

# Chapter Ten

## Mt. Clemens Secondary Academies

### Mt. Clemens, Michigan

#### 10.1 Descriptive Summary of School

Edison began operating schools in Mt. Clemens in 1995. Mt. Clemens is a small Title I district that lies just north of Detroit. It is largely a low income community, although there are some pockets of expensive housing as well as a developed business section in the community. Martin Luther King Jr. Academy was the first school in the district to be operated by Edison. The following year, Edison began operating a junior academy within the district middle school. The junior and senior academies, referred to as the Mt. Clemens Secondary Academies, are the focus of this case study. The academies are essentially “schools within schools” since they are housed in the local secondary education complex. Nevertheless, the Edison-run academies have their own administration and operational budgets. Edison reported that the total enrollment in the secondary academies totaled 481 for the 1999-00 school year. These schools are operated by Edison under contract with the school district.

These two Edison academies may be considered as two separate schools since the Michigan Department of Education has assigned different building codes for them. During the first few years of operation, however, there were no separate building codes designated for the Edison academies and their middle and high school counterparts in the district. Therefore, it was impossible to disaggregate the test data as well as much of the school data for the first few years these academies were in operation. In its last annual report, Edison (1999) reported on these two academies as a separate school/case entitled “Mt. Clemens Secondary Academies.” In this report, we will also consider the two academies as one entity, although the test data we report will be grade specific.

The Mt. Clemens Secondary Academies have a combined staff of approximately 40 persons including teachers and administrators. In its second annual report, Edison (1999, p. 32) listed the following information about the academies for the 1997-98 school year: student mobility was 4.7 percent; the student/staff ratio was 15.1:1; total enrollment was 603, of which 31.7 percent were African Americans, 1.8 percent were Asian/Pacific, 2.3 percent were Hispanic, and 62.9 percent were Caucasian. According to data presented in Edison’s annual reports, the proportion of students receiving special education has dropped in recent years (11.4 percent in 1997-98 and 7.9 percent in 1999-00). The proportion of students qualifying for free or reduced lunches has dropped even more sharply (27 percent in 1997-98 down to 12.5 percent in 1999-00).

The total enrollment for the school district has steadily increased from 3,132 students during the 1994/1995 school year to 3,448 students during the 1998/1999 school year. Enrollments in the

secondary schools, both district- and Edison-operated, have fluctuated extensively during the same period, however. Enrollment at the academies is reflected in the decline of total students enrolled at Mt. Clemens Middle and High Schools. Though in its second year of operation, the Junior Academy enrollment declined from 425 (1997/1998) students to 375 (1998/1999) students. In contrast, the Senior Academy increased from 127 (1997/1998) students to 172 (1998/1999) students.

The student-teacher ratio for the Junior Academy went from 17.7 students per teacher during the 1997/1998 school year to 15 students per teacher the following year, while the student-teacher ratio for the Senior Academy increased from 12.7 students during the 1997/1998 school year to 21.5 students. These figures, collected from the Michigan Department of Education (MDE) K-12 Database, are close, but not identical to the figures reported by Edison (1999). The changes in student-teacher ratios may reflect the decrease in enrollments at the junior academy and the increase in enrollments at the senior academy, if few or no new teachers were hired or let go for that year (1998/1999). The average student-teacher ratios for Mt. Clemens Middle and High Schools were higher than their Edison counterparts.

Expenditures per pupil at the Junior Academy during the 1997/1998 school year were \$5,556, which was higher than the other middle school in the district, which spent \$5,193 per pupil in the same year. Nevertheless, Edison's senior academy spent far less than the district high school: \$5,242 compared with \$7,299. This may be because the district high school has vocational programs that are more expensive than other academic programs.

Table 10:1 Descriptive Information for Mt. Clemens Secondary Academies and District Middle and High Schools (1994/95 - 1999/2000)

	Grades	Pre-Edison				
		1994-95	1995-96	1996-97	1997-98	1998-99
<b>Enrollment</b>						
Mt. Clemens Junior Acad. (Edison)	6-8	-	-	-	425	375
Mt. Clemens Senior Acad. (Edison)	9-11	-	-	-	127	172
Mt. Clemens Middle School	6-8	642	-	689	354	340
Mt. Clemens High School	9-12	739	1,344	1,395	578	536
Mt. Clemens Comm. School District	K-12	3,132	3,162	3,198	3,378	3,448
<b>Pupil/Teacher Ratio</b>						
Mt. Clemens Junior Acad. (Edison)		-	-	-	17.7	15.0
Mt. Clemens Senior Acad. (Edison)		-	-	-	12.7	21.5
Mt. Clemens Middle School		24.7	-	17.6	15.7	18.9
Mt. Clemens High School		28.0	53.3	54.2	16.8	32.1
Mt. Clemens Comm. School District		24.4	25.2	20.4	20.6	19.8

According to the Edison Annual School Performance Report for the 1997/1998 school year, 27 percent of its students qualified for free and reduced lunch, which is lower than the district middle school but similar to district high school figures in the same year. Overall, the Edison academies have a lower proportion of their students qualifying for free or reduced lunches than the district average of 41 percent in 1997-98.

## 10.2 Data Available for Our Analyses

Tests administered at the Mt. Clemens academies include the Michigan Educational Assessment Program (MEAP) as well as the Iowa Test of Basic Skills (ITBS). The Iowa Test of Basic Skills was administered at the school, at least during the 1996-97 and 1997-98 school years, although the results from this norm-referenced test were not reported in Edison's second annual report (1999). We were unable to secure individual student achievement data on the ITBS from Edison for this school, although we did receive copies of the summaries of school results for 1996/97 that were supplied to the school by the test company. It was unclear whether or not the school summaries included both the Edison academy and the district middle school that share the building.

For the secondary academies, the MEAP has tests for grade 7 students in reading and math; for grade 8 students in science, writing, and social studies; and for grade 11 in reading, math, science, and writing. Unfortunately, we had difficulty securing data disaggregated from the Michigan Department of Education. We were able to identify partially complete MEAP data (percentage data only) for the Junior Academy for 1996-97 and 1997-98 since Edison reported disaggregated figures in its second annual report (Edison, 1999). Complete data for the grade 7 and 8 tests should have been available, but the results for the school were merged with the results for the district's middle school for 1996-97 and 1997-98 (the Edison school and the district middle school had the same building code until 1998-99). Separate building codes were used in 1999, so we could more easily separate the data between the two schools that occupied the same building. In addition to the partially complete 96/97 and 97/98 data, we were able to extract data from the 1998 through the 2000 MEAP assessments in grade 7 math and reading tests; and from the 1999 and 2000 grade 8 science, writing, and social studies tests. We secured one year of data for the MEAP High School Test (HST), which measures students' academic performance in grade 11, since the Edison senior academy did not enroll grade 11 students until 1998-99.

The grade 7 math and reading and the grade 8 science and writing tests are scored along a 3-point ordinal scale: Satisfactory, Moderate, and Low. The grade 8 science test is scored as Proficient, Novice, and Not Yet Novice, while the writing test is scored on a 2-point scale: Proficient or Not Yet Proficient. The grade 8 social studies test is scored on a 4-point ordinal scale: (1) exceeded standards, (2) met standards, (3) basic level, and (4) apprentice. The grade 11 test is scored as (1) exceeded standards, (2) met standards, (3) basic, and (4) not endorsed. Additional information on the MEAP is provided in Appendix A.

## 10.3 Chi-Square Analysis of MEAP Data

A chi-square analysis was initiated on data available from the Michigan Department of Education on the outcomes of the Michigan Educational Assessment Program (MEAP), which is the state-mandated criterion-referenced test. As previously discussed, Mt. Clemens Secondary Academies present a unique case since the two academies that comprise the school are actually housed within the district's middle and high school. During the first two years that the Junior Academy was operated by Edison, the test results were aggregated with the district's middle school since they shared the same building code assigned by the Michigan Department of Education until separate building codes were used in 1999. Thus, for the first two years, it was more difficult to disaggregate the data. We were, however, able to calculate the number of students taking the grade 7 MEAP Math and Reading tests for 1998-99 from district and Edison numbers. Thus, for the grade 7 MEAP we included three years of data: 1997/98, 1998/99 and 1999/00; for grade 8 we secured data for only two years: 1998/99 and 1999/00; and for the HST, grade 11, we had only one year of data: 1998-99.

### Construction of the comparison groups

We constructed two different comparison groups for our chi-square analyses. Since we were interested in examining the number/proportion of students who met state standards ("passing") or conversely the number/proportion of students who did not meet state standards ("failing") on the MEAP within Mt. Clemens Secondary Academies, we needed to define a suitable comparison group. In the grades 7 and 8 chi-square analyses, our first comparison was with Mt. Clemens Middle School. This comparison was essentially equivalent to the district comparison in the other case studies, since this is the only other middle school in the district. The state performance constituted our second comparison group. In the HST analyses we utilized Mt. Clemens High School (district) as the comparison group. As was the case at the middle school level, Mt. Clemens High School is the only other high school in the district.

Because the state demographics vary from those of Mt. Clemens Secondary Academies and Mt. Clemens Middle School, we believe that comparisons with state averages can yield further information regarding the relative gains of the Edison school. Also, since Edison claims that advances in other district schools are—in part—due to its presence, we use the state as a more distant point of comparison that cannot be easily influenced by the presence of Edison's schools.

### General procedure

Utilizing published data from the Michigan Department of Education (MDE), we made comparisons at grades 7, 8, and 11. Percentage data (students in each scoring category) were converted to raw frequency data prior to chi-square analysis. To insure independence of the rows in the chi-square tables, the raw frequencies for each scoring category of the MEAP in the state comparisons were down-weighted by subtracting the number of students in that category from Mt. Clemens Secondary Academies. Thus, the state numbers reflect all students in the state exclusive of those in Mt. Clemens Secondary Academies.

We constructed four chi-square analyses for each subtest nested within year and grade level. Two of these analyses were on uncollapsed data; that is, all scoring levels were represented in the contingency table (e.g., a 2x3) for the district and the state comparisons. Note that the uncollapsed grade 8 social studies analyses constituted a 2x4 contingency table. Two follow-up analyses were conducted on the data after collapsing the multilevel scoring into a dichotomy (pass, fail), thus producing 2x2 contingency tables. According to the Michigan Department of Education, a score in the “satisfactory” category constitutes “passing” or meeting the state standard for that particular grade and subject. On the other hand, the “moderate” and “low” categories refer to “slightly below the state standard” and “not well prepared,” respectively. Students who have scores in the moderate and low categories have not met state standards and fall into the “fail” category in our 2x2 chi-square and odds-ratio analyses.

### Chi-square findings

Individual contingency tables for the chi-square analyses of the 1999 MEAP administration are presented in Appendix E. A summary of the chi-square results on the grade 7 MEAP math and reading subtests are presented in Table 10:2. Overall, there were statistically significant differences in the cell proportions in both the 2x3 and 2x2 tables such that there were lower proportions of students in the higher categories from the Junior Academy relative to both the district and state.

Relative to the district, Mt. Clemens Jr. Academy students significantly outperformed students from the district in both 1999 and 2000. However, Mt. Clemens students fell significantly below the performance level of the remainder of the state. In terms of performance on the reading test, Mt. Clemens students performed at comparable levels relative to the district but significantly below students in the rest of the state.

Table 10:2 Summary of Chi-Square Findings for Mt. Clemens Academies, Grade 7

	1998	1999	2000
<i>Mathematics</i>			
Mt. Clemens Jr. Acad. vs. District	ns/ns	sig/sig	sig/sig
Mt. Clemens Jr. Acad vs. State	ns/ns	sig/sig	ns/ns
<i>Reading</i>			
Mt. Clemens Jr. Acad vs. District	ns/ns	ns/ns	ns/ns
Mt. Clemens Jr. Acad vs. State	sig/sig	sig/sig	sig/sig

Note: Each result cell in the matrix is divided, with the results for the 2x3 analysis on the left-hand side and the results for 2x2 analysis on the right-hand side.

Table 10:3 Summary of Chi-Square Findings for Mt. Clemens Academies, Grade 8

	1999	2000
<i>Science</i>		
Mt. Clemens Jr. Acad. vs. District	ns/ns	ns/ns
Mt. Clemens Jr. Acad. vs. State	sig/sig	sig/sig
<i>Writing</i>		
Mt. Clemens Jr. Acad. vs. District	--/ns	--/sig
Mt. Clemens Jr. Acad. vs. State	--/sig	--/sig
<i>Social Studies</i>		
Mt. Clemens Jr. Acad. vs. District	sig/ns	sig/sig
Mt. Clemens Jr. Acad. vs. State	sig/sig	sig/sig

Note: Each result cell in the matrix is divided with the results for the 2x3 analysis on the left-hand side (2x4 for social studies), and the results for 2x2 analysis on the right-hand side.

Grade 8 chi-square analysis included the MEAP tests of science, writing, and social studies for the 1999 and 2000 assessments. We secured data for a 2x2 analysis of the writing results only. As can be seen from Table 10:3, on the MEAP science test, the Mt. Clemens Junior Academy students performed at a level comparable to students in the district, but again fell below students in the rest of the state. This was also true on the writing test, although in 2000, students from Mt. Clemens Jr. Academy also fell significantly below district students.

Regarding the MEAP social studies test, students at Mt. Clemens Jr. Academy tended to score significantly better than students in the district but worse than students in the rest of the state.

Sixteen chi-square analyses were evaluated in the MEAP High School Test (HST) in which four subtests are administered: mathematics, reading, science, and writing. Table 10:4 presents the summary findings for these analyses. These results are strikingly similar and consistent. All sixteen analyses are not significantly different, providing compelling evidence that the students in Edison’s Senior Academy are meeting the minimum state standards in comparable proportions to students in the district and in the state.

## 10.4 Odds Ratio Analysis of the MEAP Data

One of the many possible statistics that can be derived from a 2x2 contingency table is the odds ratio statistic (OR) and corresponding 1- $\alpha$  confidence interval. As presented in Section 2.4 of this report, the 2x2 tables analyzed in the previous section can be thought of as representing consecutive class cohorts in a prospective design. From a classical epidemiological perspective, the students in the Edison school can be thought of as the “exposed” group, that is, exposed to the “Edison-effect,” and students in the comparison group as the unexposed group. From this perspective, each yearly comparison is a new cohort, measured over a period of years. There is a minimal possibility for cohort contamination if a number of students in one group are not promoted to the next grade level. However, we think this represents a very small number of possible cases and therefore has minimal impact on the validity of these analyses. Section 2.4 in the report details the OR statistic and corresponding 1- $\alpha$  confidence interval (CI). We calculated and charted OR for each of the 2x2 tables constructed from the chi-square analyses presented above. Note that the Breslow-Day statistic cannot be calculated since there is only one time point. Exhibit 10:1 presents these findings.

Table 10:4 Summary of Chi-Square Findings for Mt. Clemens Academies, HST

	1999
<i>Math</i>	
Mt. Clemens Sr. Acad. vs. District	ns/ns
Mt. Clemens Sr. Acad. vs. State	ns/ns
<i>Reading</i>	
Mt. Clemens Sr. Acad. vs. District	ns/ns
Mt. Clemens Sr. Acad. vs. State	ns/ns
<i>Science</i>	
Mt. Clemens Sr. Acad. vs. District	ns/ns
Mt. Clemens Sr. Acad. vs. State	ns/ns
<i>Writing</i>	
Mt. Clemens Sr. Acad. vs. District	ns/ns
Mt. Clemens Sr. Acad. vs. State	ns/ns

## Odds ratio findings, grade 7

Four OR analyses were evaluated at grade 7, two for each subject test on the MEAP. Table 10:5 presents summary OR findings for the grade 7 math and reading tests. Students at Mt. Clemens Jr. Academy performed significantly better than students in the district; the OR is below 1.0 and the 95 percent CI does not eclipse 1.0. The Breslow-Day statistic was not statistically significant; thus, one OR and CI can represent this protective effect. However, the picture is the opposite when one considers performance against the state where students at Mt. Clemens Jr. Academy had slightly higher odds for failure relative to students in the rest of the state. In reading, Mt. Clemens students performed at par over the three year period relative to the district students, but showed a slightly higher odds for failure relative to the students in the rest of the state.

Table 10:5 Summary of Odds Ratio Findings for Mt. Clemens Academies, Grade 7

	B-D OR	LB	UB
<i>Odds of not meeting standard compared with district</i>			
Mathematics	0.543	0.392	0.753
Reading	0.753	0.536	1.057
<i>Odds of not meeting standard compared with state</i>			
Mathematics	1.318	1.052	1.650
Reading	1.817	1.440	2.292

## Odds ratio findings, grade 8

Four OR analyses were evaluated, two for each subject test on the MEAP. Table 10:6 presents summary OR findings for the grade 8 science and writing tests. Students at Mt. Clemens Jr. Academy evidenced striking improvements relative to district students over the two year period on both tests. In both analyses, the Breslow-Day statistics were statistically significant, and the individual ORs showed a dramatic improvement in Mt. Clemens students' performance (see Table 10:6). In science, grade 8 students from Mt. Clemens had about twice the odds for failure in 1999, but in 2000 grade 8 students had about half the odds for failure. In writing, Mt. Clemens grade 8 students showed comparable passing rates to district students in 1999, but in 2000 Mt. Clemens grade 8 students were about one-sixth as likely to fail the writing MEAP. A similar picture emerges from the state comparison, but not as strong. In science, Mt. Clemens students were about twice as likely to fail; but in writing these students showed strong improvement, decreasing their odds of failure by about half.

Table 10:6 Summary of Odds Ratio Findings for Mt. Clemens Academies, Grade 8

	1999	2000	B-D OR
<i>Odds of not meeting standard compared with district</i>			
Science	2.078	0.495	p<.05
Writing	1.104	0.152	p<.0001
<i>Odds of not meeting standard compared with state</i>			
Science			2.383
Writing	2.998	1.526	p<.05

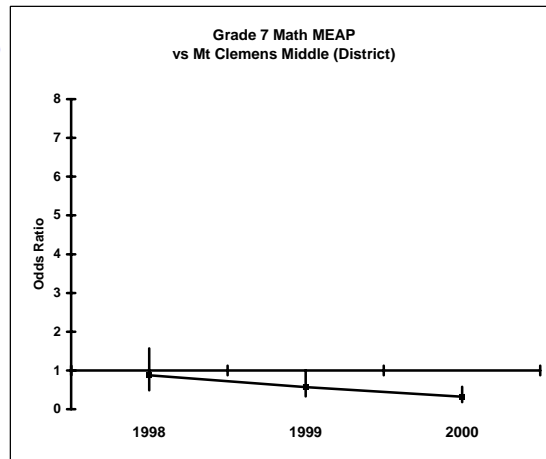
## Exhibit 10:1 Results of the Grade 7 Odds Ratio Analysis for Mt. Clemens Secondary Academies 1998-00

### Grade 7 MEAP Math vs. Mt. Clemens Middle School (district)

Year	U CI	L CI	OR
1998	1.57	0.488	0.875
1999	0.997	0.329	0.573
2000	0.575	0.182	0.323

Breslow-Day for Homogeneity of Odds Ratio  
Chi-square (2, N=600) = 5.765, p = .0560

Common OR = 0.543  
U CL = 0.753  
L CL = 0.392

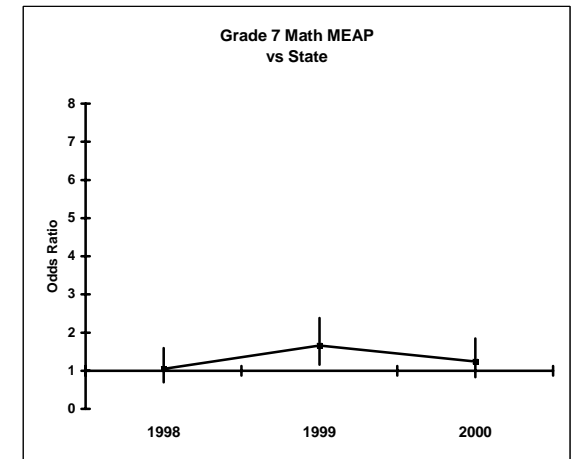


### Grade 7 MEAP Math vs. State

Year	U CI	L CI	OR
1998	1.592	0.694	1.051
1999	2.383	1.159	1.662
2000	1.843	0.83	1.237

Breslow-Day for Homogeneity of Odds Ratio  
Chi-square (2, N=345,457) = 2.806, p = .2458

Common OR = 1.318  
U CL = 1.650  
L CL = 1.052

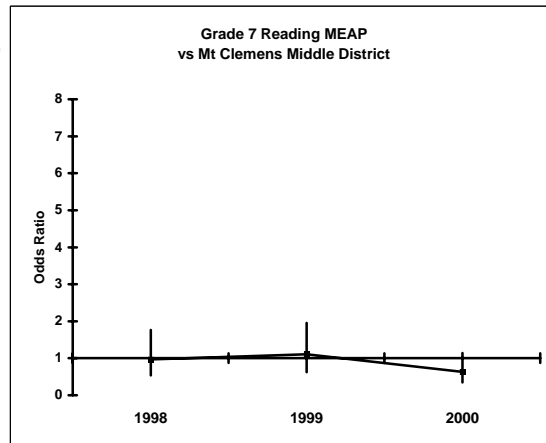


### Grade 7 MEAP Reading vs. Mt. Clemens Middle School (district)

Year	U CI	L CI	OR
1998	1.764	0.533	0.970
1999	1.958	0.623	1.104
2000	1.139	0.35	0.631

Breslow-Day for Homogeneity of Odds Ratio  
Chi-square (2, N=613) = 1.082, p = .5823

Common OR = 0.753  
U CL = 1.057  
L CL = 0.536

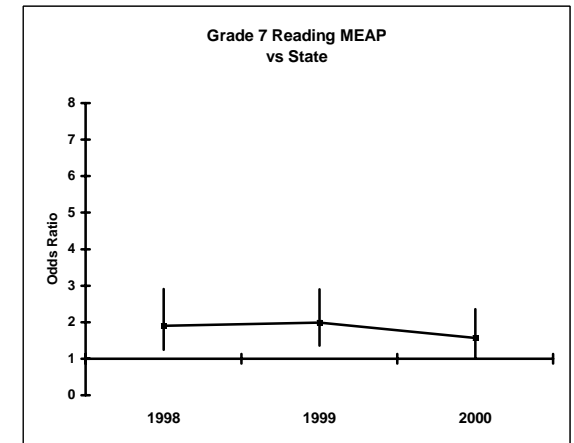


### Grade 7 MEAP Reading vs. State

Year	U CI	L CI	OR
1998	2.91	1.245	1.904
1999	2.904	1.361	1.988
2000	2.354	1.042	1.566

Breslow-Day for Homogeneity of Odds Ratio  
Chi-square (2, N=336,208) = 0.775, p = .6787

Common OR = 1.817  
U CL = 2.292  
L CL = 1.440

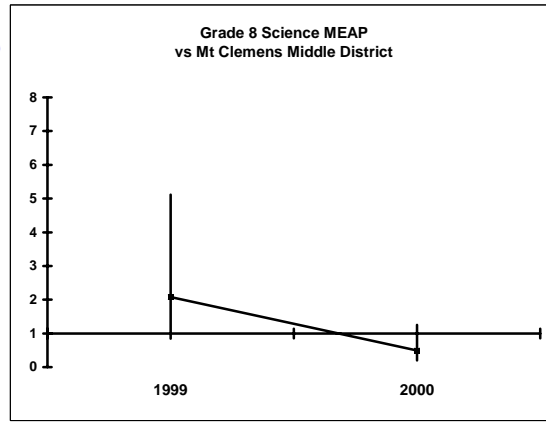


## Exhibit 10:2 Results of the Grade 8 Odds Ratio Analysis for Mt. Clemens Secondary Academies 1998-00

### Grade 8 MEAP Science vs. Mt. Clemens Middle School (district)

Year	U CI	L CI	OR
1999	5.115	0.844	2.078
2000	1.254	0.196	0.495

Breslow-Day for Homogeneity of Odds Ratio  
Chi-square (2, N=398) = 4.867, p = .0274

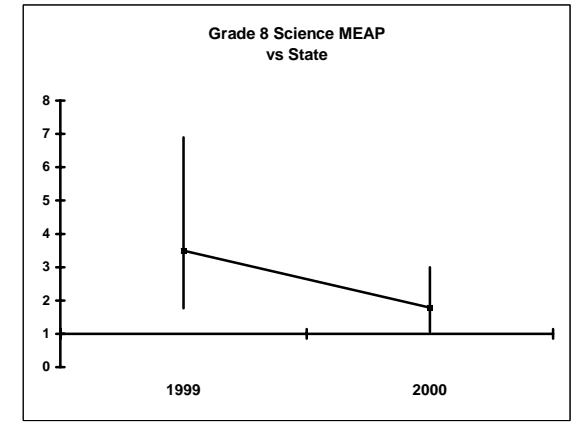


### Grade 8 MEAP Science vs. State

Year	U CI	L CI	OR
1999	6.899	1.768	3.492
2000	2.994	1.066	1.787

Breslow-Day for Homogeneity of Odds Ratio  
Chi-square (2, N=226,064) = 2.429, p = .1191

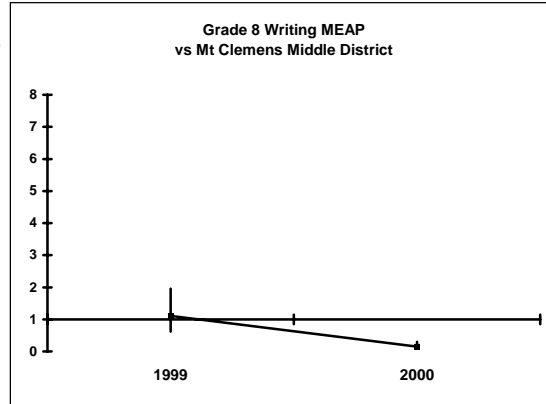
Common OR = 2.383  
L CL = 1.583



### Grade 8 MEAP Writing vs. Mt. Clemens Middle School (district)

Year	U CI	L CI	OR
1999	1.955	0.623	1.104
2000	0.297	0.078	0.152

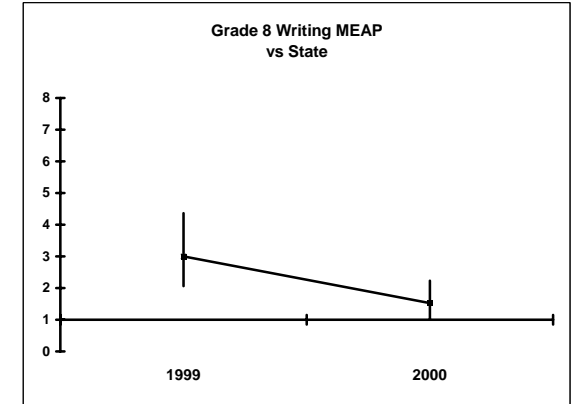
Breslow-Day for Homogeneity of Odds Ratio  
Chi-square (2, N=403) = 20.119, p < .0001



### Grade 8 MEAP Writing vs. State

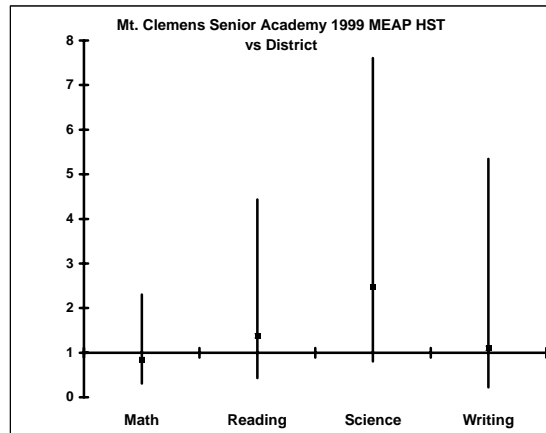
Year	U CI	L CI	OR
1999	4.366	2.058	2.998
2000	2.23	1.044	1.526

Breslow-Day for Homogeneity of Odds Ratio  
Chi-square (2, N=223,936) = 6.201, p = .0128



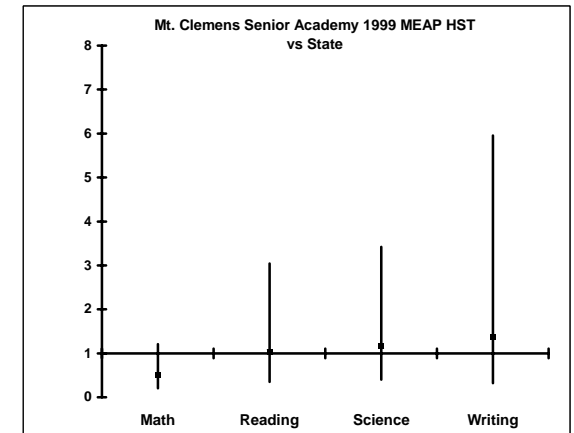
### Mt. Clemens Senior Academy 1999 Grade 11 MEAP vs. District

Subject	U CI	L CI	OR
Math	2.301	0.31	0.845
Reading	4.436	0.43	1.381
Science	7.607	0.804	2.473
Writing	5.347	0.224	1.095



### Mt. Clemens Senior Academy 1999 Grade 11 MEAP vs. State

Subject	U CI	L CI	OR
Math	1.205	0.207	0.500
Reading	3.041	0.352	1.034
Science	3.422	0.397	1.165
Writing	5.953	0.319	1.377



## Odds ratio findings, grade 11 MEAP HST

The HST test is administered in grade 11, covering writing, science, reading, and math. Eight OR analyses (See Table 10:7) were examined for the 1999 MEAP administration, and the results are all quite similar. Thus, students are generally at even odds for failing (or passing) the HST relative to students in either the district or the state.

## 10.5 Overall Performance on the MEAP Assessments

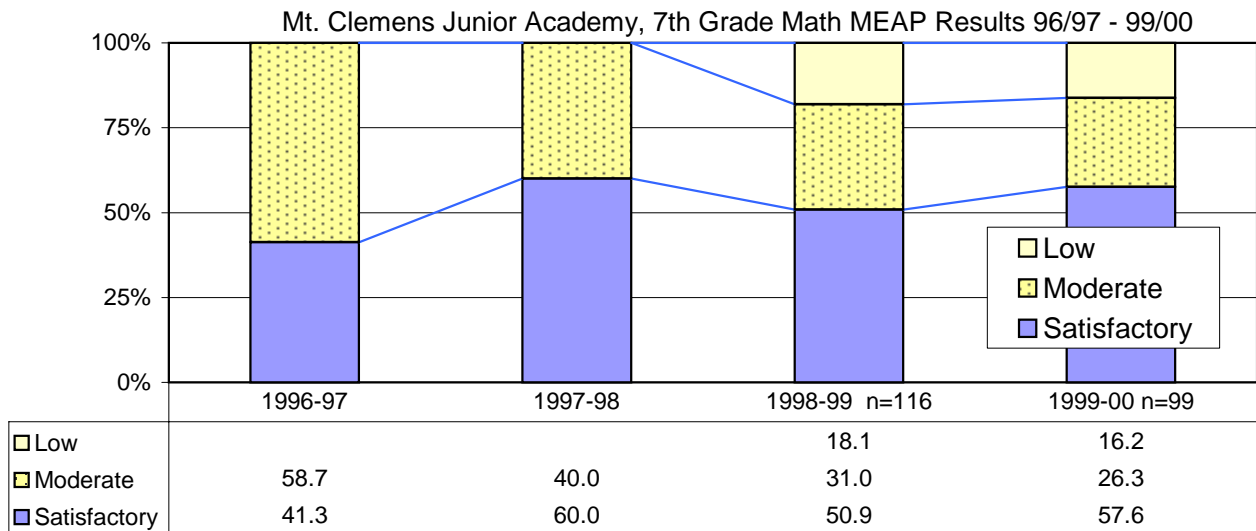
Exhibits 10:3 and 10:4 contain charts that illustrate the relative growth of consecutive groups of grade 7 students at the Edison Junior Academy in relation to the district middle school as well as the average performance in the state. According to Edison (1999), its Mt. Clemens Junior Academy students showed a large gain in math between 1996-97 and 1997-98 (see Exhibit 10:3) when the proportion of students meeting state expectations grew from 41.3 percent to 60 percent. The following year, however, the proportion of grade 7 students meeting state expectations in math dropped by about 9 percent. Then in 1999-00 it rebounded up to about 58 percent of the students meeting the state standards. Edison grade 7 students made small but consecutive gains in reading (Exhibit 10:4), and these gains were about the same as in the state. While gains were being made in the Edison half of the school, the scores for the district middle declined.

Like the grade 7 students, the grade 8 Edison students showed gains in science, writing, and social studies. The district students, housed in the other half of the building, lost ground on the state tests. In fact, the proportion of district students meeting state standards in science and writing dropped sharply between the 1998-99 school year and the 1999-00 school year. Exhibit 10:5 illustrates the relative performance on the MEAP science, writing, and social studies tests for the Edison junior academy, the district middle school, and the state of Michigan. The charts in Exhibit 10:6 cover only grade 8 students for the 1998-99 school year, but illustrate the breakdown of students by performance. From these charts we can see that both Mt. Clemens Middle School and the Edison Junior Academy are still below the average performance levels in the state. Because this is an urban and largely low-income district, the latter finding is not surprising.

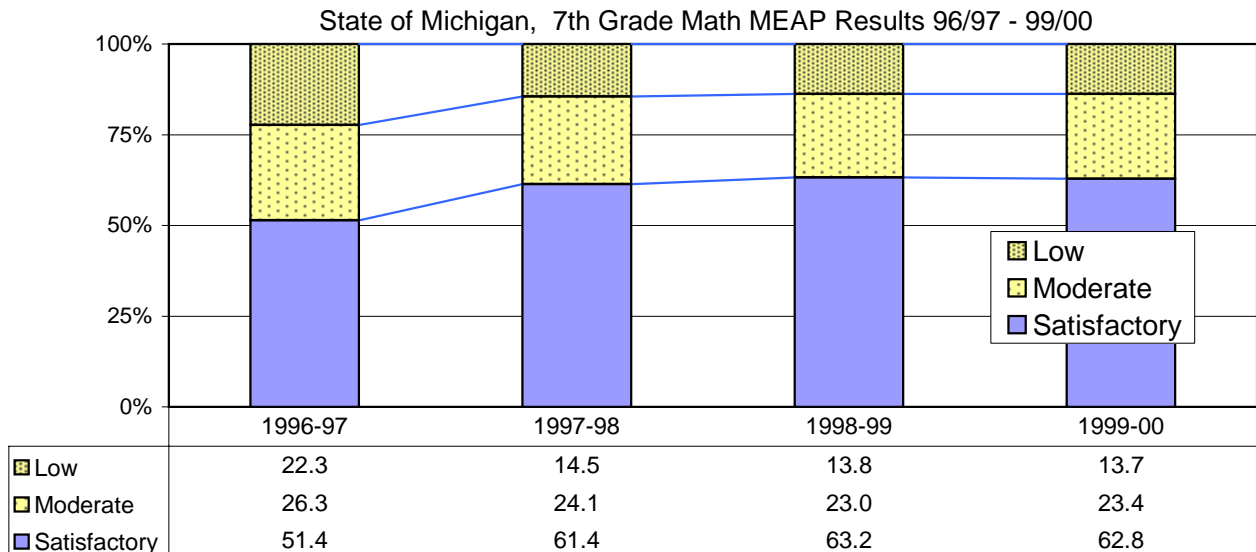
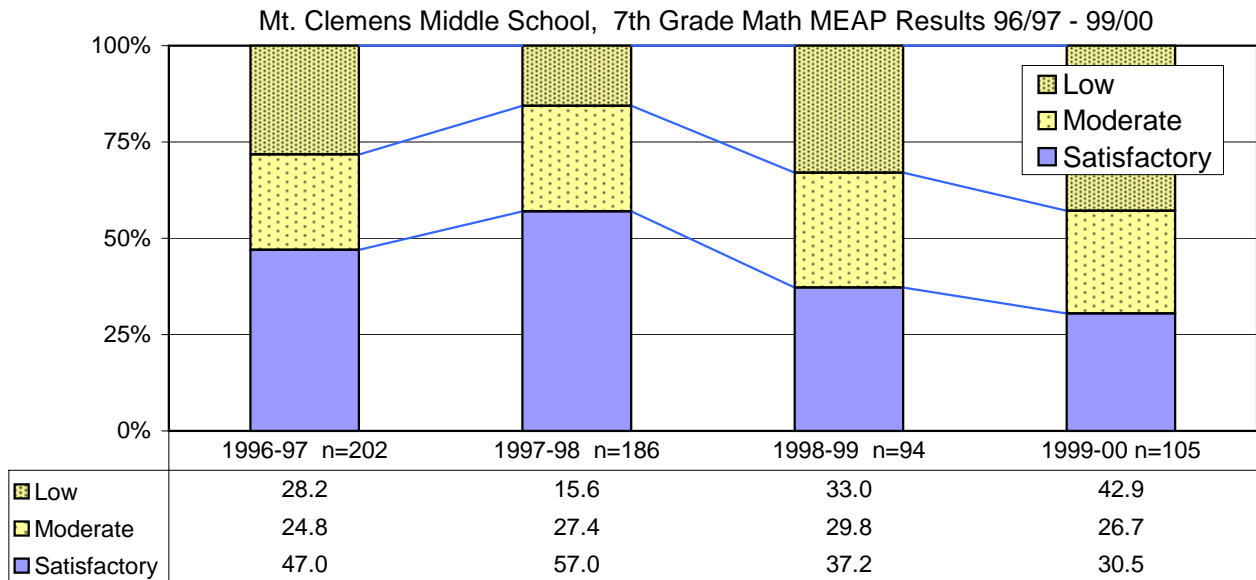
Table 10:7 Summary of Odds Ratio Findings for Mt. Clemens Academies, HST

	B-D OR	LB	UB
<i>Odds of not meeting standards compared with district</i>			
Writing	1.095	0.224	5.347
Science	2.473	0.804	7.607
Reading	1.381	0.430	4.436
Mathematics	0.845	0.310	2.301
<i>Odds of not meeting standards compared with state</i>			
Writing	1.377	0.319	5.953
Science	1.165	0.397	3.422
Reading	1.034	0.352	3.041
Mathematics	0.500	0.207	1.205

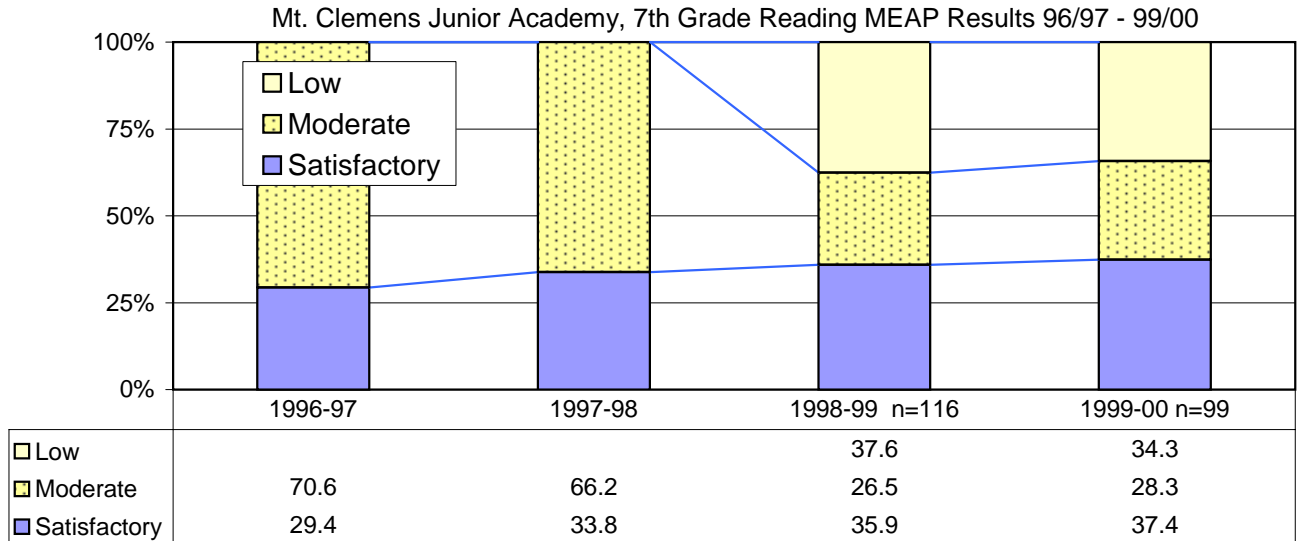
### Exhibit 10:3 Performance on Grade 7 Math for Edison, District, and State



Note: The MEAP results available from the Michigan Department of Education for 1996-97 and 1997-98 were aggregated with the local middle school that shared the same building. The results for 1996-97 and 1997-98 were derived from the figures reported by Edison and only include figures for satisfactory or unsatisfactory (i.e., moderate plus low).



# Exhibit 10:4 Performance on Grade 7 Reading for Edison, District, and State



Note: The MEAP results available from the Michigan Department of Education for 1996-97 and 1997-98 were aggregated with the local middle school that shared the same building. The results for 1996-97 and 1997-98 were derived from the figures reported by Edison and only include figures for satisfactory or unsatisfactory (i.e., moderate plus low).

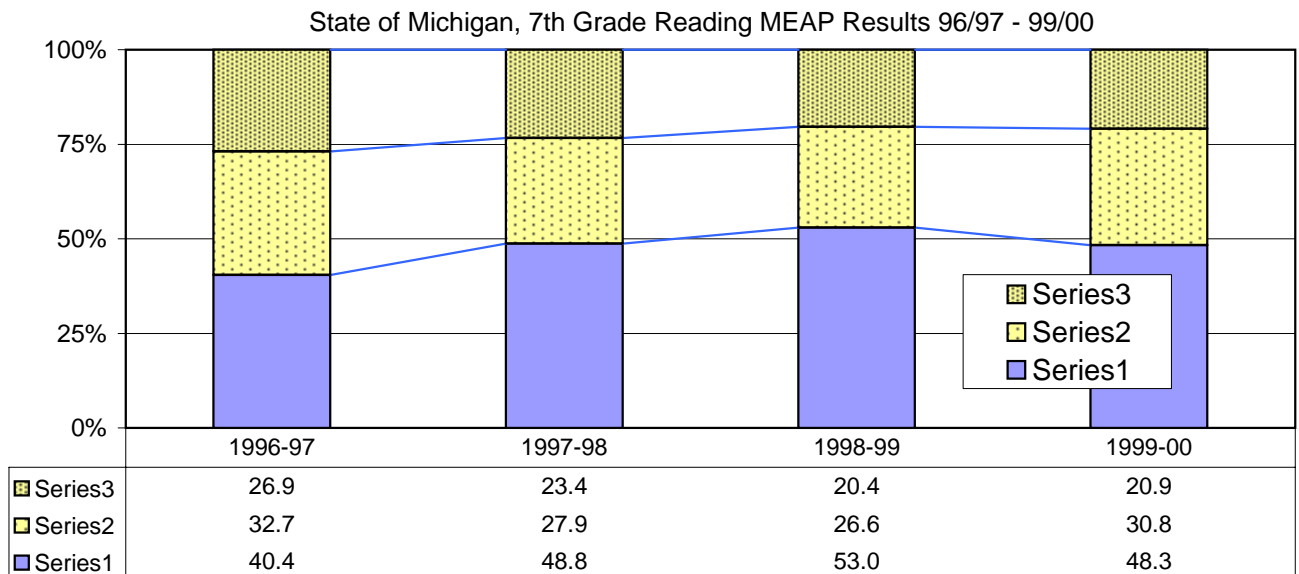
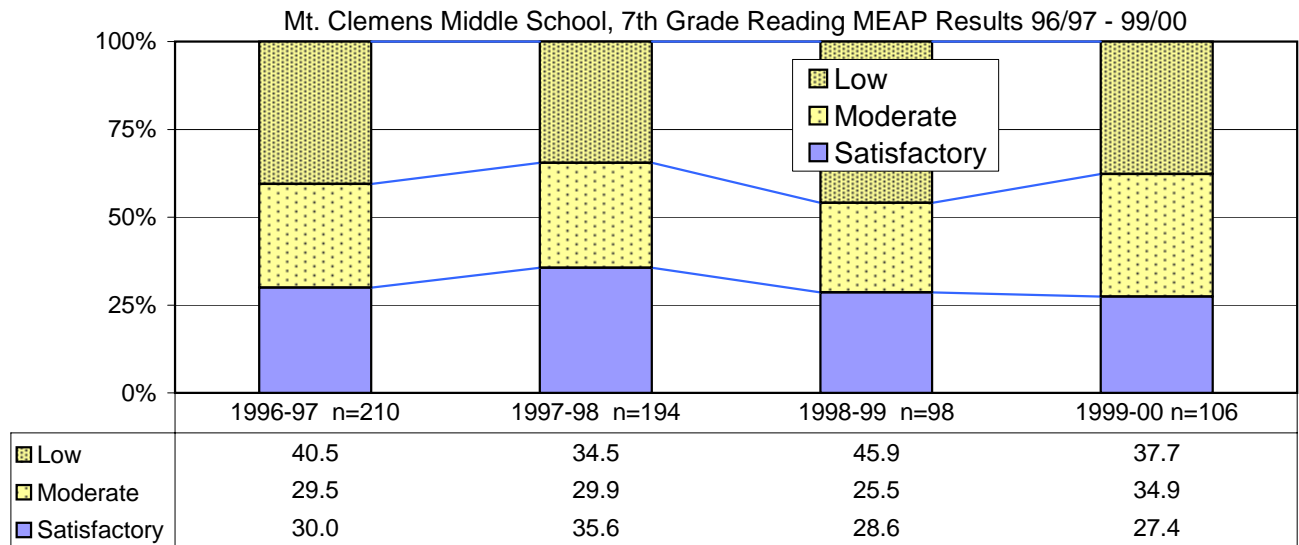
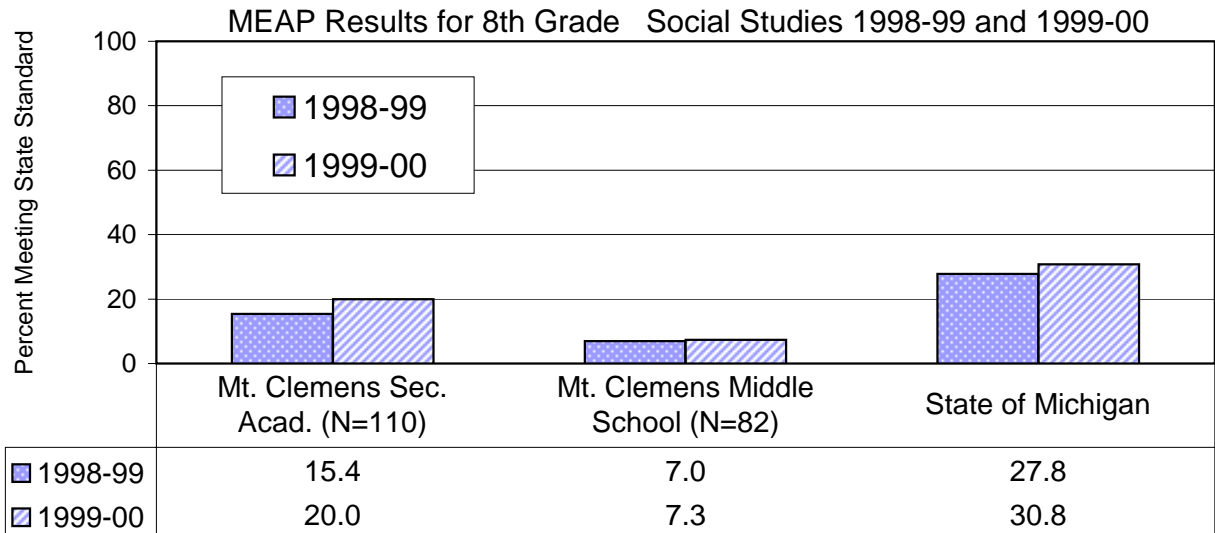
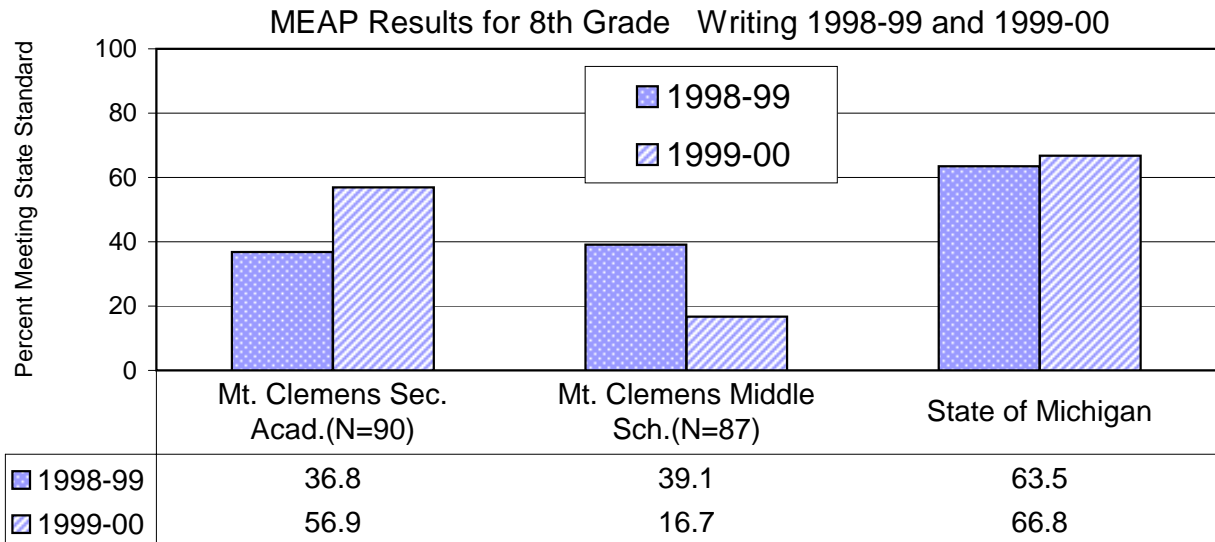
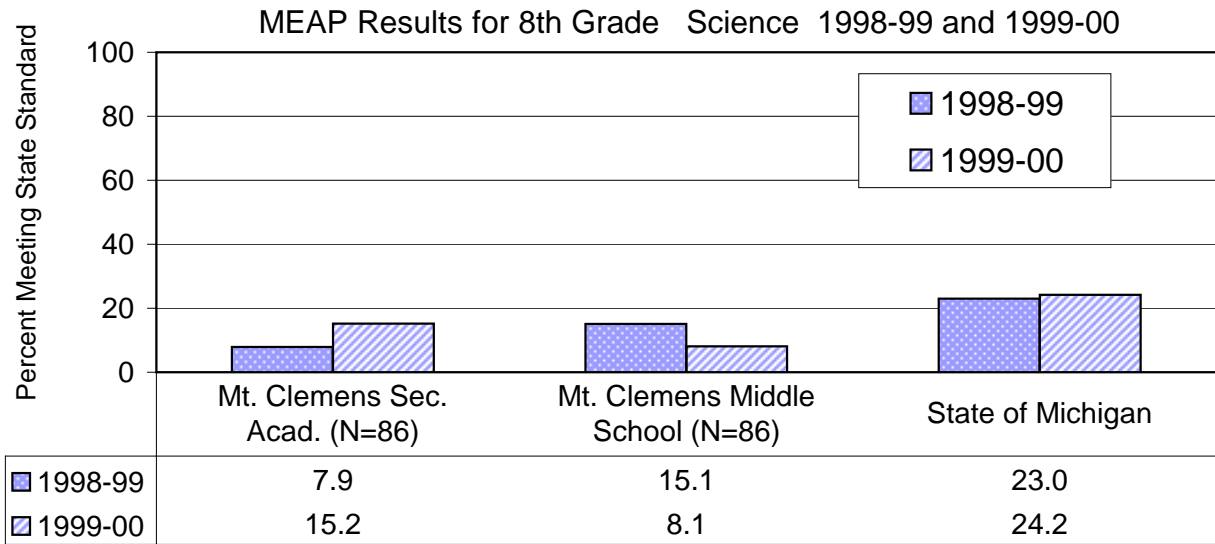


Exhibit 10:5 Performance on Grade 8 Science, Writing, and Social Studies for Edison, District, and State



N refers to the number of test takers in 1999-00

Exhibit 10:6 Performance on Grade 8 Science, Writing, and Social Studies for Edison, District and State

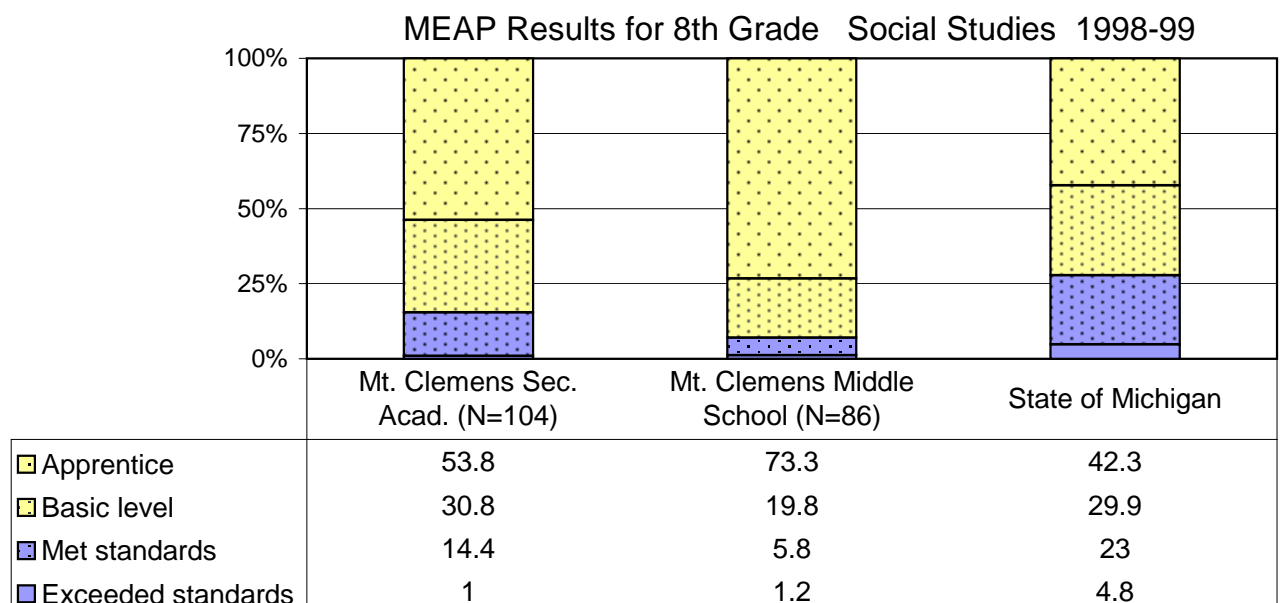
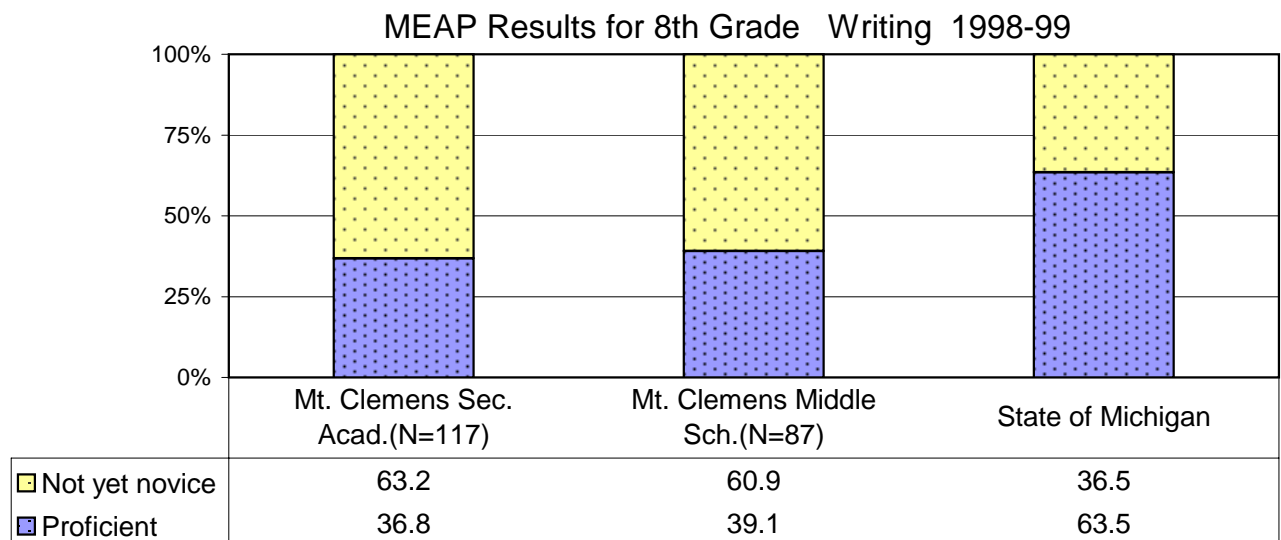
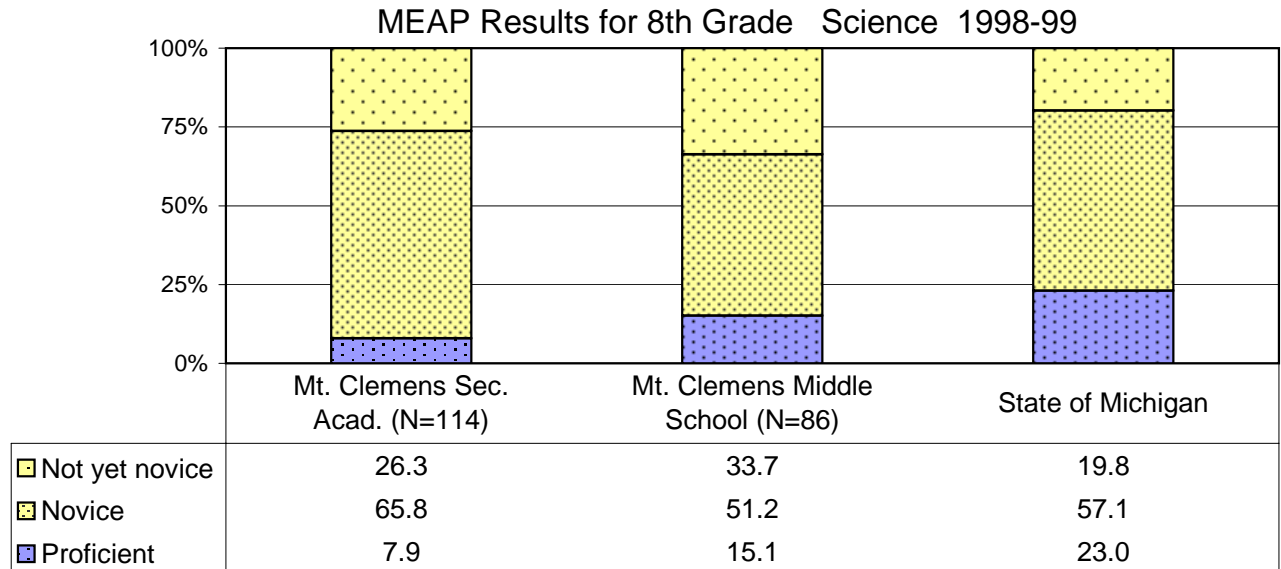
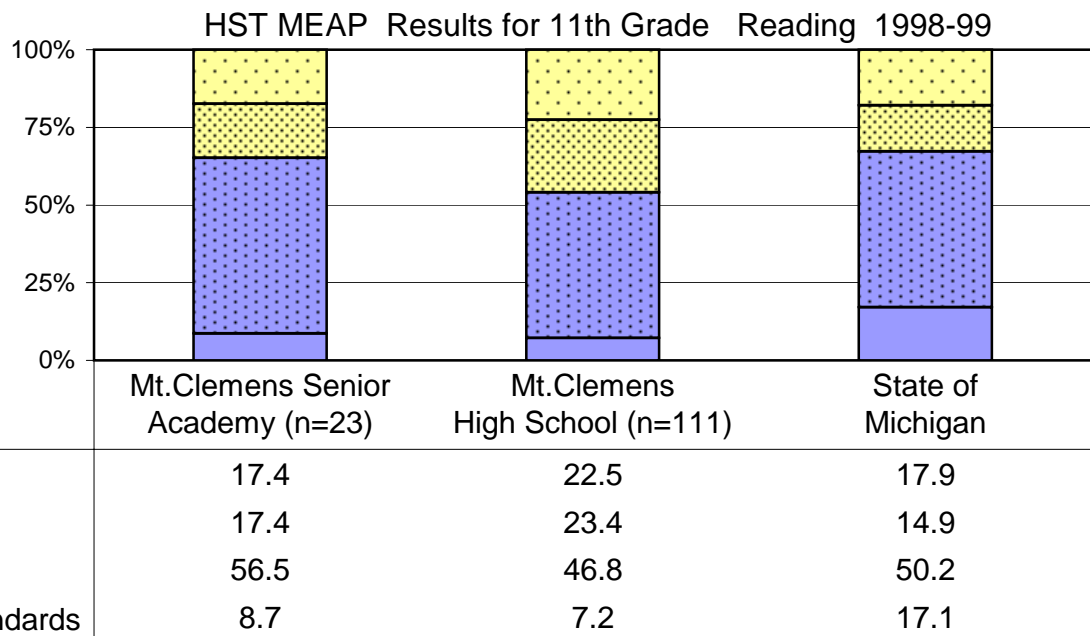
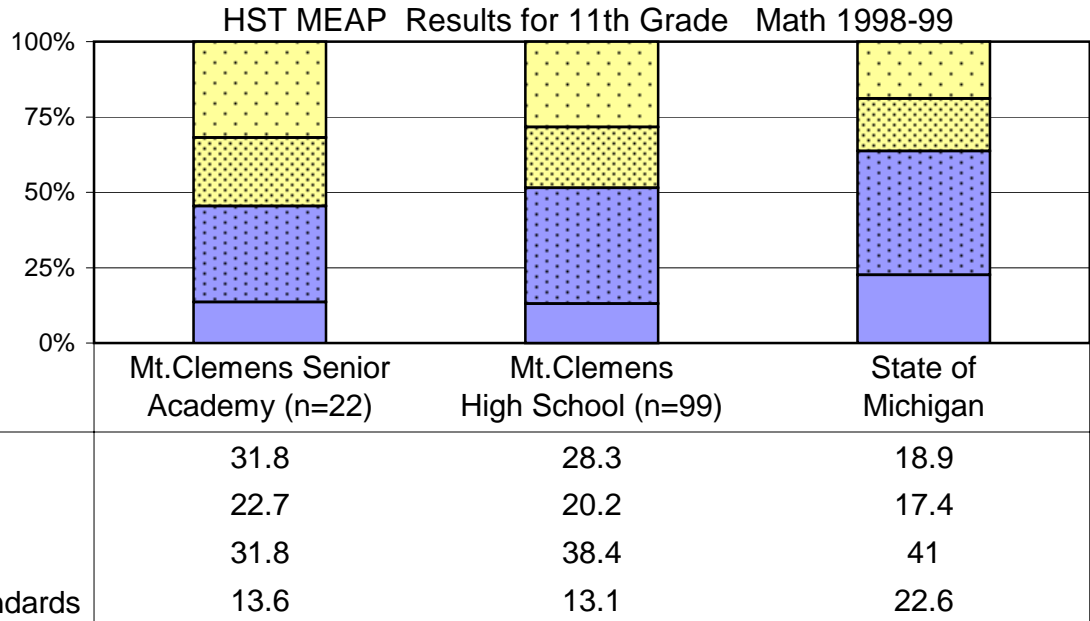
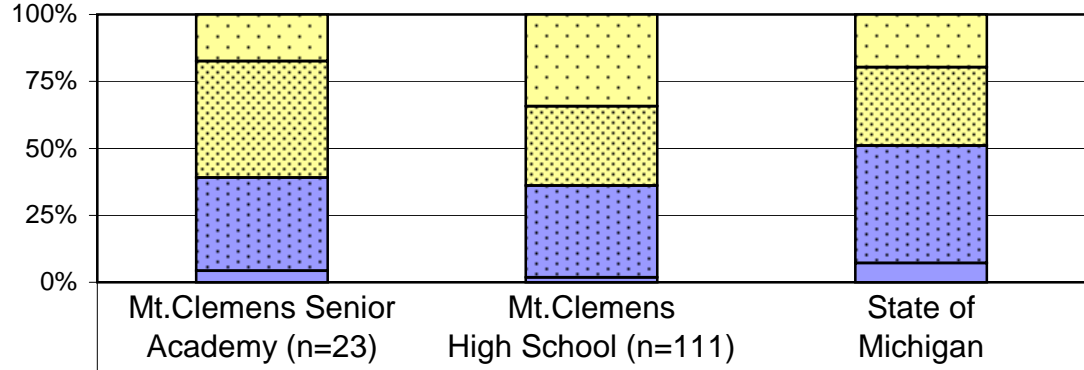


Exhibit 10:7 Performance on Grade 11 Math and Reading for Edison, District, and State



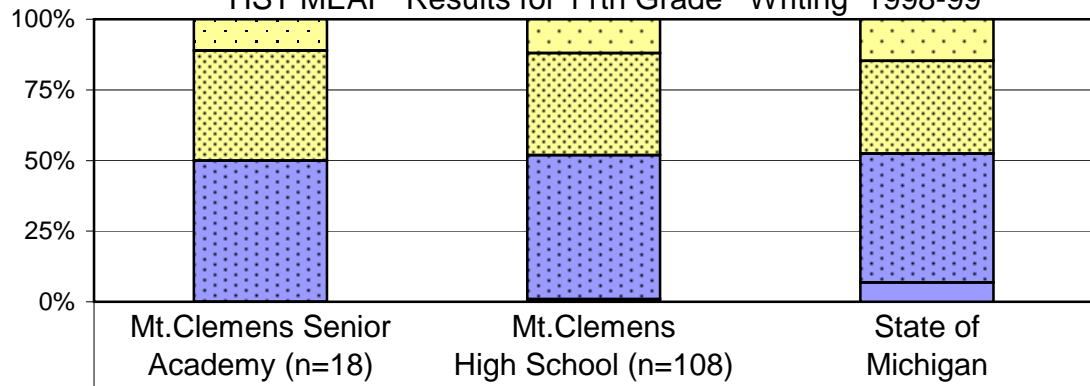
## Exhibit 10:8 Performance on Grade 11 Science and Writing for Edison, District, and State

HST MEAP Results for 11th Grade Science 1998-99



■ Unendorsed	17.4	34.2	19.7
■ Basic	43.5	29.7	29.3
■ Met Standards	34.8	34.2	43.8
■ Exceeded Standards	4.3	1.8	7.2

HST MEAP Results for 11th Grade Writing 1998-99



■ Unendorsed	11.1	12	14.7
■ Basic	38.9	36.1	32.9
■ Met Standards	50	50.9	45.7
■ Exceeded Standards	0	0.9	6.8

Exhibits 10:7 and 10:8 illustrate the results on the high school component of the MEAP. The grade 11 students are tested in math, reading, science, and writing. The Mt. Clemens Senior Academy formed within the Mt. Clemens High School in 1997-98 school year, but it wasn't until the 1998-99 school year that the academy had students at grade 11, when they are required to take the test. Most of the Edison students taking this test had, at most, participated in the Edison program for 1.5 academic years. The grade 11 students in the Edison senior academy did not perform as well as the district high school students in math, but they performed slightly better in reading and science. The two groups performed similarly in writing. Both Mt. Clemens schools performed lower than the state averages.

In Exhibits 10:3 – 10:8, we used colors to denote the proportion of students meeting state standards. For some of the MEAP tests, several performance levels can be distinguished, but only one or two of them are considered at or above state standards. The blue components of the bar charts indicate the proportion of students meeting or exceeding state standards, while the yellow parts of bar charts indicate the proportion of students not meeting state standards. The blue and yellow demarcation indicate the proportions used when we conducted the odds ratio. The results from the odds ratio analysis are presented in the previous section.

## 10.6 Summary

Because of the limited data available, the school could be grouped with the others that Edison opened later and which they categorized as “baseline” rather than attempting to place a label on their progress. Unfortunately, we are still faced with limited information on the secondary academies in Mt. Clemens.

Table 10:8 Summary Results on Criterion-Referenced Tests

Mt. Clemens vs. District	1998	1999	2000	B-D	Trend/effect
Grade 7 Math				+1	positive (+1)
Grade 7 Reading				0	mixed (0)
Grade 8 Science		0	0	NA	mixed (0)
Grade 8 Writing		0	+1	NA	positive (+1)
HST Writing				0	mixed (0)
HST Science				0	mixed (0)
HST Reading				0	mixed (0)
HST Math				0	mixed (0)

Note: Comparisons against the state were a mixture of neutral and negative effects

Test results should be available for the Iowa Test of Basic Skills, but no such results were presented in Edison’s 2000 annual report and it did not supply us with these data. Moreover, only a limited number of trends could be examined for grade 7 and grade 8 MEAP data and only a one year time point for the MEAP HST. The MEAP results available from the Michigan Department of Education presented a possible positive picture, but limited data are available (see Table 10:8). Clearly, the grade 7 Edison students performed better than the district students on the math and reading tests; and grade 8 students, who should have spent more years in the Edison program, do show some evidence of improvement relative to the district students. Unfortunately with only one year of data for the HST exam, we cannot do much more than speculate.

Table 10:9 Overall Summary of Trends

	Positive	Mixed	Negative
Criterion Referenced	2 of 8	6 of 8	0 of 8
TOTALS	2 of 8	6 of 8	0 of 8

Given the data available for this school, it would be fair to say that the “jury is still out.” Judgment on the performance of the Mt. Clemens Secondary Academies should await further years of data. If we were to make a judgment based on the limited data available (see Table 10:9), the Secondary Academies would be rated as Positive with a mean trend rating of 0.25. In its 1999 annual report, Edison rated this school as Strongly Positive. In its 2000 annual report, it rated the 1999-2000 school year as Strongly Positive and the achievement gains since opening as Strongly Positive also.