advanced		
Roosevelt	54	49	30	0	133	
%	40.6	36.84	22.56	0		
District	321	676	1221	50	2268	$\chi^2 (3, N=2401) = 84.850, p < .001$
%	14.15	29.81	53.84	2.2		
State	6975	14550	28086	2163	51,774	$\chi^2 (3, N=51907) = 105.859, p < .001$
%	13.47	28.1	54.25	4.18		

**Grade 7 Reading
1998**

2x2	Level		Row total	
	Failed	Passed		
Roosevelt	103	30	133	
%	77.44	22.56		
District	997	1271	2,268	$\chi^2 (1, N=2401) = 56.741, p < .001$
%	43.96	56.04		
State	21,525	30,249	51,774	$\chi^2 (1, N=51907) = 70.220, p < .001$
%	41.57	58.43		

**Grade 7 Reading
1998**

2x4	Level				Row total	
	Unsatisfactory	Partial	Proficient	Advanced		
Roosevelt	7	89	17	0	113	
%	6.19	78.76	15.04	0		
District	43	1162	883	0	2088	$\chi^2 (2, N=2201) = 37.602, p < .001$
%	2.06	55.65	42.29	0		
State	1074	26405	21611	541	49,631	$\chi^2 (3, N=49744) = 44.549, p < .001$
%	2.16	53.2	43.54	1.09		

**Grade 7 Reading
1999**

2x2	Level		Row total	
	Failed	Passed		
Roosevelt	96	17	113	
%	84.96	15.04		
District	1205	883	2,088	$\chi^2 (1, N=2201) = 32.922, p < .001$
%	57.71	42.29		
State	27,479	22,152	49,631	$\chi^2 (1, N=49744) = 39.955, p < .001$
%	55.37	44.63		

**Grade 7 Reading
1999**

Henry E.S. Reeves Elementary School (Miami-Dade, FL)
Chi square results from FCAT

2x4	Level					Row total	
	Level 1	Level 2	Level 3	Level 4	Level 5		
Reeves	103	22	30	14	0	169	Grade 4 Reading 1999
%	60.95	13.02	17.75	8.28	0		
District	9,887	4,160	5,778	2,774	232	22,831	$\chi^2 (4, N=23,000) = 22.097, p < .001$
%	43.31	18.22	25.31	12.15	1.02		
State	47,903	26,304	47,976	27,860	4,646	154,689	$\chi^2 (4, N=154,858) = 74.050, p < .001$
%	30.97	17	31.01	18.01	3		

2x2	Level		Row total	
	Failed	Passed		
Reeves	103	66	169	Grade 4 Reading 1999
%	60.95	39.05		
District	9,887	12,944	22,831	$\chi^2 (1, N=23,000) = 21.251, p < .001$
%	43.31	56.69		
State	47,903	106,786	154,689	$\chi^2 (1, N=154,858) = 70.933, p < .001$
%	30.97	69.03		

2x4	Level					Row total	
	Level 1	Level 2	Level 3	Level 4	Level 5		
Reeves	100	44	17	5	2	168	Grade 5 Math 1999
%	59.52	26.19	10.12	2.98	1.19		
District	9,031	7,083	3,769	1,771	221	21,881	$\chi^2 (4, N=22049) = 25.796, p < .001$
%	41.27	32.37	17.22	8.12	1.01		
State	42,030	49,609	34,590	21,060	3,007	150,296	$\chi^2 (4, N=150,464) = 89.338, p < .001$
%	27.96	33.01	23.01	14.01	2.00		

2x2	Level		Row total	
	Failed	Passed		
Reeves	100	68	168	Grade 5 Math 1999
%	59.52	40.48		
District	9,031	12,850	21,881	$\chi^2 (1, N=22,049) = 22.888, p < .001$
%	41.27	58.73		
State	42,030	108,266	150,296	$\chi^2 (1, N=150,464) = 82.905, p < .001$
%	27.96	72.04		

2x2	Level		Row total	
	Failed	Passed		
Reeves	73	105	178	Grade 4 Florida Writes 1998
%	41.01	58.99		
District	6,944	15,515	22,459	$\chi^2 (1, N=22,637) = 8.410, p = .004$
%	30.92	69.08		
State	44,978	105,014	149,992	$\chi^2 (1, N=150,170) = 10.289, p < .001$
%	29.99	70.01		

2x2	Level		Row total	
	Failed	Passed		
Reeves	55	113	168	Grade 4 Florida Writes 1999
%	32.74	67.26		
District	6,699	16,422	23,121	$\chi^2 (1, N=23,289) = 1.148, p = .284$
%	28.97	71.03		
State	41,703	112,787	154,490	$\chi^2 (1, N=154,658) = 2.809, p < .094$
%	26.99	73.01		

**Boston Renaissance (Boston, MA)
Chi Square Results from MCAS**

2x4	Level				Row total	
	Fail	Need Improvement	Proficient	Advanced		
Boston Renaissance	39	67	2	0	108	
%	36.11	62.04	1.85	0.00		
District	1,692	2,417	175	0	4,284	$\chi^2 (2, N=4,392) = 2.198, p = .333$
%	39.50	56.42	4.08	0.00		
State	11,129	49,071	14,144	745	75,089	$\chi^2 (3, N=75,197) = 50.704, p < .001$
%	14.82	65.35	18.84	0.99		

**Grade 4 English
1998**

2x2	Level		Row total	
	Failed	Passed		
Boston Renaissance	106	2	108	
%	98.15	1.85		
District	4,109	175	4,284	$\chi^2 (1, N=4,392) = 1.358, p = .244$
%	95.92	4.08		
State	60,200	14,889	75,089	$\chi^2 (1, N=75,197) = 21.945, p < .001$
%	80.17	19.83		

**Grade 4 English
1998**

2x4	Level				Row total	
	Fail	Need Improvement	Proficient	Advanced		
Boston Renaissance	39	66	3	0	108	
%	36.11	61.11	2.78	0.00		
District	1452	2822	230	0	4,504	$\chi^2 (2, N=4,612) = 1.662, p = .436$
%	32.24	62.66	5.11	0.00		
State	9,098	50,945	15,986	0	76,029	$\chi^2 (2, N=76,137) = 70.050, p < .001$
%	11.97	67.01	21.03	0.00		

**Grade 4 English
1999**

2x2	Level		Row total	
	Failed	Passed		
Boston Renaissance	105	3	108	
%	97.22	2.78		
District	4,274	230	4,504	$\chi^2 (1, N=4,612) = 1.192, p = .275$
%	94.89	5.11		
State	60,043	15,986	76,029	$\chi^2 (1, N=76,137) = 21.647, p < .001$
%	78.97	21.03		

**Grade 4 English
1999**

2x4	Level				Row total	
	Fail	Need Improvement	Proficient	Advanced		
Boston Renaissance	64	39	3	1	107	
%	59.81	36.45	2.8	0.93		
District	2,610	1,557	278	93	4,538	$\chi^2 (3, N=4,645) = 2.784, p = .426$
%	57.51	34.45	6.13	2.05		
State	17,240	33,065	17,301	8,275	75,881	$\chi^2 (3, N=75,988) = 94.320, p < .001$
%	22.72	43.57	22.80	10.91		

**Grade 4 Math
1998**

2x2	Level		Row total	
	Failed	Passed		
Boston Renaissance	103	4	107	
%	96.26	3.74		
District	4,167	371	4,538	$\chi^2 (1, N=4,645) = 2.773, p = .096$
%	91.82	8.18		
State	50,305	25,576	75,881	$\chi^2 (1, N=75,988) = 42.969, p < .001$
%	66.29	33.71		

**Grade 4 Math
1998**

2x4	Level				Row total	
	Fail	Need Improvement	Proficient	Advanced		
Boston Renaissance	59	40	9	0	108	
%	54.63	37.04	8.33	0.00		
District	2,063	1,986	522	193	4,764	$\chi^2 (3, N=4,872) = 8.702, p = .034$
%	43.30	41.69	10.96	4.05		
State	14,572	33,843	18,473	9,241	76,129	$\chi^2 (3, N=76,237) = 96.511, p < .001$
%	19.14	44.45	24.27	12.14		

**Grade 4 Math
1999**

2x2	Level		Row total	
	Failed	Passed		
Boston Renaissance	99	9	108	
%	91.67	8.33		
District	4,049	715	4,764	$\chi^2 (1, N=4,872) = 3.719, p = .054$
%	84.99	15.01		
State	48,415	27,714	76,129	$\chi^2 (1, N=76,237) = 36.723, p < .001$
%	63.6	36.4		

**Grade 4 Math
1999**

2x4	Level				Row total	
	Fail	Need Improvement	Proficient	Advanced		
Boston Renaissance	42	52	13	0	107	
%	39.25	48.60	12.15	0.00		
District	2,022	2,012	503	47	4,584	$\chi^2 (3, N=4,691) = 2.316, p = .510$
%	44.11	43.89	10.97	1.03		
State	8,986	30,040	31,584	4,514	75,124	$\chi^2 (3, N=75,231) = 97.457, p < .001$
%	11.96	39.99	42.04	6.01		

**Grade 4 Science & Tech
1998**

2x2	Level		Row total	
	Failed	Passed		
Boston Renaissance	94	13	107	
%	87.85	12.15		
District	4,034	550	4,584	$\chi^2 (1, N=4,691) = .002, p = .962$
%	88	12		
State	39,026	36,098	75,124	$\chi^2 (1, N=75,231) = 55.176, p < .001$
%	51.95	48.05		

**Grade 4 Science & Tech
1998**

2x4	Level				Row total	
	Fail	Need Improvement	Proficient	Advanced		
Boston Renaissance	27	64	15	0	106	
%	25.47	60.38	14.15	0.00		
District	1,417	2,341	851	96	4,705	$\chi^2 (3, N=4,811) = 6.140, p = .105$
%	30.12	49.76	18.09	2.04		
State	6,134	27,657	35,657	7,700	76,898	$\chi^2 (3, N=77,004) = 92.038, p < .001$
%	7.98	35.97	46.04	10.01		

**Grade 4 Science & Tech
1999**

2x2	Level		Row total	
	Failed	Passed		
Boston Renaissance	91	15	106	
%	85.85	14.15		
District	3,758	947	4,705	$\chi^2 (1, N=4,811) = 2.315, p = .128$
%	79.87	20.13		
State	33,791	43,107	76,898	$\chi^2 (1, N=77,004) = 75.445, p < 0.001$
%	43.94	56.06		

**Grade 4 Science & Tech
1999**

2x4	Level				Row total	
	Fail	Need Improvement	Proficient	Advanced		
Boston Renaissance	38	50	24	0	112	
%	33.93	44.64	21.43	0.00		
District	1,232	1,419	1,128	40	3,819	$\chi^2 (3, N=3,931) = 5.340, p = .149$
%	32.26	37.16	29.54	1.05		
State	9,550	21,180	35,589	2,055	68,374	$\chi^2 (3, N=68,486) = 62.091, p < .001$
%	13.97	30.98	52.05	3.01		

**Grade 8 English
1998**

2x2	Level		Row total	
	Failed	Passed		
Boston Renaissance	88	24	112	
%	78.57	21.43		
District	2,651	1168	3,819	$\chi^2 (1, N=3,931) = 4.317, p = .038$
%	69.42	30.58		
State	30,730	37,644	68,374	$\chi^2 (1, N=68,486) = 51.088, p < .001$
%	44.94	55.06		

**Grade 8 English
1998**

2x4	Level				Row total	
	Fail	Need Improvement	Proficient	Advanced		
Boston Renaissance	30	60	40	1	131	
%	22.90	45.80	30.53	0.76		
District	1,093	1,504	1,283	39	3,919	$\chi^2 (3, N=4,050) = 3.205, p = .361$
%	27.89	38.38	32.74	1.00		
State	8,398	21,713	37,185	2,106	69,402	$\chi^2 (3, N=69,533) = 36.578, p < .001$
%	12.10	31.29	53.58	3.03		

**Grade 8 English
1999**

2x2	Level		Row total	
	Failed	Passed		
Boston Renaissance	90	41	131	
%	68.7	31.3		
District	2,597	1322	3,919	$\chi^2 (1, N=4,050) = .337, p = .562$
%	66.27	33.73		
State	30,111	39,291	69,402	$\chi^2 (1, N=69,533) = 34.108, p < .001$
%	43.39	56.61		

**Grade 8 English
1999**

2x4	Level				Row total	
	Fail	Need Improvement	Proficient	Advanced		
Boston Renaissance	104	10	0	0	114	
%	91.23	8.77	0.00	0.00		
District	2,808	605	451	123	3,987	$\chi^2 (3, N=4,101) = 26.194, p < .001$
%	70.43	15.17	11.31	3.09		
State	28,882	17,933	15,783	5,521	68,119	$\chi^2 (3, N=68,233) = 112.865, p < .001$
%	42.40	26.33	23.33	8.10		

**Grade 8 Math
1998**

2x2	Level		Row total	
	Failed	Passed		
Boston Renaissance	114	0	114	
%	100	0		
District	3,413	574	3,987	$\chi^2 (1, N=4,101) = 19.083, p < .001$
%	85.6	14.4		
State	46,815	21,304	68,119	$\chi^2 (1, N=68,233) = 51.838, p < .001$
%	68.73	31.27		

**Grade 8 Math
1998**

2x4	Level				Row total	
	Fail	Need Improvement	Proficient	Advanced		
Boston Renaissance	88	35	8	0	131	
%	67.18	26.72	6.11	0.00		
District	2,562	848	539	168	4,117	$\chi^2 (3, N=4,248) = 12.942, p = .005$
%	62.23	20.6	13.09	4.08		
State	28,443	22,076	15,684	4,280	70,483	$\chi^2 (3, N=70,614) = 47.458, p < .001$
%	40.35	31.32	22.25	6.07		

**Grade 8 Math
1999**

2x2	Level		Row total	
	Failed	Passed		
Boston Renaissance	123	8	131	
%	93.89	6.11		
District	3,410	707	4,117	$\chi^2 (1, N=4,248) = 11.106, p < .001$
%	82.83	17.17		
State	50,519	19,964	70,483	$\chi^2 (1, N=70,614) = 31.821, p < .001$
%	71.68	28.32		

**Grade 8 Math
1999**

2x4	Level				Row total	
	Fail	Need Improvement	Proficient	Advanced		
Boston Renaissance	104	9	1	0	114	
%	91.23	7.89	0.88	0.00		
District	2,972	647	368	0	3,987	$\chi^2 (2, N=4,101) = 17.519, p < .001$
%	74.54	16.23	9.23	0.00		
State	28,184	21,379	17,938	1,380	68,881	$\chi^2 (3, N=68,995) = 119.931, p < .001$
%	40.92	31.04	26.04	2.00		

**Grade 8 Science & Tech
1998**

2x2	Level		Row total	
	Failed	Passed		
Boston Renaissance	113	1	114	
%	99.12	0.88		
District	3,619	368	3,987	$\chi^2 (1, N=4,101) = 9.444, p = .002$
%	90.77	9.23		
State	49,563	19,318	68,881	$\chi^2 (1, N=68,995) = 41.669, p < .001$
%	71.95	28.05		

**Grade 8 Science & Tech
1998**

2x4	Level				Row total	
	Fail	Need Improvement	Proficient	Advanced		
Boston Renaissance	113	16	3	0	132	
%	85.61	12.12	2.27	0.00		
District	3,052	617	335	42	4,046	$\chi^2 (3, N=4,178) = 9.644, p = .022$
%	75.43	15.25	8.28	1.04		
State	31,977	19,238	16,399	3,566	71,180	$\chi^2 (3, N=71,312) = 90.616, p < .001$
%	44.92	27.03	23.03	5.01		

**Grade 8 Science & Tech
1999**

2x2	Level		Row total	
	Failed	Passed		
Boston Renaissance	129	3	132	
%	97.73	2.27		
District	3,669	377	4,046	$\chi^2 (1, N=4,178) = 7.674, p = .006$
%	90.68	9.32		
State	51,215	19,965	71,180	$\chi^2 (1, N=71,312) = 43.421, p < .001$
%	71.95	28.05		

**Grade 8 Science & Tech
1999**

Seven Hills Charter School (Worcester, MA)
Chi Square Results from MCAS

2x4	Level				Row total	Grade 4 English 1998
	Fail	Need Improvement	Proficient	Advanced		
Seven Hills	34	45	4	0	83	
%	41	54	5	0		
District	395	1241	210	0	1846	$\chi^2 (2, N=1,929) = 18.768, p < 0.001$
%	21	67	11	0		
State	11134	49094	14142	745	75,115	$\chi^2 (3, N=75,198) = 49.195, p < 0.001$
%	15	65	19	1		

2x2	Level		Row total	Grade 4 English 1998
	Failed	Passed		
Seven Hills	79	4	83	
%	95.18	4.82		
District	1636	210	1,846	$\chi^2 (1, N=1929) = 3.462, p = 0.063$
%	88.62	11.38		
State	60,228	14,887	75,115	$\chi^2 (1, N=75,198) = 11.746, p < 0.001$
%	80.18	19.82		

2x4	Level				Row total	Grade 4 English 1999
	Fail	Need Improvement	Proficient	Advanced		
Seven Hills	38	41	4	0	83	
%	46	50	5	0		
District	319	1269	313	0	1901	$\chi^2 (2, N=1984) = 47.555, p < 0.001$
%	17	67	17	0		
State	9098	50971	15985	0	76,054	$\chi^2 (3, N=76,137) = 93.235, p < 0.001$
%	12	67	21	0		

2x2	Level		Row total	Grade 4 English 1999
	Failed	Passed		
Seven Hills	79	4	83	
%	95.18	4.82		
District	1588	313	1,901	$\chi^2 (1, N=1984) = 8.034, p = 0.005$
%	83.53	16.47		
State	60,069	15,985	76,054	$\chi^2 (1, N=76,137) = 13.113, p < 0.001$
%	78.98	21		

2x4	Level				Row total	Grade 4 Math 1998
	Fail	Need Improvement	Proficient	Advanced		
Seven Hills	44	31	7	1	83	
%	53	37	8	1		
District	456	950	374	139	1919	$\chi^2 (3, N=2002) = 38.911, p < 0.001$
%	24	50	19	7		
State	17260	33073	17297	8275	75,905	$\chi^2 (3, N=75,988) = 48.763, p < 0.001$
%	22.7	43.5	22.7	10.9		

2x2	Level		Row total	Grade 4 Math 1998
	Failed	Passed		
Seven Hills	75	8	83	
%	90	10		
District	1406	513	1,919	$\chi^2 (1, N=2002) = 12.076, p < 0.001$
%	73	27		
State	50,333	25,572	75,905	$\chi^2 (1, N=75,988) = 21.476, p < 0.001$
%	66.31	33.69		

2x4	Level				Row total	Grade 4 Math 1999
	Fail	Need Improvement	Proficient	Advanced		
Seven Hills	34	31	15	3	83	
%	41	37	18	4		
District	494	903	371	179	1947	$\chi^2 (3, N=2030) = 11.655, p = 0.009$
%	25.37	46.38	19.01	9.19		
State	14597	33852	18467	9238	76,154	$\chi^2 (3, N=76,237) = 27.730, p < 0.001$
%	19	44	24	12		

2x2	Level		Row total	
	Failed	Passed		
Seven Hills	65	18	83	
%	78	22		
District	1397	550	1,947	$\chi^2 (1, N=2030) = 1.701, p = 0.192$
%	71.75	28.25		
State	48,449	27,705	76,154	$\chi^2 (1, N=76,237) = 7.735, p = 0.005$
%	64	36		

2x4	Level				Row total	Grade 4 Science & Tech. 1998
	Fail	Need Improvement	Proficient	Advanced		
Seven Hills	20	46	16	1	83	
%	24	55	19	1		
District	260	855	725	79	1919	$\chi^2 (3, N=2002) = 17.463, p < 0.001$
%	14	45	38	4		
State	9008	30046	31581	4513	75,148	$\chi^2 (3, N=75,231) = 28.471, p < 0.001$
%	12	40	42	6		

2x2	Level		Row total	
	Failed	Passed		
Seven Hills	66	17	83	
%	80	20		
District	1115	804	1,919	$\chi^2 (1, N=2002) = 15.082, p < 0.001$
%	58	42		
State	39,054	36,094	75,148	$\chi^2 (1, N=75,231) = 25.209, p < 0.001$
%	52	48		

2x4	Level				Row total	Grade 4 Science & Tech. 1999
	Fail	Need Improvement	Proficient	Advanced		
Seven Hills	23	45	13	2	83	
%	28	54	16	2		
District	220	869	718	140	1947	$\chi^2 (3, N=2030) = 32.086, p < 0.001$
%	11	45	37	7		
State	6137	27676	35408	7699	76,920	$\chi^2 (3, N=77,003) = 69.426, p < 0.001$
%	8	36	46	10		

2x2	Level		Row total	
	Failed	Passed		
Seven Hills	68	15	83	
%	82	18		
District	1089	858	1,947	$\chi^2 (1, N=2030) = 21.948, p < 0.001$
%	56	44		
State	33,813	43,107	76,920	$\chi^2 (1, N=77,003) = 48.510, p < 0.001$
%	44	56		

2x4	Level				Row total	Grade 8 English 1998
	Fail	Need Improvement	Proficient	Advanced		
Seven Hills	12	20	20	1	53	
%	23	38	38	2		
District	368	535	598	15	1516	$\chi^2 (3, N=1569) = 0.585, p = 0.900$
%	24	35	40	1		
State	9576	21211	35593	2054	68,434	$\chi^2 (3, N=68,487) = 5.900, p = 0.117$
%	14	31	52	3		

2x2	Level		Row total	Grade 8 English 1998
	Failed	Passed		
Seven Hills	32	21	53	
%	60	40		
District	903	613	1,516	$\chi^2 (1, N=1569) = 0.014, p = 0.906$
%	60	40		
State	30,787	37,647	68,434	$\chi^2 (1, N=68,487) = 5.068, p = 0.024$
%				

2x4	Level				Row total	Grade 8 English 1999
	Fail	Need Improvement	Proficient	Advanced		
Seven Hills	26	37	17	1	81	
%	32	46	21	1		
District	422	587	511	16	1536	$\chi^2 (3, N=1617) = 5.285, p = 0.152$
%	27	38	33	1		
State	8402	21736	37208	2107	69,453	$\chi^2 (3, N=69,534) = 48.959, p < 0.001$
%	12	31	54	3		

2x2	Level		Row total	Grade 8 English 1999
	Failed	Passed		
Seven Hills	63	18	81	
%	78	22		
District	1009	527	1,536	$\chi^2 (1, N=1617) = 5.031, p = 0.025$
%	66	34		
State	30,138	39,315	69,453	$\chi^2 (1, N=69,534) = 38.933, p < 0.001$
%	43	57		

2x4	Level				Row total	Grade 8 Math 1998
	Fail	Need Improvement	Proficient	Advanced		
Seven Hills	33	9	9	2	53	
%	62	17	17	4		
District	964	329	216	46	1555	$\chi^2 (3, N=1608) = 0.890, p = 0.828$
%	62	21	14	3		
State	28953	17935	15864	5519	68,271	$\chi^2 (3, N=68,324) = 8.771, p = 0.032$
%	42.41	26.27	23	8		

2x2	Level		Row total	Grade 8 Math 1998
	Failed	Passed		
Seven Hills	42	11	53	
%	79.25	20.75		
District	1293	262	1,555	$\chi^2 (1, N=1608) = 0.555, p = 0.456$
%	83	17		
State	46,888	21,383	68,271	$\chi^2 (1, N=68,324) = 2.749, p = 0.097$
%	69	31		

2x4	Level				Row total	Grade 8 Math 1999
	Fail	Need Improvement	Proficient	Advanced		
Seven Hills	64	12	4	0	80	
%	80	15	5	0		
District	936	405	213	33	1587	$\chi^2 (3, N=1667) = 14.792, p = .002$
%	59	25.52	13.42	2		
State	28466	22099	15688	4280	70,533	$\chi^2 (3, N=70,613) = 53.431, p < 0.001$
%	40	31	22	6		

2x2	Level		Row total	Grade 8 Math 1999
	Failed	Passed		
Seven Hills	76	4	80	
%	95	5		
District	1341	246	1,587	$\chi^2 (1, N=1667) = 6.588, p = 0.010$
%	84.5	15.5		
State	50,565	19,968	70,533	$\chi^2 (1, N=70,613) = 21.406, p < 0.001$
%	72	28		

2x4	Level				Row total	Grade 8 Science & Tech. 1998
	Fail	Need Improvement	Proficient	Advanced		
Seven Hills	29	16	8	0	53	
%	55	30	15	0		
District	1000	338	201	0	1539	$\chi^2 (2, N=1592) = 2.555, p = 0.279$
%	65	22	13	0		
State	28259	21373	17931	1380	68,943	$\chi^2 (3, N=68,996) = 5.933, p = 0.115$
%	41	31	26	2		

2x2	Level		Row total	Grade 8 Science & Tech. 1998
	Failed	Passed		
Seven Hills	45	8	53	
%	85	15		
District	1338	201	1,539	$\chi^2 (1, N=1592) = 0.186, p = 0.666$
%	87	13		
State	49,632	19,311	68,943	$\chi^2 (1, N=68,996) = 4.382, p = 0.036$
%	72	28		

2x4	Level				Row total	Grade 8 Science & Tech. 1999
	Fail	Need Improvement	Proficient	Advanced		
Seven Hills	62	13	3	2	80	
%	77.5	16	4	2.5		
District	1037	282	210	30	1559	$\chi^2 (3, N=1639) = 7.173, p = 0.067$
%	66.52	18	13	2		
State	32028	19241	16398	3563	71,230	$\chi^2 (3, N=71,310) = 36.130, p < 0.001$
%	45	27	23	5		

2x2	Level		Row total	Grade 8 Science & Tech. 1999
	Failed	Passed		
Seven Hills	75	5	80	
%	94	6		
District	1319	240	1,559	$\chi^2 (1, N=1639) = 5.005, p = 0.025$
%	84.61	15.39		
State	51,269	19,961	71,230	$\chi^2 (3, N=71,310) = 18.792, p < 0.001$
%	72	28		

Martin Luther King Jr. Academy (Mt. Clemens, MI)
Chi Square Results from MEAP

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Martin Luther King Acad.	27	13	15	55	
%	49.09	23.64	27.27		
George Washington Sch.	40	11	5	56	$\chi^2 (2, N=111) = 7.681, p = .021$
%	71.63	19.64	8.93		
State	72,250	24,744	20,284	117,278	$\chi^2 (2, N=117,333) = 4.729, p = .094$
%	61.61	21.1	17.3		

Grade 4 Math
1995

2x2	Level		Row total	
	Failed	Passed		
Martin Luther King Acad.	28	27	55	
%	50.91	49.09		
George Washington Sch.	16	40	56	$\chi^2 (1, N=111) = 5.787, p = .016$
%	28.57	71.43		
State	45,028	72,250	117,278	$\chi^2 (1, N=117,333) = 3.640, p = .056$
%	38.39	61.61		

Grade 4 Math
1995

2x3	Level			Row Total	
	Satisfactory	Moderate	Low		
Martin Luther King Acad.	39	16	13	68	
%	57.35	23.53	19.12		
George Washington Sch.	76	26	19	121	$\chi^2 (2, N=189) = 0.595, p = .743$
%	62.81	21.49	15.7		
State	72,485	25,729	16,652	114,866	$\chi^2 (2, N=114,934) = 1.396, p = .498$
%	63.1	22.4	14.5		

Grade 4 Math
1996

2x2	Level		Row total	
	Failed	Passed		
Martin Luther King Acad.	29	39	68	
%	42.65	57.35		
George Washington Sch.	45	76	121	$\chi^2 (1, N=189) = 0.544, p = .461$
%	37.19	62.81		
State	42,381	72,485	114,866	$\chi^2 (1, N=114,934) = 0.965, p = .326$
%	36.9	63.1		

Grade 4 Math
1996

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Martin Luther King Acad.	42	14	20	76	
%	55.26	18.42	26.32		
George Washington Sch.	62	27	39	128	$\chi^2 (2, N=204) = 0.890, p = .641$
%	48.44	21.09	30.47		
State	69,462	24,571	20,774	114,807	$\chi^2 (2, N=114,883) = 3.496, p = .174$
%	60.5	21.4	18.09		

Grade 4 Math
1997

2x2	Level		Row total	
	Failed	Passed		
Martin Luther King Acad.	34	42	76	
%	44.74	55.26		
George Washington Sch.	66	62	128	$\chi^2 (1, N=204) = 0.889, p = .346$
%	51.56	48.44		
State	45,345	69,462	114,807	$\chi^2 (1, N=114,883) = 0.873, p = .350$
%	39.5	60.5		

**Grade 4 Math
1997**

2x3	Level			Row	
	Satisfactory	Moderate	Low		
Martin Luther King Acad.	42	18	10	70	
%	60	25.71	14.29		
George Washington Sch.	77	26	9	112	$\chi^2 (2, N=182) = 2.228, p = .328$
%	68.75	23.21	8.04		
State	84,314	20,139	9,328	113,781	$\chi^2 (2, N=113,851) = 7.756, p = .023$
%	74.1	17.7	8.2		

**Grade 4 Math
1998**

2x2	Level		Row total	
	Failed	Passed		
Martin Luther King Acad.	28	42	70	
%	40	60		
George Washington Sch.	35	77	112	$\chi^2 (1, N=182) = 1.457, p = .227$
%	31.25	68.75		
State	29,467	84,314	113,781	$\chi^2 (1, N=113,851) = 7.248, p = .007$
%	25.9	74.1		

**Grade 4 Math
1998**

2x3	Level			Row	
	Satisfactory	Moderate	Low		
Martin Luther King Acad.	56	22	28	106	
%	52.83	20.75	26.42		
George Washington Sch.	58	29	17	104	$\chi^2 (2, N=210) = 3.666, p = .160$
%	55.77	27.88	16.35		
State	84,420	20,832	12,461	117,713	$\chi^2 (2, N=117,819) = 30.861, p < .001$
%	71.72	17.7	10.59		

**Grade 4 Math
1999**

2x2	Level		Row total	
	Failed	Passed		
Martin Luther King Acad.	50	56	106	
%	44.74	55.26		
George Washington Sch.	46	58	104	$\chi^2 (1, N=210) = 0.183, p = .669$
%	44.23	55.77		
State	33,293	84,420	117,713	$\chi^2 (1, N=117,819) = 18.617, p < .001$
%	28.28	71.72		

**Grade 4 Math
1999**

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Martin Luther King Acad.	34	13	8	55	
%	61.82	23.64	14.55		
George Washington Sch.	26	17	13	56	$\chi^2 (2, N=111) = 2.782, p = .249$
%	46.43	30.36	23.21		
State	51,062	35,614	30,462	117,138	$\chi^2 (2, N=117,193) = 7.794, p = .020$
%	43.59	30.4	26.1		

**Grade 4 Reading
1995**

2x2	Level		Row total	
	Failed	Passed		
Martin Luther King Acad.	21	34	55	
%	38.18	61.82		
George Washington Sch.	30	26	56	$\chi^2 (1, N=111) = 2.646, p = .104$
%	53.57	46.43		
State	66,076	51,062	117,138	$\chi^2 (1, N=117,193) = 7.427, p = .006$
%	56.41	43.59		

**Grade 4 Reading
1995**

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Martin Luther King Acad.	27	25	16	68	
%	39.71	36.76	23.53		
George Washington Sch.	52	44	25	121	$\chi^2 (2, N=189) = 0.278, p = .870$
%	42.98	36.36	20.66		
State	57,266	35,453	21,914	114,633	$\chi^2 (2, N=114,701) = 2.870, p = .238$
%	49.96	30.93	19.12		

**Grade 4 Reading
1996**

2x2	Level		Row total	
	Failed	Passed		
Martin Luther King Acad.	41	27	68	
%	60.29	39.71		
George Washington Sch.	69	52	121	$\chi^2 (1, N=189) = 0.191, p = .662$
%	57.02	42.98		
State	57,367	57,266	114,633	$\chi^2 (1, N=114,701) = 2.856, p = .091$
%	50.04	49.96		

**Grade 4 Reading
1996**

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Martin Luther King Acad.	35	21	20	76	
%	46.05	27.63	26.23		
George Washington Sch.	50	4	37	91	$\chi^2 (2, N=167) = 18.076, p < .001$
%	54.95	4.4	40.66		
State	56,229	32,360	25,471	114,060	$\chi^2 (2, N=114,136) = 0.717, p = .699$
%	49.3	28.37	22.33		

**Grade 4 Reading
1997**

2x2	Level		Row total	
	Failed	Passed		
Martin Luther King Acad.	41	35	76	
%	53.95	46.05		
George Washington Sch.	41	50	91	$\chi^2 (1, N=167) = 1.310, p = .252$
%	45.05	54.95		
State	57,831	56,229	114,060	$\chi^2 (1, N=114,136) = 0.320, p = .572$
%	50.7	49.3		

**Grade 4 Reading
1997**

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Martin Luther King Acad.	34	20	16	70	
%	48.57	28.57	22.86		
George Washington Sch.	62	32	18	112	$\chi^2 (2, N=182) = 1.438, p = .487$
%	55.36	28.57	16.07		
State	66,578	29,534	17,489	113,601	$\chi^2 (2, N=113,671) = 3.910, p = .142$
%	58.61	26	15.4		

**Grade 4 Reading
1998**

2x2	Level		Row total	
	Failed	Passed		
Martin Luther King Acad.	36	34	70	
%	51.43	48.57		
George Washington Sch.	50	62	112	$\chi^2 (1, N=182) = 0.796, p = .372$
%	44.64	55.36		
State	47,023	66,578	113,601	$\chi^2 (1, N=113,671) = 2.904, p = .088$
%	41.39	58.61		

**Grade 4 Reading
1998**

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Martin Luther King Acad.	43	37	26	106	
%	40.57	34.91	24.53		
George Washington Sch.	46	33	25	104	$\chi^2 (2, N=210) = 0.330, p = .848$
%	44.23	31.73	24.04		
State	69,936	30,004	17,763	117,703	$\chi^2 (2, N=117,809) = 16.263, p < .001$
%	59.42	25.49	15.09		

**Grade 4 Reading
1999**

2x2	Level		Row total	
	Failed	Passed		
Martin Luther King Acad.	63	43	106	
%	59.43	40.57		
George Washington Sch.	58	46	104	$\chi^2 (1, N=210) = 0.289, p = .591$
%	55.77	44.23		
State	47,767	69,936	117,703	$\chi^2 (1, N=117,809) = 15.606, p < .001$
%	40.58	59.42		

**Grade 4 Reading
1999**

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Martin Luther King Acad.	11	36	7	54	
%	20.37	66.67	12.96		
George Washington Sch.	38	97	22	157	$\chi^2 (2, N=211) = 0.438, p = .803$
%	24.2	61.78	14.01		
State	31,565	72,795	13,106	117,466	$\chi^2 (2, N=117,520) = 1.199, p = .549$
%	27	62	11		

**Grade 5 Science
1996**

2x2	Level		Row total	
	Failed	Passed		
Martin Luther King Acad.	43	11	54	
%	79.63	20.37		
George Washington Sch.	119	38	157	$\chi^2 (1, N=211) = 0.331, p = .565$
%	75.8	24.2		
State	85,901	31,565	117,466	$\chi^2 (1, N=117,520) = 1.161, p = .281$
%	73.13	26.87		

**Grade 5 Science
1996**

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Martin Luther King Acad.	15	45	14	74	
%	20.27	60.81	18.92		
George Washington Sch.	41	55	21	117	$\chi^2 (2, N=211) = 5.047, p = .080$
%	35.04	47.01	17.95		
State	41,841	61,784	10,175	113,800	$\chi^2 (2, N=113,874) = 13.651, p < .001$
%	36.77	54.29	8.94		

**Grade 5 Science
1997**

2x2	Level		Row total	
	Failed	Passed		
Martin Luther King Acad.	59	15	74	
%	79.73	20.27		
George Washington Sch.	76	41	117	$\chi^2 (1, N=191) = 4.773, p = .029$
%	64.96	35.04		
State	71,959	41,841	113,800	$\chi^2 (1, N=113,874) = 8.658, p = .003$
%	63.23	36.77		

**Grade 5 Science
1997**

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Martin Luther King Acad.	17	44	10	71	
%	23.94	61.97	14.08		
George Washington Sch.	64	41	10	115	$\chi^2 (2, N=186) = 17.975, p < .001$
%	55.65	35.65	8.7		
State	46,016	60,121	7,816	113,953	$\chi^2 (2, N=114,024) = 11.034, p < .001$
%	40.38	52.76	6.86		

**Grade 5 Science
1998**

2x2	Level		Row total	
	Failed	Passed		
Martin Luther King Acad.	54	17	71	
%	76.06	23.94		
George Washington Sch.	51	64	115	$\chi^2 (1, N=186) = 17.953, p < .001$
%	44.35	55.65		
State	67,937	46,016	113,953	$\chi^2 (1, N=114,024) = 7.964, p = .005$
%	59.62	40.38		

**Grade 5 Science
1998**

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Martin Luther King Acad.	11	59	36	106	
%	10.38	55.66	33.96		
George Washington Sch.	50	35	1	86	$\chi^2 (2, N=192) = 62.768, p < .001$
%	58.14	40.7	1.16		
State	42,501	59,457	11,300	113,258	$\chi^2 (2, N=113,364) = 81.941, p < .001$
%	37.53	52.5	9.98		

**Grade 5 Science
1999**

2x2	Level		Row total	
	Failed	Passed		
Martin Luther King Acad.	95	11	106	
%	89.62	10.38		
George Washington Sch.	36	50	86	$\chi^2 (1, N=192) = 49.966, p < .001$
%	41.86	58.14		
State	70757	42501	113,258	$\chi^2 (1, N=113,364) = 33.303, p < .001$
%	62.47	37.53		

**Grade 5 Science
1999**

2x2	Level		Row total	
	Failed	Passed		
Martin Luther King Acad.	31	21	52	
%	59.62	40.38		
George Washington Sch.	74	79	153	$\chi^2 (1, N=205) = 1.966, p = .161$
%	48.37	51.63		
State	51846	64842	116,688	$\chi^2 (1, N=116,740) = 4.853, p = .028$
%	44.43	55.57		

**Grade 5 Writing
1996**

2x2	Level		Row total	
	Failed	Passed		
Martin Luther King Acad.	23	51	74	
%	31.08	68.92		
George Washington Sch.	35	78	113	$\chi^2 (1, N=187) = 0.000, p = .998$
%	30.97	69.03		
State	30104	83082	113,186	$\chi^2 (1, N=113,260) = 0.762, p = .383$
%	26.6	73.4		

**Grade 5 Writing
1997**

2x2	Level		Row total	
	Failed	Passed		
Martin Luther King Acad.	39	32	71	
%	54.93	45.07		
George Washington Sch.	41	73	114	$\chi^2 (1, N=185) = 6.411, p = .011$
%	35.96	64.04		
State	40389	72786	113,175	$\chi^2 (1, N=113,246) = 11.445, p < .001$
%	35.69	64.31		

**Grade 5 Writing
1998**

2x2	Level		Row total	
	Failed	Passed		
Martin Luther King Acad.	77	29	106	
%	72.64	27.36		
George Washington Sch.	38	50	88	$\chi^2 (1, N=194) = 17.287, p < .001$
%	43.18	56.82		
State	50948	61833	112,781	$\chi^2 (1, N=112,887) = 32.256, p < .001$
%	45.17	54.83		

**Grade 5 Writing
1999**

2x4	Level				Row total	
	Level1	Level2	Level3	Level4		
Martin Luther King Acad.	0	6	17	85	108	
%	0	5.56	15.74	78.7		
George Washington Sch.	2	24	29	30	85	$\chi^2 (3, N=193) = 40.063, p < .001$
%	2.35	28.24	34.12	35.29		
State	191	19,133	30,830	60,596	110,750	$\chi^2 (3, N=110,858) = 25.789, p < .001$
%	0.17	17.28	27.84	54.71		

**Grade 5 Social Studies
1999**

2x2	Level		Row total	
	Failed	Passed		
Martin Luther King Acad.	108	0	108	
%	100	0		
George Washington Sch.	83	2	85	$\chi^2 (1, N=193) = 2.568, p = .109$
%	97.65	2.35		
State	110559	191	110,750	$\chi^2 (1, N=110,858) = 0.187, p = .666$
%	99.83	0.17		

**Grade 5 Social Studies
1999**

Mt. Clemens Secondary Academies (Mt. Clemens, MI)
Chi Square Results from HSPT MEAP

2x4	Level				Row total	Grade 11 Math 1999
	Endorsed	Met	Basic	Not Endorsed		
Mt. Clemens Academy	3	7	5	7	22	
%	13.6	31.8	22.7	31.8		
District	13	38	20	28	99	$\chi^2 (3, N=121) = 0.345, p = .951$
%	13.1	38.4	20.2	28.3		
State	18,391	33,362	14,157	15,376	81,286	$\chi^2 (3, N=81,308) = 3.533, p = .317$
%	22.6	41	17.4	18.9		

2x2	Level		Row total	Grade 11 Math 1999
	Endorsed	Not Endorsed		
Mt. Clemens Academy	15	7	22	
%	71.7	28.3		
District	71	28	99	$\chi^2 (1, N=121) = 0.109, p = .741$
%	68.2	31.8		
State	65,910	15,376	81,286	$\chi^2 (1, N=81,330) = 2.387, p = .122$
%	81.1	18.9		

2x4	Level				Row total	Grade 11 Reading 1999
	Endorsed	Met	Basic	Not Endorsed		
Mt. Clemens Academy	2	13	4	4	23	
%	8.7	56.5	17.4	17.4		
District	8	52	26	25	111	$\chi^2 (3, N=134) = 0.966, p = .810$
%	7.2	46.6	23.4	22.5		
State	13,972	41,009	12,172	14,623	81,776	$\chi^2 (3, N=81,799) = 1.234, p = .745$
%	22.6	41	17.4	18.9		

2x2	Level		Row total	Grade 11 Reading 1999
	Endorsed	Not Endorsed		
Mt. Clemens Academy	19	4	23	
%	82.6	17.4		
District	86	25	111	$\chi^2 (1, N=134) = 0.296, p = .587$
%	77.5	22.5		
State	67,153	14,623	81,776	$\chi^2 (1, N=81,799) = 0.004, p = .951$
%	82.1	17.9		

2x4	Level				Row total	Grade 11 Science 1999
	Endorsed	Met	Basic	Not Endorsed		
Mt. Clemens Academy	1	8	10	4	23	
%	4.4	34.8	43.5	17.4		
District	2	38	33	38	111	$\chi^2 (3, N=134) = 3.400, p = .334$
%	1.8	34.2	29.7	34.2		
State	5,819	35,397	23,674	15,920	80,810	$\chi^2 (3, N=80,333) = 2.328, p = .507$
%	7.2	43.8	29.3	19.7		

2x2	Level		Row total	Grade 11 Science 1999
	Endorsed	Not Endorsed		
Mt. Clemens Academy	19	4	23	
%	82.6	17.4		
District	73	38	111	$\chi^2 (1, N=134) = 2.512, p = .113$
%	65.8	34.2		
State	64,890	15,920	80,810	$\chi^2 (1, N=80,333) = 0.078, p = .781$
%	82.1	17.9		

2x4	Level				Row total	Grade 11 Writing 1999
	Endorsed	Met	Basic	Not Endorsed		
Mt. Clemens Academy	0	9	7	2	18	
%	0	50	38.9	11.1		
District	1	55	39	13	108	$\chi^2 (3, N=126) = 0.213, p = .975$
%	1	50.9	36.1	12		
State	5,337	35,855	25,812	11,534	78,538	$\chi^2 (3, N=78,556) = 1.653, p = .647$
%	7.2	43.8	29.3	19.7		

2x2	Level		Row total	Grade 11 Writing 1999
	Endorsed	Not Endorsed		
Mt. Clemens Academy	16	2	18	
%	88.9	11.1		
District	95	13	108	$\chi^2 (1, N=126) = 0.013, p = .911$
%	88	12		
State	67,004	11,534	78,538	$\chi^2 (1, N=78,556) = 0.184, p = .668$
%	82.1	17.9		

2x3	Level			Row total	Grade 7 Reading 1999
	Satisfactory	Moderate	Low		
Mt. Clemens Academy	42	31	43	116	
%	36.21	26.72	37.07		
District	28	25	45	98	$\chi^2 (2, N=214) = 1.988, p = .370$
%	28.57	25.51	45.92		
State	60,573	30,391	23,288	114,252	$\chi^2 (2, N=114,368) = 21.995, p < .001$
%	53.02	26.6	20.38		

2x2	Level		Row total	Grade 7 Reading 1999
	Failed	Passed		
Mt. Clemens Academy	74	42	116	
%	63.79	36.21		
District	70	28	98	$\chi^2 (1, N=214) = 1.407, p = .236$
%	71.43	28.57		
State	53,697	60,573	114,288	$\chi^2 (1, N=114,252) = 13.146, p < .001$
%	46.98	53.02		

2x3	Level			Row total	Grade 7 Math 1999
	Satisfactory	Moderate	Low		
Mt. Clemens Academy	59	36	21	116	
%	50.86	31.03	18.1		
District	35	28	31	94	$\chi^2 (2, N=210) = 6.821, p = .033$
%	37.23	29.79	32.98		
State	72,211	26,265	15,713	114,189	$\chi^2 (2, N=114,305) = 7.645, p < .022$
%	63.24	23	13.77		

2x2	Level		Row total	Grade 7 Math 1999
	Failed	Passed		
Mt. Clemens Academy	57	59	116	
%	49.14	50.86		
District	59	35	94	$\chi^2 (1, N=210) = 3.900, p = .048$
%	62.77	37.23		
State	41,978	72,211	114,189	$\chi^2 (1, N=114,305) = 7.634, p = .006$
%	36.76	63.24		

2x2	Level		Row total	
	Failed	Passed		
Mt. Clemens Academy	74	43	117	
%	63.25	36.75		
District	53	34	87	$\chi^2 (1, N=204) = 0.115, p = .734$
%	60.92	39.08		
State	41,018	71,445	112,463	$\chi^2 (1, N=112580) = 36.153, p < .001$
%	36.47	63.53		

**Grade 8 Writing
1998**

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Mt. Clemens Academy	9	75	30	114	
%	7.89	65.79	26.32		
District	13	44	29	86	$\chi^2 (2, N=200) = 4.998, p = .082$
%	15.12	51.16	33.72		
State	26,146	64,862	22,486	113,494	$\chi^2 (2, N=113608) = 15.260, p < .001$
%	23.04	57.15	19.81		

**Grade 8 Science
1998**

2x2	Level		Row total	
	Failed	Passed		
Mt. Clemens Academy	105	9	114	
%	92.11	7.89		
District	73	13	86	$\chi^2 (1, N=200) = 2.611, p = .106$
%	84.88	15.12		
State	87,348	26,146	113,494	$\chi^2 (1, N=113,608) = 14.735, p < .001$
%	76.96	23.04		

**Grade 8 Science
1998**

2x4	Level				Row total	
	Level1	Level2	Level3	Level4		
Mt. Clemens Academy	1	15	32	56	104	
%	0.96	14.42	30.77	53.85		
District	1	5	17	63	86	$\chi^2 (3, N=190) = 8.373, p = .039$
%	1.16	5.81	19.77	73.26		
State	5,446	26,087	33,900	47,949	113,382	$\chi^2 (3, N=113,486) = 9.831, p = .020$
%	4.8	23.01	29.9	42.29		

**Grade 8 Social Studies
1999**

2x2	Level		Row total	
	Failed	Passed		
Mt. Clemens Academy	103	1	104	
%	99.04	0.96		
District	85	1	86	$\chi^2 (1, N=190) = 0.018, p = .892$
%	98.84	1.16		
State	107,936	5,446	113,382	$\chi^2 (1, N=113,486) = 3.356, p = .067$
%	95.2	4.8		

**Grade 8 Social Studies
1999**

Mid-Michigan Public School Academy (Lansing, MI)
Chi Square Results from MEAP

2x3	Level			Row Total	
	Satisfactory	Moderate	Low		
Mid-Michigan	25	23	55	103	
%	24.27	22.33	53.4		
State	56,239	32,358	25,436	114,033	$\chi^2 (2, N=114,136) = 58.965, p < .001$
%	22.6	41	17.4		

Grade 4 Reading
1997

2x2	Level		Row total	
	Failed	Passed		
Mid-Michigan	78	25	103	
%	79.63	30.37		
District	854	382	1,236	$\chi^2 (1, N=1,339) = 1.978, p = .160$
%	69.09	30.91		
State	57,794	56,239	114,033	$\chi^2 (1, N=114,136) = 25.827, p < .001$
%	50.68	49.32		

Grade 4 Reading
1997

2x3	Level			Row Total	
	Satisfactory	Moderate	Low		
Mid-Michigan	33	30	28	91	
%	36.26	32.97	30.77		
State	66,579	29,524	17,477	113,580	$\chi^2 (2, N=113,671) = 23.425, p < .001$
%	58.62	25.99	15.39		

Grade 4 Reading
1998

2x2	Level		Row total	
	Failed	Passed		
Mid-Michigan	58	33	91	
%	63.74	36.26		
District	624	523	1,147	$\chi^2 (1, N=1,238) = 2.696, p = .085$
%	54.4	45.6		
State	47,001	66,579	113,580	$\chi^2 (1, N=113,671) = 18.730, p < .001$
%	41.38	58.62		

Grade 4 Reading
1998

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Mid-Michigan	23	32	41	96	
%	23.96	33.33	42.71		
State	69,956	30,009	17,748	117,713	$\chi^2 (2, N=117,809) = 71.129, p < .001$
%	59.43	25.49	15.08		

Grade 4 Reading
1999

2x2	Level		Row total	
	Failed	Passed		
Mid-Michigan	73	23	96	
%	76.04	23.96		
District	680	492	1,172	$\chi^2 (1, N=1,268) = 11.948, p = .001$
%	58.02	41.98		
State	47,757	69,956	117,713	$\chi^2 (1, N=117,809) = 50.044, p < .001$
%	40.57	59.43		

Grade 4 Reading
1999

2x3	Level			Row Total	
	Satisfactory	Moderate	Low		
Mid-Michigan	27	22	57	106	
%	36.26	32.97	30.77		
State	69,477	24,563	20,737	114,777	$\chi^2(2, N=114,883) = 96.134, p < .001$
%	60.53	21.4	18.07		

**Grade 4 Math
1997**

2x2	Level		Row total	
	Failed	Passed		
Mid-Michigan	79	27	106	
%	74.53	25.47		
District	731	507	1,238	$\chi^2(1, N=1,344) = 9.773, p = .002$
%	59.05	40.95		
State	45,300	69,477	114,777	$\chi^2(1, N=114,883) = 54.474, p < .001$
%	39.47	60.53		

**Grade 4 Math
1997**

2x3	Level			Row Total	
	Satisfactory	Moderate	Low		
Mid-Michigan	38	31	24	93	
%	40.86	33.33	25.81		
State	84,318	20,126	9,314	113,758	$\chi^2(2, N=113,851) = 61.884, p < .001$
%	74.12	17.69	8.19		

**Grade 4 Math
1998**

2x2	Level		Row total	
	Failed	Passed		
Mid-Michigan	55	38	93	
%	59.14	40.86		
District	447	706	1,153	$\chi^2(1, N=1,246) = 14.845, p < .001$
%	38.77	61.23		
State	29,440	84,318	113,758	$\chi^2(1, N=113,851) = 53.554, p < .001$
%	25.88	74.12		

**Grade 4 Math
1998**

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Mid-Michigan	32	20	44	96	
%	33.33	20.83	45.83		
State	84,444	20,834	12,445	117,723	$\chi^2(2, N=117,819) = 132.774, p < .001$
%	71.73	17.7	10.57		

**Grade 4 Math
1999**

2x2	Level		Row total	
	Failed	Passed		
Mid-Michigan	64	32	96	
%	66.67	33.33		
District	528	642	1,170	$\chi^2(1, N=1,266) = 16.533, p < .001$
%	45.13	54.87		
State	33,279	84,444	117,723	$\chi^2(1, N=117,819) = 69.698, p < .001$
%	28.27	71.73		

**Grade 4 Math
1999**

2x4	Level				Row total	Grade 5 Social Studies 1999
	Level1	Level2	Level3	Level4		
Mid-Michigan	2	6	12	85	105	
%	1.9	5.71	11.43	80.95		
District	37	124	285	644	1,090	$\chi^2 (3, N=1,195) = 19.330, p < .001$
%	3.39	11.38	26.15	59.08		
State	189	19,133	30,835	60,596	110,753	$\chi^2 (3, N=110,858) = 49.780, p < .001$
%	0.17	17.28	27.84	54.71		

2x2	Level		Row total	Grade 5 Social Studies 1999
	Failed	Passed		
Mid-Michigan	103	2	105	
%	66.67	33.33		
District	1,053	37	1,090	$\chi^2 (1, N=1,195) = 0.673, p = .412$
%	96.61	3.39		
State	110,564	189	110,753	$\chi^2 (1, N=110,858) = 18.341, p < .001$
%	99.83	0.17		

2x2	Level		Row total	Grade 5 Writing 1997
	Failed	Passed		
Mid-Michigan	38	48	86	
%	44.19	55.81		
District	308	779	1,087	$\chi^2 (1, N=1,173) = 9.629, p = .002$
%	45.13	54.87		
State	30,089	83,085	113,174	$\chi^2 (1, N=113,260) = 13.633, p < .001$
%	26.59	73.41		

2x2	Level		Row total	Grade 5 Writing 1998
	Failed	Passed		
Mid-Michigan	51	44	95	
%	53.68	46.32		
District	529	634	1,163	$\chi^2 (1, N=1,258) = 2.376, p = .123$
%	45.49	54.51		
State	40,377	72,774	113,151	$\chi^2 (1, N=113,246) = 13.398, p < .001$
%	35.68	64.32		

2x2	Level		Row total	Grade 5 Writing 1999
	Failed	Passed		
Mid-Michigan	76	30	106	
%	71.7	28.3		
District	411	646	1,057	$\chi^2 (1, N=1,163) = 42.620, p < .001$
%	38.88	61.12		
State	50,949	61,832	112,781	$\chi^2 (1, N=112,887) = 30.076, p < .001$
%	45.18	54.82		

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Mid-Michigan	10	48	30	88	
%	11.36	54.55	34.09		
District	236	652	225	1,113	$\chi^2 (2, N=1,201) = 11.478, p = .003$
%	32	32	36		
State	41,831	61,781	10,145	113,757	$\chi^2 (2, N=113,845) = 77.790, p < .001$
%	36.77	54.31	8.92		

**Grade 5 Science
1997**

2x2	Level		Row total	
	Failed	Passed		
Mid-Michigan	78	10	88	
%	88.64	11.36		
District	887	236	1,113	$\chi^2 (1, N=1,201) = 4.848, p = .028$
%	78.8	21.2		
State	71,926	41,831	113,757	$\chi^2 (1, N=113,845) = 24.422, p < .001$
%	63.23	36.77		

**Grade 5 Science
1997**

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Mid-Michigan	15	57	22	94	
%	15.96	60.64	23.4		
District	351	709	117	1,117	$\chi^2 (2, N=1,271) = 20.241, p < .001$
%	29.82	60.24	9.94		
State	46,018	60,108	7,804	113,930	$\chi^2 (2, N=114,024) = 52.497, p < .001$
%	40.39	52.76	6.85		

**Grade 5 Science
1998**

2x2	Level		Row total	
	Failed	Passed		
Mid-Michigan	79	15	94	
%	84.04	15.96		
District	826	351	1,117	$\chi^2 (1, N=1,271) = 8.160, p = .004$
%	70.18	29.82		
State	67,912	46,018	113,930	$\chi^2 (1, N=114,024) = 23.293, p < .001$
%	59.61	40.39		

**Grade 5 Science
1998**

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Mid-Michigan	12	53	42	107	
%	11.21	49.53	39.25		
District	288	622	162	1,072	$\chi^2 (2, N=1,179) = 43.357, p < .001$
%	26.87	58.02	15.11		
State	42,500	59,463	11,294	113,257	$\chi^2 (2, N=113,364) = 111.564, p < .001$
%	37.53	52.5	9.97		

**Grade 5 Science
1999**

2x2	Level		Row total	
	Failed	Passed		
Mid-Michigan	95	12	107	
%	88.79	11.21		
District	784	288	1,072	$\chi^2 (1, N=1,179) = 12.562, p < .001$
%	73.13	26.87		
State	70,757	42,500	113,257	$\chi^2 (1, N=113,364) = 31.573, p < .001$
%	62.47	37.53		

**Grade 5 Science
1999**

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Mid-Michigan	26	25	35	86	
%	30.23	29.07	40.7		
State	56,596	32,347	27,113	116,056	$\chi^2 (2, N=116,142) = 17.148, p < .001$
%	48.77	27.87	23.36		

**Grade 7 Reading
1998**

2x2	Level		Row total	
	Failed	Passed		
Mid-Michigan	60	26	86	
%	69.77	30.23		
District	657	334	991	$\chi^2 (1, N=1,077) = 0.428, p = .513$
%	66.3	33.7		
State	59,460	56,596	116,056	$\chi^2 (1, N=116,142) = 11.815, p < .001$
%	51.23	48.77		

**Grade 7 Reading
1998**

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Mid-Michigan	17	25	38	80	
%	21.25	31.25	47.5		
State	60,598	30,397	23,293	114,288	$\chi^2 (2, N=114,368) = 44.698, p < .001$
%	53.02	26.6	20.38		

**Grade 7 Reading
1999**

2x2	Level		Row total	
	Failed	Passed		
Mid-Michigan	63	17	80	
%	78.75	21.25		
District	546	349	895	$\chi^2 (1, N=975) = 9.861, p = .002$
%	61.01	38.99		
State	53,690	60,598	114,288	$\chi^2 (1, N=114,368) = 32.397, p < .001$
%	46.98	53.02		

**Grade 7 Reading
1999**

2x3	Level			Row total	
	Satisfactory	Moderate	Low		
Mid-Michigan	18	25	41	84	
%	21.43	29.76	48.81		
State	71,345	27,985	16,812	116,142	$\chi^2 (2, N=116,226) = 91.233, p < .001$
%	61.43	24.1	14.48		

**Grade 7 Math
1998**

2x2	Level		Row total
	Failed	Passed	
Mid-Michigan	66	18	84
%	78.57	21.43	
District	571	434	1,005
%	56.82	43.18	
State	44,797	71,345	116,142
%	38.57	61.43	

$\chi^2 (1, N=1,089) = 15.112, p < .001$

$\chi^2 (1, N=116,226) = 56.669, p < .001$

**Grade 7 Math
1998**

2x3	Level			Row total
	Satisfactory	Moderate	Low	
Mid-Michigan	18	19	47	84
%	21.43	22.62	55.95	
State	72,252	26,282	15,734	114,268
%	63.23	23	13.77	

$\chi^2 (2, N=114,352) = 131.442, p < .001$

**Grade 7 Math
1999**

2x2	Level		Row total
	Failed	Passed	
Mid-Michigan	66	18	84
%	78.57	21.43	
District	534	347	881
%	60.61	39.39	
State	42,016	72,252	114,268
%	36.77	63.23	

$\chi^2 (1, N=965) = 10.517, p < .001$

$\chi^2 (1, N=114,352) = 63.064, p < .001$

**Grade 7 Math
1999**

2x2	Level		Row total
	Failed	Passed	
Mid-Michigan	28	15	43
%	65.12	34.88	
District	400	553	953
%	41.97	58.03	
State	33,822	75,338	109,160
%	30.98	69.02	

$\chi^2 (1, N=996) = 8.993, p = .003$

$\chi^2 (1, N=109,203) = 23.412, p < .001$

**Grade 8 Writing
1998**

2x2	Level		Row total
	Failed	Passed	
Mid-Michigan	44	16	60
%	73.33	26.67	
District	331	580	911
%	36.33	63.67	
State	41,048	71,472	112,520
%	36.48	63.52	

$\chi^2 (1, N=971) = 32.509, p < .001$

$\chi^2 (1, N=112,580) = 35.139, p < .001$

**Grade 8 Writing
1999**

2x3	Level			Row total
	Satisfactory	Moderate	Low	
Mid-Michigan	1	20	30	51
%	1.96	39.22	58.82	
District	121	606	272	999
%	12.11	60.66	27.23	
State	24,407	66,119	20,220	110,746
%	22.04	59.7	18.26	

$\chi^2 (2, N=1,050) = 24.889, p < .001$

$\chi^2 (2, N=110,797) = 58.810, p < .001$

**Grade 8 Science
1998**

2x2	Level		Row total
	Failed	Passed	
Mid-Michigan	50	1	51
%	98.04	1.96	
District	878	121	999
%	87.89	12.11	
State	86,339	24,407	110,746
%	77.96	22.04	

Grade 8 Science 1998

$\chi^2 (1, N=1,050) = 4.869, p = .027$

$\chi^2 (1, N=110,797) = 11.964, p < .001$

2x3	Level			Row total
	Satisfactory	Moderate	Low	
Mid-Michigan	1	16	43	60
%	1.67	26.67	71.67	
District	139	521	267	927
%	14.99	56.2	28.8	
State	26,154	64,916	22,473	113,543
%	23.03	57.17	19.79	

Grade 8 Science 1999

$\chi^2 (2, N=987) = 49.058, p < .001$

$\chi^2 (2, N=113,603) = 103.075, p < .001$

2x2	Level		Row total
	Failed	Passed	
Mid-Michigan	59	1	60
%	98.33	1.67	
District	788	139	927
%	85.01	14.99	
State	87,389	26,154	113,543
%	76.97	23.03	

Grade 8 Science 1999

$\chi^2 (1, N=987) = 8.224, p = .004$

$\chi^2 (1, N=113,603) = 15.450, p < .001$

2x4	Level				Row total
	Level1	Level2	Level3	Level4	
Mid-Michigan	1	0	5	57	63
%	1.59	0	7.94	90.48	
District	22	145	261	502	930
%	2.37	15.59	28.06	53.98	
State	5,446	26,120	33,927	47,946	113,421
%	4.8	23.01	29.91	42.27	

Grade 8 Social Studies 1999

$\chi^2 (3, N=993) = 32.862, p < .001$

$\chi^2 (3, N=113,484) = 60.612, p < .001$

2x2	Level		Row total
	Failed	Passed	
Mid-Michigan	62	1	63
%	98.41	1.59	
District	908	22	930
%	97.63	2.37	
State	107,975	5,446	113,421
%	95.2	4.8	

Grade 8 Social Studies 1999

$\chi^2 (1, N=993) = 0.158, p = .691$

$\chi^2 (1, N=113,484) = 1.424, p = .233$