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ABSTRACT

An evaluation was done of compensatory educational programs in reading and mathematics in the Saginaw (Michigan) School District. The elementary Compensatory Education (CE) program is both a push-in format (grades 1 and 2) and a pull-out format (periodically taking students out of regular classrooms) that serves 2,045 students in grades 1 through 6. Also included is a pull-out Reading Recovery program for grade 1 serving 55 students and piloted in December of 1991. The secondary CE is a self-contained classroom program that involves approximately 772 students in grades 7 through 12. Also included is the Thinking Skills Program (TSP) for grades 7 through 9. The process evaluation focused on supportive services provided by the pupil service team and project success. The evaluation proceeded using structured interviews with eight key staff members, a review of logs for the pupil service team, and an analysis of the results of student test performance on the California Achievement Tests. Results of the Reading Recovery Pilot suggest that this program has promise. Data from the pre- to post-testing of CE students indicate that overall greatest gains in reading were made in grade 1. Grades 1 through 3 attained the performance standard in basic and advanced skills. Grades 9, 10, and 12 attained the performance standard in basic skills. Mathematics gains were the greatest in grade 3 (basic skills) and grade 1 (advanced skills). Included are 27 tables. Six appendixes, which comprise about half of the document, contain counts of program participants and technical information on program evaluation and administration. (JB)

EVALUATION REPORT

COMPENSATORY EDUCATION PRODUCT EVALUATION:

ELEMENTARY AND SECONDARY PROGRAMS

1991-1992

DEPARTMENT OF EVALUATION SERVICES

- PROVIDING ASSESSMENT, PROGRAM EVALUATION AND RESEARCH SERVICES -

SCHOOL DISTRICT OF THE CITY OF SAGINAW

Saginaw, Michigan

COMPENSATORY EDUCATION PRODUCT EVALUATION:

ELEMENTARY AND SECONDARY PROGRAMS

1991-1992

An Approved Report of the

DIVISION OF ADMINISTRATION AND PERSONNEL

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August, 1992

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PROGRAM DESCRIPTION

The School District of the City of Saginaw operates a supplemental educational delivery system in reading and mathematics consisting of two programs - elementary and secondary Compensatory Education (CE). The elementary CE is both a push-in program (that operates in the regular classroom in grades one and two) and pull-out program (periodically taking students out of regular classrooms) that serves 2,045 students in grades one through six. The Reading Recovery program (a pull-out intervention in reading in grade one serving approximately 55 pupils) was piloted starting in December, 1991. The secondary CE is a self-contained classroom program which involved approximately 772 students in grades seven through twleve. In its second year was the Thinking Skills Program (TSP) that operated in grades 7-9 in a self-contained room setting.[1] The CE programs are funded by both the Federal Education Consolidation and Improvement Act (ECIA) Chapter 1 and Article 3 of the State School Aid Act.

Summarized in the chart below are demographic characteristics that describe both the elementary and secondary levels on CE in greater detail.

[1]The Thinking Skills Program (TSP) is the local name for the nationally validated Higher Order Thinking Skills (HOTS) program. See Appendix C for a checklist for middle school principals interested in HOTS for a further in-depth operational description.

DEMOGRAPHIC CHARACTERISTICS OF THE COMPENSATORY EDUCATION (CE) PROGRAMS

Program	Grade Levels Served	Approximate Number of Students Served	Number of Full-Time Equivalent Teachers	Number of Full-Time Equivalent Classroom Aides	Number of School Sites	Program Setting	Instructional Services
Academic Achievement, Elementary	1-6	2,045*	33.6	2.5	23	Push-in (grades 1 & 2) in math) and Pull-out (grades 2-6 in math and grades 1-6 in reading.)**	- Reading - Mathematics
Academic Achievement, Secondary	7-12	772*	14.2	0.0	5	Self-Contained Classroom	- Reading*** - Mathematics***

*Detailed counts by funding source, building and grade can be found in Appendix A.

**The Reading Recovery Program (pilot) operated compensing in December, 1991 as a pull-out program in grade one.

***The Thinking Skills Program (TSP) operated in grades 7-9 in place of a reading and/or mathematics program.

As can be seen from the chart above, the primary purpose of the programs is to improve the reading and mathematics achievement of a designated number of educationally disadvantaged children. The children in the program are screened for entry with the California Achievement Tests — Form E/F (CAT). Students were determined eligible for the CE programs if they scored at or below the 36th normal curve equivalent (NCE) on the reading vocabulary and/or mathematics computation subtests of the CAT (this is equivalent to a score at or below the 25th percentile). This year approximately 2,817 pupils are participating in the compensatory education programs.

This year there were eight other program components in addition to the basic CE programs that were added to the overall program. These components included the following: Home-School Aides; Parent Involvement/ Training; Staff Development; Pupil Assistance Team; Elementary After-School/ Extended Day Program; Computer Assisted Learning Lab/After School for grades 7-9; Secondary After-School Tutoring grades 7-9 and 12; and Project Success. A description of each of these eight components can be found in Appendix D.

The broad goals of these basic CE programs were to: 1) provide intensive academic instruction to the educationally disadvantaged, 2) involve parents in the program, 3) supply students with incentives for academic achievement, 4) operate staff inservice programs, 5) measure academic growth, and 6) prepare students to effectively meet the academic competition of the general classroom. These goals are the focus of the Compensatory Education Department's activities throughout the 1991-92 school year.

PROCEDURES FOR EVALUATION

Both process and product evaluations were undertaken for the compensatory education delivery system. This year's process evaluation efforts focused on supportive services provided by the pupil service team (consisting of counselors, social worker, psychologist and building staff) and project success (special assistance program for students who have not shown positive academic growth for the past two years). Structured interviews were conducted in November, 1991 of eight key staff members involved in the provision and coordination of these services. The results were not written up in a formal process evaluation but rather shared in the form of an internal memo dated December 2, 1991 (see Appendix E for a copy of this memo). In addition, the Evaluation Department also has reviewed and summarized time logs for the pupil service team (PST) and project success as part of an on-going monitoring effort during the course of the 1991-92 school year.

The product evaluation, which is the focus of this report, addresses the results of student test performance. The California Achievement Tests -- Form E/F (CAT) normed Spring, 1985 for grades 1-12 served as the evaluation instruments. These tests were administered on a pre-test basis in the Spring, 1991 and on a post-test basis in Spring, 1992.

Mean pre- to post-test score comparisons were used to evaluate the effectiveness of the delivery system. The agreed upon standard was an

improvement greater than two normal curve equivalent (NCE) points from pre- to post-testing.[2] The reading (both basic and advanced skills) and then the mathematics (both basic and advanced skills) results for the entire CE delivery system will be presented.[3]

[2]A NCE is very similar to a percentile rank (ranging from 1 to 99 with a mean of 50) with the additional advantage of being based on an equal interval scale. Federal and State educational officials are increasing requiring outcome standards for compensatory education students be expressed in NCE units and expressing state-wide results in these units. The 1991-92 School Aid Act set the standards for student and school average gains to exceed two NCE units for 1991-92 and to exceed three NCE units for 1992-93. The standards in this evaluation report have been revised to reflect this change from the standard for 1988-89 through 1990-91 when gains were to exceed zero NCE units.

[3]The use of advanced skills as a means to evaluate the progress of CE students represents a major change from past evaluation requirements which only required basic skills in reading and mathematics to be evaluated. The administrative rules that required the measurement of advanced skills also required "plans of improvement" from Chapter 1 buildings experiencing an average gain of two NCEs or less in one or more skill/subject areas served. The 1991-92 school year marked the first year that Article 3 administrative rules were changed to include advance skill reporting and also "plans of improvement".

PRESENTATION AND ANALYSIS OF DATA: PRODUCT

The primary goal of compensatory education was to increase reading and mathematics achievement in both basic and advanced skill areas. The data presented in this section will indicate the extent to which this goal was achieved. Reading and then mathematics data by grade are presented below. Where relatively few students were tested at any grade level and for a building, the results should be viewed with caution.

The achievement results by school for the entire program and each funding source separately are presented in Appendix B.

In addition, a short section on the results of the Reading Recovery Pilot Project in grade one will be presented. The results presented focus exclusively on reading achievement.

Product Data: Reading Basic Skills

The pre- and post-test results for total reading are presented in Table 1.

TABLE 1. ATTAINMENT OF THE PERFORMANCE STANDARD FOR TOTAL READING IN NORMAL CURVE EQUIVALENT SCORES FOR COMPENSATORY EDUCATION PARTICIPANTS, GRADES 1-10, AND 12, 1991-92.

Comparisons by Grade	# of Students Pre- to Post-Tested	Normal Curve Equivalents			Performance Standard* Attained
		Pre Mean	Post Mean	Mean Gain	
1	203	24.1	37.9	13.8	Yes
2	266	22.2	30.0	7.8	Yes
3	219	28.6	33.9	5.3	Yes
4	186	31.5	32.2	0.7	No
5	219	32.1	32.5	0.4	No
6	222	31.6	32.4	0.8	No
7	171	30.2	26.2	-4.0	No
8	182	27.1	27.1	0.0	No
9	148	29.6	32.2	2.6	Yes
10	36	23.6	25.8	2.2	Yes
12	16	22.2	25.6	3.4	Yes

*Post-test NCE scores will evidence an improvement of more than two NCE points over pre-test scores.

A study of the reading results shows that students met the performance standard at all grades except four through eight. At the seventh grade level, the score indicated the largest average loss of -4.0 NCE points respectively between pre- and post-testings. At grade five the largest gain (13.8 NCE points) was recorded. At the tenth grade level the smallest positive acceptable NCE gain (2.2 points) can be seen. See Appendix B for the test results by building and funding source.

Product Data: Reading Advanced Skills

The pre- and post-test results for reading comprehension are presented in Table 2.

TABLE 2. ATTAINMENT OF THE PERFORMANCE STANDARD FOR READING COMPREHENSION IN NORMAL CURVE EQUIVALENT SCORES FOR COMPENSATORY EDUCATION PARTICIPANTS, GRADES 1-10 AND 12, 1991-92.

Comparisons by Grade	# of Students Pre- to Post-Tested	Normal Curve Equivalents			Performance Standard* Attained
		Pre Mean	Post Mean	Mean Gain	
1	203	32.1	39.0	6.9	Yes
2	266	28.3	32.6	4.3	Yes
3	219	33.3	35.9	2.6	Yes
4	186	38.3	35.6	-2.7	No
5	219	34.6	34.4	-0.2	No
6	222	35.3	34.6	-0.7	No
7	171	34.7	30.5	-4.2	No
8	182	30.9	31.1	0.2	No
9	148	33.9	31.8	-2.1	No
10	36	30.9	30.9	0.0	No
12	16	28.5	30.0	1.5	No

*Post-test NCE scores will evidence an improvement of more than two NCE points over pre-test scores.

A review of the advanced skills in reading results show that students attained the performance standard at grades two, three, and four. At the seventh and fourth grade levels the scores revealed an average loss of -4.2 and -2.7 respectively between pre- and post-testings. At grade three the largest gain (6.9 NCE points) was observed. At the ninth grade level the smallest acceptable positive NCE gain (2.6) can be seen. See Appendix B for the test results by building and funding source.

Overall in the area of reading the standard that post-test NCE scores will exceed two NCE units was attained in 6 of 11 (54.5%) and 3 of 11 (27.3%) grades levels for basic reading skills and advanced reading skills respectively. The administrative rules that required the monitoring of progress in both basic and advanced skills also required "plans of

improvement" from buildings experiencing aggregate gains of two NCE units or less in one or more skill areas served. The chart below shows with an "X" the buildings in the area of reading (basic and/or advanced skills) required to submit a plan of improvement for 1991-92 school year Chapter 1/Article 3 results.

1991-92 CHAPTER 1/ARTICLE 3 BUILDINGS REQUIRED TO SUBMIT READING PLANS OF IMPROVEMENT.

	Basic Skills	Advanced Skills
High School		
Arthur Hill		
Saginaw High		X
Junior High		
Central Jr.	X	X
North Int.		X
South Int.	X	X
Webber Jr.	X	X
Elementary		
Baillie	X	X
Coulter	X	X
Emerson		X
Fuerbringer	X	X
Nelle Haley		
Handley		
Heavenrich		X
Herig		
Houghton		X
Jerome		
Jones	X	X
Kempton		X
Longfellow		X
Longstreet		X
J. Loomis		X
Merrill Park		
Chester Miller	X	X
John Moore		X
Morley		
J. Rouse	X	X
Salina	X	X
Stone		
Webber		
Zilwaukee		

Note: X = Aggregate gain two NCE units or less.

A review of the chart above shows that 20 buildings (one high school, four junior highs, and 15 elementary schools) need to develop plans of improvement because their aggregate performance in basic and/or advanced skills was two NCE units or less.

Product Data: Mathematics Basic Skills

Table 3 below presents the attainment of the performance standard for spring to spring data in grades 2-10 and 12 in total mathematics.

TABLE 3. ATTAINMENT OF THE PERFORMANCE STANDARD FOR TOTAL MATHEMATICS IN NORMAL CURVE EQUIVALENT SCORES FOR COMPENSATORY EDUCATION PARTICIPANTS, GRADES 2-10 AND 12, 1991-92.

Comparisons by Grade	# of Students Pre- to Post-Tested	Normal Curve Equivalents			Performance Standard* Attained
		Pre Mean	Post Mean	Mean Gain	
2	184	27.5	37.1	9.6	Yes
3	182	28.2	39.5	11.3	Yes
4	179	32.2	39.0	6.8	Yes
5	113	30.0	37.9	7.9	Yes
6	86	29.0	37.7	8.7	Yes
7	63	30.3	27.2	-3.1	No
8	99	27.3	31.4	4.1	Yes
9	76	29.1	32.5	3.4	Yes
10	23	30.3	30.6	0.3	No
12	13	25.9	19.6	-6.3	No

*Post-test NCE scores will evidence an improvement of more than two NCE points over pre-test scores.

A review of total mathematics results reveals that students met the performance standard in all grades except 7, 10, and 12. At the seventh and twelfth grade levels, the scores indicated an average loss of -3.1 and -6.3 NCE points respectively between pre- and post-testings. The gain at the third

grade level, indicated the largest NCE improvement (11.3 points) between pre- and post-testings. At the ninth grade, the smallest acceptable positive NCE gain (3.4 points) was observed. See Appendix B for the test results by building and funding source.

Product Data: Mathematics Advanced Skills

Table 4 below presents the attainment standard for students in grades 1-10 and 12 in mathematics concepts and applications.

TABLE 4. ATTAINMENT OF THE PERFORMANCE STANDARD FOR MATHEMATICS CONCEPTS AND APPLICATIONS IN NORMAL CURVE EQUIVALENT SCORES FOR COMPENSATORY EDUCATION PARTICIPANTS, GRADES 1-10 AND 12, 1991-92.

Comparisons by Grade	# of Students Pre- to Post-Tested	Normal Curve Equivalents			Performance Standard* Attained
		Pre Mean	Post Mean	Mean Gain	
1	262	26.9	46.6	19.7	Yes
2	184	35.0	38.6	3.6	Yes
3	182	35.4	41.9	6.5	Yes
4	179	38.7	40.4	1.7	No
5	113	35.8	40.5	4.7	Yes
6	86	33.5	37.9	4.4	Yes
7	63	33.3	29.9	-3.4	No
8	99	30.2	33.5	3.3	Yes
9	76	32.2	35.3	3.1	Yes
10	23	33.0	31.1	-1.9	No
12	13	28.3	20.6	-7.7	No

*Post-test NCE scores will evidence an improvement of more than two NCE points over pre-test scores.

A study of the advanced mathematics skills results show that students attained the performance standard at all grades except 4, 7, 10, and 12. At the seventh and twelfth grade levels, the scores revealed an average loss of -3.4 and -7.7 NCE points respectively between pre- and post-testings. At

grade one, the largest gain (19.7 NCE points) was observed. At the eighth grade level the smallest acceptable positive NCE gain (3.1) can be observed. See Appendix B for the test results by building and funding source.

Overall in the area of mathematics the standard that post-test NCE scores will exceed two NCE units was attained in 7 of 10 (70.0%) and 7 of 11 (63.6%) grade levels for basic mathematics skills and advanced mathematics skills respectively. The administrative rules that required the monitoring of progress in both basic and advanced skills also required "plans of improvement" from buildings experiencing aggregate gains of two NCE units or less in one or more skill areas served. The chart below shows with an "X" the buildings in the area of mathematics (basic and/or advanced skills) required to submit a plan of improvement for 1991-92 school year Chapter 1/Article 3 results.

1991-92 CHAPTER 1/ARTICLE 3 BUILDINGS REQUIRED TO SUBMIT MATHEMATICS PLANS OF IMPROVEMENT.

	Basic Skills	Advanced Skills
High School		
Arthur Hill		
Saginaw High	X	X
Junior High		
Central Jr.	X	
North Int.		
South Int.	X	X
Webber Jr.	X	X
Elementary		
Baillie	X	X
Coulter		
Emerson		X
Fuerbringer		X
Nelle Haley		
Handley		
Heavenrich		X
Herig		
Houghton		
Jerome		
Jones		
Kempton		
Longfellow		
Longstreet		
J. Loomis		
Merrill Park		
Chester Miller		
John Moore		
Morley		
J. Rouse		
Salina		X
Stone		
Webber Ele.		X
Zilwaukee		

Note: X = Aggregate gain two NCE units or less.

A study of the chart above reveals that ten buildings (one high school, three junior highs, and six elementary schools) need to develop plans of improvement because their aggregate performance in basic and/or advanced skills was two NCE units or less.

Product Data: Reading Recovery Pilot

As stated, the Reading Recovery Pilot program (a pull-out intervention for 55 pupils in reading in grade one) was started in December, 1991. The pilot took place at eight elementary sites. They were the following: Coulter, Nelle Haley, Loomis, Longfellow, Longstreet, Salina, Webber, and Heavenrich.

A group of first grade compensatory education students were randomly sampled from five elementary sites. The sites where students were selected for the random sample included Baillie, Emerson, Houghton, Morley, and Rouse. The random sample of approximately 26 compensatory education pupils were selected for pre- and post-testing on the Diagnostic Survey[4]. A comparison group of approximately 100 compensatory education participants were selected to be pre- and post-tested on the California Achievement Test (CAT) as another comparison group that extended to all first grade compensatory education sites.

Reading Recovery is based on the premise that early, high-quality help has the greatest potential for lasting impact and for reducing the need for continued compensatory help. The program is an intensive one-to-one intervention program for the poorest readers (lowest 20 percent) in first-grade classrooms, as identified by teacher judgment and a Diagnostic Survey. The primary goals of Reading Recovery are to reduce reading failure through early intervention and to help children become independent readers. The

[4]The Diagnostic Survey is a systematic observation assessment (six different assessments in different aspects of reading and writing) used as part of the Reading Recovery procedures. A full discussion of its potential uses and procedures can be found in Clay, M. M. (1990). The Early Detection of Reading Difficulties. Auckland, New Zealand Heinemann Education.

program accomplishes this by: 1) bringing children who are "at risk" of reading failure up to the average of their class within a short period of time, so that they can profit form ongoing classroom instruction, and 2) helping these children develop a self-improving system for continued growth in reading, so that additional help is not necessary.

Reading Recovery supplements but does not substitute for conventional classroom teaching. During daily, 30-minute lessons, teachers who are specially trained in Reading Recovery techniques individually tutor these faltering readers to help them develop the kinds of strategies that good readers use. The power of Reading Recovery is in the framework of the lesson itself and in the development of teacher knowledge and problem-solving ability. The approach combines the use of related reading and writing experiences, close interaction between teacher and child within the lesson, and careful selection of materials for reading. In this instructional program, the teacher follows and guides the child individually in his or her use of reading and writing strategies. The teacher closely assesses and monitors progress and makes appropriate decisions to accelerate the child's program.

Research to date indicates that Reading Recovery has potential for substantially reducing the number of children with reading difficulties. As a result of accelerated progress, children typically leave the program within 12 to 16 weeks and are able to perform at satisfactory levels in reading without continued extra help. The sustained success that Reading Recovery achieves with the poorest performers in first grade classes runs counter to the experience in most remedial education programs.

Two research questions were the focus of comparing results of the Reading Recovery Pilot group and comparison groups at non-Reading Recovery sites.

These questions follow:

1) How did Reading Recovery children (discontinued and not discontinued) and comparison children perform at the end of grade one on a variety of measures of reading ability?

2) How did Reading Recovery and comparison children perform at the end of grade one on a nationally normed standardized test?

Table 5 below presents the means and standard deviations for the Reading Recovery children (including both discontinued and not discontinued pupils) and a comparison group of children at non-Reading Recovery Pilot sites. The statistics given in Table 5 relate to the six subtests of the Diagnostic Survey which are expressed as number right except for text reading which is a numerical score and refers to the level of difficulty a child can read with 90% accuracy or above (see Appendix F for conversion chart).

TABLE 5. MEANS AND STANDARD DEVIATIONS FOR ALL READING RECOVERY CHILDREN AND RANDOM SAMPLE OF FIRST GRADERS ON SIX MEASURES FROM THE DIAGNOSTIC SURVEY, DECEMBER AND MAY, 1991-92.

		Reading Recovery Children*			Comparison Children		
Measure	Month	N	Mean	S.D.	N	Mean	S.D.
Text Reading (Max=34)	Dec.	48	**2.00**	1.38	20	**4.00**	3.58
	May	48	**15.10**	7.34	20	**10.65**	9.12
Letter Ident. (Max=54)	Dec.	48	**51.08**	2.63	20	**48.10**	8.68
	May	48	**53.06**	1.20	20	**50.55**	7.25
Word Test (Max=20)	Dec.	48	**5.96**	2.80	20	**7.90**	6.07
	May	48	**17.87**	3.32	20	**14.10**	6.30
Concepts About Print (Max=24)	Dec.	48	**13.29**	3.21	20	**12.60**	3.35
	May	48	**20.10**	2.77	20	**15.45**	3.51
Writing Vocabulary (10 min.)	Dec.	48	**23.79**	10.64	20	**26.45**	15.61
	May	48	**51.46**	17.99	20	**33.55**	18.37
Dictation (Max=37)	Dec.	48	**17.65**	7.30	20	**19.45**	11.59
	May	48	**32.83**	5.11	20	**26.50**	10.13

*Includes both successfully discontinued and not-discontinued children during the first grade year.

Highlights from Table 5 include the following:

- Although the Reading Recovery and comparison groups had similar mean scores for the six subtests assessed in December, 1991, the Reading Recovery group (including both discontinued and not discontined) scored higher on all six measures at the end of the school year.

- When contrasting pre- to post-test average gains the largest difference between these gains occurred in writing vocabulary with the comparison group gaining 7.1 (33.55 - 26.45) raw score points and the Reading Recovery group gaining 27.67 (51.46 - 23.79) raw score points. Overall on average, the Reading Recovery group out gained the comparison group by 20.57 raw score points on the writing vocabulary subtest.

- Again, when contrasting pre- to post-test average gains, the smallest difference between these gains occurred in letter identification with the comparison group gaining 2.45 (50.55 - 48.10) raw score points and the Reading Recovery group gaining 1.98 (53.06 - 51.08) raw score points. Overall on average, the comparison group out gained the Reading Recovery group by 0.47 raw score points on the letter identification subtest.

Table 6 below records the Normal Curve Equivalent (NCE) gain scores for the Reading Recovery group, comparison group, and all first grade children tested on the reading vocabulary, comprehension, total scores of the California Achievement Tests (CAT).

TABLE 6. MEAN NORMAL CURVE EQUIVALENT (NCE) GAIN SCORES FOR GRADE 1 READING RECOVERY, COMPARISON, AND DISTRICT-WIDE GROUPS IN READING VOCABULARY, READING COMPREHENSION, AND READING TOTAL BASED ON APRIL-MAY, 1991 PRE-TESTING AND APRIL-MAY, 1992 POST-TESTING ON CAT (SPRING TO SPRING).

Subtest/Group	Number Tested	Normal Curve Equivalents		
		Pre-Test Mean (Spring, 1991)	Post-Test Mean (Spring, 1992)	Mean Gain/ Loss
Reading Vocabulary				
Reading Recovery	54	24.6	40.0	15.4
Comparison	89	22.1	42.7	20.6
District-Wide*	1,014	49.3	46.8	- 2.5
Reading Comprehension				
Reading Recovery	54	35.6	38.7	3.1
Comparison	89	30.2	39.2	9.0
District-Wide	1,014	48.1	44.8	- 3.3
Reading Total				
Reading Recovery	54	26.9	37.0	10.1
Comparison	89	22.0	39.0	17.0
District-Wide	1,014	48.6	44.2	- 4.4

*District-wide results included all matched students pre-tested in kindergarten during Spring, 1991 and again post-tested in grade one during Spring, 1992. This group also included the Reading Recovery and comparison groups.

A review of Table 6 above, reveals the following highlights:

- When students were pre-tested with the California Achievement Test (CAT), the Reading Recovery group was better than the comparison group by 2.5, 5.4, and 4.9 NCEs for reading vocabulary, reading comprehension, and reading total respectively. The district-wide group was better than the Reading Recovery group by 24.7, 12.5, and 21.7 NCEs respectively.

- Both Reading Recovery and comparison group children showed positive NCE gain scores from pre- to post-testing. However, comparison group children outgained Reading Recovery group children by 5.2, 5.9, and 6.9 NCEs for reading vocabulary, reading comprehension, and reading total respectively.

- District-wide children, on the other hand, had minus NCE gain scores from pre- to post-testing. The district-wide group lost -2.5, -3.3, and -4.4 NCEs for reading vocabulary, reading comprehension, and reading total respectively.

Further research plans into the Reading Recovery Pilot calls for following this the first Reading Recovery cohort and its comparison group for the next four school years. The results will be reported in the Compensatory Education Product Evaluation Report so long as the group size remains above 15. A second long-term tracking of Reading Recovery students (second Reading Recovery cohort) will start in the 1993-94 school year after more Reading Recovery teachers are trained and the current partially trained teachers complete the year long instruction. Again, the second study will track the second Reading Recovery cohort for four years after they receive the Reading Recovery treatment in 1993-94.

SUMMARY AND CONCLUSIONS

The Chapter 1 and Article 3 Compensatory Education (CE) programs were designed to provide direct instructional services in reading and mathematics to some 2,817 students in grades one through twelve. The main intent of the CE programs were to improve the pupil's reading and/or mathematics achievement. Instruction occurred primarily in small group settings outside of the regular classroom (pull-out) or push-in (that operated in the regular classroom in grades one and two) for CE at the elementary level, and in a regular classroom setting with a reduced number of students for CE at the secondary level. In addition, the Reading Recovery Pilot program (a pull-out intervention for 55 pupils in reading in grade one) was started in December, 1991. The results of Reading Recovery Pilot presented herein tend to suggest that this program has promise (when you realize the current set of Reading Recovery teachers are only half trained) and its long-term effectiveness should be tracked for the four additional school years as planned. As noted eariler, this is the first year the program changed significantly by focusing the evaluation of both Chapter 1 and Article 3 on advanced skills as well as basic skills in reading and mathematics.

The results of the pre- to post-testing of compensatory education students by grade indicate the overall greatest gains in reading were made at the first grade level, and grades one through three attained the performance standard in basic and advanced skills plus grades 9, 10, and 12 in basic skills. Mathematics gains were the greatest at grade 3 (basic skills) and grade 1 (advanced skills), but that all grades met the standard except grade 4 (advanced), grades 7, 10, and 12 (basic and advanced). The reader should be cautioned not to hold too much confidence in the results of grade 12 since they have so few students in this grade (from 13 to 16).

The new evaluation rules that required focusing the evaluation of both Chapter 1 and Article 3 on basic and advanced skills also required "plans of improvement" from buildings experiencing two NCE units or less in one or more skill/subject areas across all grades served. For the 1992-93 school year, 20 and 10 buildings in reading and mathematics respectively will be required to submit plans of improvement in basic and/or advanced skills. The chart below shows with an "X" the buildings that are required to submit a plan of improvement in basic and/or advanced skills for reading and/or mathematics.

1991-92 CHAPTER 1/ARTICLE 3 BUILDINGS REQUIRED TO SUBMIT READING AND/OR MATHEMATICS PLANS OF IMPROVEMENT.

	READING		MATHEMATICS	
	Basic Skills	Advanced Skills	Basic Skills	Advanced Skills
HIGH SCHOOL				
Arthur Hill				
Saginaw High		X	X	X
JUNIOR HIGH				
Central Jr.	X	X	X	
North Int.		X		
South Int.	X	X	X	X
Webber Jr.	X	X	X	X
ELEMENTARY				
Baillie	X	X	X	X
Coulter	X	X		
Emerson		X		X
Fuerbringer	X	X		X
Nelle Haley				
Handley				
Heavenrich		X		X
Herig				
Houghton		X		
Jerome				
Jones	X	X		
Kempton		X		
Longfellow		X		
Longstreet		X		
J. Loomis		X		
Merrill Park				
Chester Miller	X	X		
John Moore		X		
Morley				
J. Rouse	X	X		
Salina	X	X		X
Stone				
Webber Ele.				X
Zilwaukee				

Note: X = Aggregate gain two NCE units or less.

The 1991-92 compensatory education delivery system showed decreases from the previous years in terms of the percentage of grade levels meeting the standard. Since the standard increased from more than zero NCE gain (1990-91) to more than two NCE gains (1991-92), the percent of grades attaining the standard for 1990-91 were recalculated using the standard of more than two NCE gain as the measure of a successful grade level attainment. The chart below summarizes these changes.

PERCENT OF GRADES ATTAINING STANDARD

Area	1990-91 vs. 1991-92	Change Status
Basic Reading	75.0% vs. 54.5%	Decrease
Advanced Reading	58.3% vs. 27.3%	Decrease
Basic Mathematics	80.0% vs. 70.0%	Decrease
Advanced Mathematics	72.7% vs. 63.6%	Decrease

Overall, CE results present a picture of a strong program (especially at the elementary level) in both reading and mathematics. The fourth grade and above reading program and the tenth/twelfth grade mathematics program appear especially weak.

As mentioned earlier, a process evaluation report was completed this year and can be found in Appendix E. The findings from that report as well as those cited above were used in helping develop the recommendations that follow.

RECOMMENDATIONS

The recommendations that follow are based on this year's process and product evaluations plus the recently completed 1987-1990 sustained effects study and are intended to help bring about Chapter 1/Article 3 program improvements in the following school year. These recommendations take nothing away from a program that continues to show positive results especially at the elementary level, on an annual basis. This year being no expection.

The recommended ideas and techniques offered below stem from a perceived problem and are just one of many ways to improve the performance of the program. As solutions are sought for optimum program operations, a dialogue/ discussion should be undertaken to determine the best and most workable way to solve the perceived problem. The staff and evaluator should be brought into these discussions so that all involved feel part of the proposed new operation of the program.

- The sustained effects study found that most exiting CE program participants in reading and mathematics experienced a drop off of achievement during the sustained effects period (-3.3 and -5.8 NCEs respectively). These results strongly indicate that students should be grandfathered if they score above the selection cut score after one or more years of Chapter 1 service. Present Chapter 1 legislation allows for a two-year grandfathering period and hopefully in the case of most students that would be an adequate length of additional service to help promote future positive academic achievement.

- Reduce variations in the program between building sites by having the director and compensatory education staff analyze the building results presented in Appendix B. This analysis process should also involve building leaders and school improvement teams. Hopefully, a plan can be formulated to reduce (or control) these variations in program impact.

- Pupil Service Team (PST) and Success activities need to have more definition and less variation in their operation. These Chapter 1/Article 3 activities could be enhanced by doing the following:

  -- One person should be assigned to oversee PST and Success activities. Such a person would be in a better position to bring consistency to PST/Success. This consistency of operation would include the following: Chapter 1/Article 3 eligibility verification processes, provide communication between and within organization units involved with PST/Success and inspire, where lacking, commitment to PST/Success outreach efforts.

  -- A specific definition of what constitutes a completed plan should be developed, with attention given to whether completed refers solely to fact-finding, discussion, and prescription or if treatment and case reviews are included.

  -- Volunteer roles, e.g., how the roles are determined and how volunteers are screened for abilities, should be specified. As well, a listing of all study center sites (both on and off campus) should be completed.

  -- An inservice, or set of inservices, should be developed to fully inform personnel (district-wide) of the scope, nature, and importance of the PST/Success processes.

  -- The PST/Success process should not be limited to just those students recommended by a teacher. All Chapter 1/Article 3 students with two (and perhaps one) years NCE gain or loss status should have action plans developed for them.

APPENDICES

APPENDIX A

1991-92 COUNT OF PROGRAM PARTICIPANTS*

PROGRAM: Total Chapter 1

Building	K	1	2	3	4	5	6	Total
E. Baillie	0	16	13	16	27	17	7	96
Coulter	0	23	11	8	17	3	10	72
Emerson	0	24	41	39	20	12	24	160
Fuerbringer	0	8	11	8	4	5	2	38
N. Haley	0	25	13	16	26	22	14	116
Handley	0	0	0	0	0	0	0	0
Heavenrich	0	28	34	20	26	30	17	155
Herig	0	20	12	16	16	9	5	78
Houghton	0	10	8	14	11	9	6	58
Jerome	0	11	18	7	6	10	10	62
Jones	0	7	11	12	14	6	15	65
Kempton	0	0	0	0	0	0	0	0
Longfellow	0	34	33	25	16	16	30	154
Longstreet	0	19	18	13	7	7	6	70
J. Loomis	0	14	32	29	25	10	19	129
M. Park	0	18	20	20	19	12	16	105
C. Miller	0	14	9	7	5	7	8	50
J. Moore	0	13	10	12	14	8	5	62
Morley	0	24	22	18	14	17	13	108
J. Rouse	0	15	19	9	6	14	10	73
Salina	0	15	9	11	5	15	11	66
Stone	0	13	16	22	14	17	12	94
Webber Elem.	0	35	22	36	16	25	26	160
Zilwaukee	0	1	6	5	7	8	5	32
TOTAL	0	387	388	363	315	279	271	2,003

*Count as of March 18, 1992 computer run that included all participants.

APPENDIX A

1991-92 COUNT OF PROGRAM PARTICIPANTS*

PROGRAM: Total Chapter 1

Building	7	8	9	Total
Central Junior	95	63	52	210
North Intermediate	19	43	60	122
South Intermediate	0	0	0	0
Webber Junior	79	97	60	236
TOTAL	193	203	172	568

*Count as of March 18, 1992 computer run that included all participants.

APPENDIX A

1991-92 COUNT OF PROGRAM PARTICIPANTS*

PROGRAM: Total Chapter 1

Building	10	11	12	Total
Arthur Hill	0	0	0	0
Saginaw High	58	0	38	96
TOTAL	58	0	38	96

*Count as of March 18, 1992 computer run that included all participants.

APPENDIX A

1991-92 COUNT OF PROGRAM PARTICIPANTS*

PROGRAM: Total Article 3

Building	K	1	2	3	4	5	6	Total
E. Baillie	0	14	1	16	27	16	0	74
Coulter	0	22	1	1	17	0	10	51
Emerson	0	21	40	4	20	1	4	90
Fuerbringer	0	0	0	8	1	5	2	16
N. Haley	0	24	13	15	26	2	0	80
Handley	0	0	0	0	0	0	0	0
Heavenrich	0	0	32	20	24	29	1	106
Herig	0	19	1	16	15	1	0	52
Houghton	0	3	0	12	0	9	0	24
Jerome	0	0	18	0	6	11	11	46
Jones	0	0	1	12	1	6	15	35
Kempton	0	7	3	7	7	9	6	39
Longfellow	0	2	31	23	16	16	2	90
Longstreet	0	17	1	13	7	7	6	51
J. Loomis	0	1	31	2	22	9	19	84
M. Park	0	0	20	20	0	12	16	68
C. Miller	0	0	0	7	5	0	8	20
J. Moore	0	13	0	12	14	1	0	40
Morley	0	0	22	18	13	1	13	67
J. Rouse	0	12	1	9	1	14	10	47
Salina	0	0	8	0	2	15	11	36
Stone	0	13	0	22	14	15	0	64
Webber Elem.	0	2	22	37	0	25	25	111
Zilwaukee	0	0	6	5	7	8	5	31
TOTAL	0	170	252	279	245	212	164	1,322

*Count of March 18, 1992 computer run that included all participants.

APPENDIX A

1991-92 COUNT OF PROGRAM PARTICIPANTS*

PROGRAM: Total Article 3

Building	7	8	9	Total
Central Junior	0	56	40	96
North Intermediate	1	43	60	104
South Intermediate	23	37	40	100
Webber Junior	0	96	59	155
TOTAL	24	232	199	455

*Count as of March 18, 1992 computer run that included all participants.

APPENDIX A

1991-92 COUNT OF PROGRAM PARTICIPANTS*

PROGRAM: Total Article 3

Building	10	11	12	Total
Arthur Hill	0	0	0	0
Saginaw High	18	0	0	18
TOTAL	18	0	0	18

*Count as of March 18, 1992 computer run that included all participants.

APPENDIX A

1991-92 COUNT OF PROGRAM PARTICIPANTS*

PROGRAM: Total Compensatory Education

Building	K	1	2	3	4	5	6	Total
E. Baillie	0	16	13	16	27	17	7	96
Coulter	0	23	11	8	17	3	10	72
Emerson	0	24	41	39	20	12	24	160
Fuerbringer	0	8	11	8	4	5	2	38
N. Haley	0	25	13	16	26	22	14	116
Handley	0	0	0	0	0	0	0	0
Heavenrich	0	28	34	20	26	30	17	155
Herig	0	20	12	16	16	9	5	78
Houghton	0	10	8	14	11	9	6	58
Jerome	0	11	18	7	6	11	11	64
Jones	0	7	11	12	14	6	15	65
Kempton	0	7	3	7	7	9	6	39
Longfellow	0	34	33	25	16	16	30	154
Longstreet	0	19	18	13	7	7	6	70
J. Loomis	0	14	32	29	25	10	19	129
M. Park	0	18	20	20	19	12	16	105
C. Miller	0	14	9	7	5	7	8	50
J. Moore	0	13	10	12	14	8	5	62
Morley	0	24	22	18	14	17	13	108
J. Rouse	0	15	19	9	6	14	10	73
Salina	0	15	9	11	5	15	11	66
Stone	0	13	16	22	14	17	12	94
Webber Elem.	0	35	22	37	16	25	26	161
Zilwaukee	0	1	6	5	7	8	5	32
TOTAL	0	394	391	371	322	289	278	2,045

*Count of March 18, 1992 computer run that included all participants.

APPENDIX A

1991-92 COUNT OF PROGRAM PARTICIPANTS*

PROGRAM: Total Compensatory Education

Building	7	8	9	Total
Central Junior	95	63	52	210
North Intermediate	20	43	60	123
South Intermediate	23	37	40	100
Webber Junior	79	97	60	236
TOTAL	217	240	212	669

*Count as of March 18, 1992 computer run that included all participants.

TABLE B.1. MEAN NORMAL CURVE EQUIVALENT GAIN BY BUILDING AND GRADE FOR ALL I-6 CHAPTER 1 PUPILS IN TOTAL READING (BASIC SKILLS) BASED ON APRIL-MAY, 1991 PRE-TESTING AND APRIL-MAY, 1992 POST-TESTING ON CAT (SPRING TO SPRING).

BUILDING	GRADE 1 Normal Curve Equivalents				GRADE 2 Normal Curve Equivalents				GRADE 3 Normal Curve Equivalents				GRADE 4 Normal Curve Equivalents				GRADE 5 Normal Curve Equivalents				GRADE 6 Normal Curve Equivalents			
	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss
Baillie	9	16.7	31.1	14.4	4	31.7	28.5	- 3.2	8	29.8	29.5	- 0.3	16	35.0	21.0	-14.0	16	34.6	27.8	- 6.8	6	24.3	25.0	0.7
Coulter	17	27.0	35.8	8.8	9	24.1	34.2	10.1	5	34.4	36.8	2.4	13	36.8	34.9	- 1.9	3	33.6	39.0	5.4	7	34.1	36.0	1.9
Emerson	7	22.8	34.7	11.9	24	14.5	23.2	8.7	20	28.9	39.4	10.5	11	31.4	27.4	- 4.0	11	30.0	31.4	1.4	20	25.6	27.9	2.3
Fuerbringer	1	28.0	10.0	-18.0	7	21.7	41.7	20.0	5	35.0	32.6	- 2.4	2	39.5	33.5	- 6.0	5	35.8	34.8	- 1.0	1	35.0	30.0	- 5.0
Nelle Haley	18	24.0	54.6	30.6	6	27.3	38.3	11.0	11	31.4	39.9	8.5	21	32.2	33.5	1.3	14	33.3	33.2	- 0.1	8	34.7	31.2	- 3.5
Handley	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--
Heavenrich	16	23.4	38.5	15.1	21	21.8	24.2	2.4	8	28.5	37.7	9.2	12	22.5	25.5	3.0	17	26.9	28.0	1.1	13	36.6	35.2	- 1.4
Herig	9	28.7	47.6	18.9	8	19.7	27.3	7.6	8	34.5	44.7	10.2	5	32.2	36.4	4.2	8	32.5	36.8	4.3	3	35.0	37.6	2.6
Houghton	5	17.2	37.4	20.2	3	29.7	29.3	- 0.4	9	26.8	25.8	- 1.0	5	30.8	34.6	3.8	8	32.7	39.2	6.5	6	32.1	35.8	3.7
Jerome	2	24.0	49.0	25.0	13	25.8	36.7	10.9	6	30.3	26.1	- 4.2	3	35.3	42.3	7.0	7	36.4	39.1	2.7	9	33.4	33.7	0.3
Jones	0	--	--	--	10	16.5	21.7	5.2	7	31.1	40.7	9.6	9	19.4	22.8	3.4	5	29.2	27.6	- 1.6	13	31.6	30.0	- 1.6
Kempton	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--
Longfellow	20	28.3	34.7	6.4	26	19.4	28.6	9.2	16	31.6	32.8	1.2	10	33.1	42.6	9.5	12	29.6	32.2	2.6	24	30.2	30.8	0.6
Longstreet	10	25.3	40.0	14.7	15	25.9	32.0	6.1	10	28.3	33.0	4.7	5	32.3	32.2	- 0.1	7	28.7	29.7	1.0	5	30.8	36.8	6.0
J. Loomis	11	24.4	27.1	2.7	24	20.2	27.6	7.4	15	24.4	25.2	0.8	13	32.7	39.8	7.1	8	28.8	31.6	2.8	17	30.8	23.9	- 6.9
Merrill Park	4	24.5	27.2	2.7	14	22.5	30.5	8.0	14	28.8	37.3	8.5	8	33.1	34.6	1.5	10	33.8	33.8	0.0	10	31.4	34.6	3.2
Chester Miller	0	--	--	--	4	30.0	40.5	10.5	5	31.6	38.0	6.4	4	40.0	36.0	- 4.0	5	36.6	29.6	- 7.0	5	33.4	35.0	1.6
John Moore	8	24.2	42.3	18.1	9	32.7	38.2	5.5	5	27.4	34.8	7.4	8	29.8	39.2	9.4	7	34.0	28.7	- 5.3	3	33.6	27.0	- 6.6
Morley	15	22.5	37.8	15.3	15	20.1	28.2	8.1	8	28.7	40.6	11.9	4	35.0	38.0	3.0	12	29.0	33.1	4.1	11	26.8	35.2	8.4
J. Rouse	6	22.8	39.0	16.2	13	25.8	36.9	11.1	3	22.7	20.0	- 2.7	5	31.0	27.8	- 3.2	13	32.0	27.4	- 4.6	9	36.6	32.1	- 4.5
Salina	12	19.4	25.1	5.7	4	31.0	26.0	- 5.0	9	27.7	27.5	- 0.2	2	35.5	36.5	1.0	12	32.8	31.0	- 1.8	11	36.3	35.5	- 0.8
Stone	7	22.4	20.1	- 2.3	13	19.6	27.2	7.6	14	24.5	31.1	6.6	13	26.4	29.6	3.2	11	35.1	33.4	- 1.7	10	28.9	29.9	1.0
Webber Ele.	25	26.1	43.6	17.5	16	24.6	35.3	10.7	25	24.4	29.8	5.4	9	33.1	33.6	0.5	19	34.2	35.7	1.5	21	32.5	38.3	5.8
Zilwaukee	0	--	--	--	5	30.8	29.4	- 1.4	4	32.0	37.7	5.7	4	34.2	36.5	2.3	6	32.7	40.5	7.8	4	35.0	43.2	8.2
TOTAL	202	24.2	37.7	13.5	263	22.4	30.0	7.6	215	28.5	33.6	5.1	182	31.4	32.3	0.9	216	32.1	32.4	0.3	216	31.5	32.4	0.9

TABLE B.2. MEAN NORMAL CURVE EQUIVALENT GAIN BY BUILDING AND GRADE FOR ALL 1-6 CHAPTER 1 PUPILS IN READING COMPREHENSION (ADVANCED SKILLS) BASED ON APRIL-MAY, 1991 PRE-TESTING AND APRIL-MAY, 1992 POST-TESTING ON CAT (SPRING TO SPRING).

BUILDING	GRADE 1 Normal Curve Equivalents				GRADE 2 Normal Curve Equivalents				GRADE 3 Normal Curve Equivalents				GRADE 4 Normal Curve Equivalents				GRADE 5 Normal Curve Equivalents				GRADE 6 Normal Curve Equivalents			
	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss
Baillie	9	21.1	32.1	11.0	4	35.5	33.7	- 1.8	8	32.3	31.1	- 1.2	16	39.1	26.7	-12.4	16	38.6	33.1	- 5.5	6	26.5	26.3	- 0.2
Coulter	17	34.8	39.4	4.5	9	30.6	33.5	2.9	5	43.6	42.6	- 1.0	13	43.7	40.2	- 3.5	3	35.0	43.0	8.0	7	38.7	39.1	0.4
Emerson	7	32.5	37.0	4.5	24	19.2	24.8	5.6	20	32.5	37.5	5.0	11	41.3	28.9	-12.4	11	31.8	31.0	- 0.8	20	29.1	29.2	0.1
Fuerbringer	1	27.0	13.0	-14.0	7	26.1	53.7	27.6	5	40.6	35.8	- 4.8	2	44.0	40.0	- 4.0	5	39.6	34.2	- 5.4	1	34.0	32.0	- 2.0
Nelle Haley	18	31.8	54.5	22.7	6	31.5	43.3	11.8	11	37.0	40.3	3.3	21	36.4	37.6	1.2	14	36.2	36.4	0.2	8	38.1	34.7	- 3.4
Handley	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--
Heavenrich	16	35.0	40.8	5.8	21	29.9	25.0	- 4.9	8	26.0	31.3	5.3	12	26.7	29.8	3.1	17	29.4	28.4	- 1.0	13	43.8	40.0	- 3.8
Herig	9	39.5	45.4	5.9	8	23.5	29.3	5.8	8	38.7	51.5	12.8	5	36.6	40.4	3.8	8	36.4	38.0	1.6	3	38.0	41.3	3.3
Houghton	5	27.8	42.6	14.8	3	34.0	36.3	2.3	9	30.5	28.0	- 2.5	5	36.0	42.4	6.4	8	35.3	36.6	1.3	6	36.6	36.0	- 0.6
Jerome	2	21.5	54.0	32.5	13	31.1	39.8	8.7	6	33.3	28.3	- 5.0	3	38.7	40.7	2.0	7	35.4	42.8	7.4	9	34.8	33.4	- 1.4
Jones	0	--	--	--	10	25.1	29.2	4.1	7	35.2	43.7	8.5	9	25.4	29.0	3.6	5	30.6	29.4	- 1.2	13	36.0	32.7	- 3.3
Kempton	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--
Longfellow	20	37.0	37.0	0.0	26	27.4	27.1	- 0.3	16	37.5	32.9	- 4.6	10	36.6	44.3	7.7	12	30.8	32.9	2.1	24	32.7	31.0	- 1.7
Longstreet	10	32.2	37.3	5.1	15	30.1	35.0	4.9	10	36.3	35.5	- 0.8	5	30.2	34.6	4.4	7	31.2	32.1	0.9	5	41.8	41.4	- 0.4
J. Loomis	11	31.8	28.9	- 2.9	24	25.7	29.8	4.1	15	27.4	27.4	0.0	13	38.5	42.2	3.7	8	30.6	32.2	1.6	17	32.5	28.7	- 3.8
Merrill Park	4	27.2	26.7	- 0.5	14	29.6	35.1	5.5	14	34.9	38.8	3.9	8	39.0	34.5	- 4.5	10	34.7	34.8	0.1	10	32.3	34.9	2.6
Chester Miller	0	--	--	--	4	38.2	40.2	2.0	5	38.8	39.6	0.8	4	51.0	32.7	-18.3	5	41.0	33.4	- 7.6	5	36.2	35.8	- 0.4
John Moore	8	31.7	42.0	10.3	9	38.2	39.7	1.5	5	32.2	35.8	3.6	8	38.3	43.1	4.8	7	39.5	30.1	- 9.4	3	38.6	35.0	- 3.6
Morley	15	30.8	38.9	8.1	15	25.2	34.0	8.8	8	34.0	44.0	10.0	4	38.5	37.2	- 1.3	12	30.0	32.5	2.5	11	31.2	34.7	3.5
J. Rouse	6	27.1	38.5	11.4	13	30.3	39.2	8.9	3	19.3	23.0	3.7	5	37.2	34.6	- 2.6	13	36.8	31.2	- 5.6	9	40.5	38.1	- 2.4
Salina	12	25.5	27.2	1.7	4	40.0	29.5	-10.5	9	31.2	29.6	- 1.6	2	43.0	36.0	- 7.0	12	36.1	34.0	- 2.1	11	41.0	40.9	- 0.1
Stone	7	28.5	26.1	- 2.4	13	26.9	28.0	1.1	14	30.0	35.7	5.7	13	31.1	33.3	2.2	11	38.3	36.0	- 2.3	10	31.3	31.9	0.6
Webber Ele.	25	35.8	43.0	7.2	16	30.2	38.4	8.2	25	31.0	34.1	3.1	9	36.8	38.6	1.8	19	36.1	40.1	4.0	21	37.4	38.9	1.5
Zilwaukee	0	--	--	--	5	36.6	35.8	- 0.8	4	33.7	45.7	12.0	4	39.0	35.2	- 3.8	6	32.6	39.6	7.0	4	38.2	43.7	5.5
TOTAL	202	32.2	38.9	6.7	263	28.4	32.7	4.3	215	33.2	35.6	2.4	182	36.9	35.8	- 1.3	216	34.6	34.3	- 0.3	216	35.2	34.5	- 0.7

TABLE B.3. MEAN NORMAL CURVE EQUIVALENT GAIN BY BUILDING AND GRADE FOR ALL 1-6 CHAPTER 1 PUPILS IN TOTAL MATH (BASIC SKILLS) BASED ON APRIL-MAY, 1991 PRE-TESTING AND APRIL-MAY, 1992 POST-TESTING ON CAT (SPRING TO SPRING).

BUILDING	GRADE 1 Normal Curve Equivalents				GRADE 2 Normal Curve Equivalents				GRADE 3 Normal Curve Equivalents				GRADE 4 Normal Curve Equivalents				GRADE 5 Normal Curve Equivalents				GRADE 6 Normal Curve Equivalents			
	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss
Baillie					6	30.6	53.5	22.9	6	24.6	29.3	4.7	15	34.6	27.9	- 6.7	1	19.0	39.0	20.0	3	24.3	25.6	1.3
Coulter					4	22.2	49.2	27.0	4	31.0	32.0	1.0	3	39.3	41.6	2.3	0	--	--	--	3	30.3	48.6	18.3
Emerson					23	21.9	24.6	2.7	20	25.5	40.5	15.0	17	32.1	37.2	5.1	1	25.0	26.0	1.0	9	29.2	29.5	0.3
Fuerbringer					6	45.8	56.3	10.5	5	28.8	45.2	16.4	3	41.6	41.6	0.0	1	36.0	26.0	-10.0	1	31.0	22.0	- 9.0
Nelle Haley					6	23.3	42.1	18.8	4	39.5	50.0	10.5	13	26.2	36.8	10.6	12	29.3	33.5	4.2	6	31.5	31.1	- 0.4
Handley					0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--
Heavenrich					16	26.5	25.9	- 0.6	11	25.1	37.0	11.9	17	30.1	28.5	- 1.6	16	25.5	29.0	3.5	0	--	--	--
Herig					7	33.0	34.7	1.7	9	32.4	52.5	20.1	13	34.3	41.7	7.4	2	18.5	46.5	28.0	3	33.0	55.0	22.0
Houghton					1	25.0	62.0	37.0	6	26.6	36.1	9.5	7	38.8	46.2	7.4	3	27.3	48.3	21.0	0	--	--	--
Jerome					9	26.2	43.8	17.6	5	31.6	39.4	7.8	4	33.5	49.7	16.2	6	29.8	45.3	15.5	4	22.5	32.7	10.2
Jones					4	12.0	20.2	8.2	4	21.2	43.5	22.3	8	29.6	38.5	8.9	1	27.0	15.0	-12.0	3	23.3	40.6	17.3
Kempton					0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--
Longfellow					17	27.6	28.5	0.9	12	31.5	39.3	7.8	7	27.1	43.5	16.4	5	32.2	40.6	8.4	8	30.5	36.3	5.8
Longstreet					3	23.6	45.0	21.4	4	35.5	38.6	3.1	5	29.2	36.2	7.0	2	30.0	38.0	8.0	1	1.0	37.0	36.0
J. Loomis					17	25.3	48.5	23.2	21	25.8	23.4	- 2.4	19	31.1	50.1	19.0	5	28.4	32.4	4.0	4	42.0	28.2	-13.8
Merrill Park					11	32.8	34.5	1.7	7	29.1	49.2	20.1	11	31.0	38.5	7.5	6	26.1	27.1	1.0	6	27.5	37.5	10.0
Chester Miller					3	29.0	56.3	27.3	2	30.5	44.5	14.0	1	41.0	50.0	9.0	2	36.5	38.5	2.0	2	36.0	41.5	5.5
John Moore					9	55.2	56.0	0.8	7	32.2	47.4	15.2	7	33.5	42.2	8.7	3	34.3	39.6	5.3	2	41.0	60.0	19.0
Morley					16	19.8	39.5	19.7	7	21.0	44.7	23.7	10	33.7	48.2	14.5	6	26.1	45.1	19.0	9	28.2	39.5	11.3
J. Rouse					6	34.0	45.6	11.6	8	20.5	28.8	8.3	1	37.0	36.0	- 1.0	3	27.3	19.3	- 8.0	2	31.0	42.0	11.0
Salina					4	29.5	29.5	0.0	2	29.5	31.5	2.0	2	31.0	37.0	6.0	6	35.8	56.6	20.8	1	40.0	41.0	1.0
Stone					10	27.7	30.4	2.7	10	27.7	46.3	18.6	4	19.5	20.0	0.5	7	32.1	45.7	13.6	6	27.8	39.6	11.8
Webber Ele.					7	29.2	34.2	5.0	18	29.5	41.2	11.7	6	37.1	33.3	- 3.8	14	31.8	35.8	4.0	7	24.0	43.0	19.0
Zilwaukee					2	37.5	48.5	11.0	2	34.0	60.0	26.0	3	47.0	46.6	- 0.4	3	35.0	44.3	9.3	3	39.3	41.6	2.3
TOTAL					182	27.4	37.1	9.7	174	27.9	39.2	11.3	176	30.2	30.6	0.4	105	29.4	37.2	7.8	83	29.3	37.8	8.5

TABLE B.4. MEAN NORMAL CURVE EQUIVALENT GAIN BY BUILDING AND GRADE FOR ALL 1-6 CHAPTER 1 PUPILS IN MATHEMATICS CONCEPTS AND APPLICATIONS (ADVANCED SKILLS) BASED ON APRIL-MAY, 1991 PRE-TESTING AND APRIL-MAY, 1992 POST-TESTING ON CAT (SPRING TO SPRING).

BUILDING	GRADE 1 Normal Curve Equivalents				GRADE 2 Normal Curve Equivalents				GRADE 3 Normal Curve Equivalents				GRADE 4 Normal Curve Equivalents				GRADE 5 Normal Curve Equivalents				GRADE 6 Normal Curve Equivalents			
	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss
Baillie	11	23.6	39.2	15.6	6	36.8	56.5	19.7	6	29.0	31.3	2.3	15	35.6	26.6	- 9.0	1	33.0	38.0	5.0	3	19.6	29.6	10.0
Coulter	18	25.1	42.2	17.1	4	30.7	47.5	16.8	4	35.2	35.0	- 0.2	3	45.0	40.0	- 5.0	0	--	--	--	3	31.3	44.3	13.0
Emerson	14	23.5	43.6	20.1	23	30.0	30.0	0.0	20	32.5	42.7	10.2	17	39.9	37.9	- 2.0	1	25.0	24.0	- 1.0	9	33.4	29.6	- 3.8
Fuerbringer	7	24.7	49.2	24.5	6	71.0	55.6	-15.4	5	36.0	49.2	13.2	3	54.6	44.6	-10.0	1	43.0	17.0	-26.0	1	30.0	13.0	-17.0
Nelle Haley	16	28.5	54.0	25.5	6	27.8	46.6	18.8	4	51.7	56.0	4.3	13	29.7	36.5	6.8	12	36.1	35.6	- 0.5	6	40.3	37.5	- 2.8
Handley	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--
Heavenrich	11	30.5	48.2	17.7	16	31.5	23.3	- 8.2	11	27.1	40.6	13.5	17	33.8	30.1	- 3.7	16	29.5	32.0	2.5	0	--	--	--
Herig	17	32.9	56.7	23.8	7	45.4	39.7	- 5.7	9	42.3	58.2	15.9	13	41.8	48.3	6.5	2	17.5	45.5	28.0	3	43.6	49.6	6.0
Houghton	6	24.3	35.3	11.0	1	23.0	64.0	41.0	6	33.5	31.3	- 2.2	7	48.8	49.2	0.4	3	36.3	39.6	3.3	0	--	--	--
Jerome	7	28.2	59.5	31.3	9	44.3	48.3	4.0	5	42.0	40.0	- 2.0	4	43.5	60.2	16.7	6	32.8	50.0	17.2	4	25.0	32.5	7.5
Jones	7	35.1	37.2	2.1	4	10.2	27.5	17.3	4	29.0	51.2	22.2	8	37.3	41.5	4.2	1	28.0	24.0	- 4.0	3	27.6	40.0	12.4
Kempton	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--
Longfellow	21	26.3	42.2	15.9	17	32.5	28.1	- 4.4	12	37.3	42.4	5.1	7	33.5	47.2	13.7	5	36.2	44.2	8.0	8	32.5	34.0	1.5
Longstreet	12	25.4	52.4	27.0	3	30.0	39.6	9.6	4	42.0	42.0	0.0	5	34.0	37.4	3.4	2	33.5	39.0	5.5	1	10.0	58.0	48.0
J. Loomis	9	25.1	20.2	- 4.9	17	32.3	44.7	12.4	21	33.6	25.3	- 8.3	19	38.5	46.6	8.1	5	29.8	34.8	5.0	4	41.5	28.2	-13.3
Merrill Park	14	27.7	53.7	26.0	11	37.8	39.1	1.3	7	33.4	52.2	18.8	11	37.7	40.6	2.9	6	33.1	29.0	- 4.1	6	34.0	37.1	3.1
Chester Miller	12	29.8	48.6	18.8	3	32.3	64.6	32.3	2	39.5	47.0	7.5	1	47.0	58.0	11.0	2	42.5	42.5	0.0	2	47.0	46.0	- 1.0
John Moore	7	29.5	51.4	21.9	4	60.5	55.2	- 5.3	7	42.1	50.7	8.6	7	46.0	43.7	- 2.3	3	39.6	41.3	1.7	2	52.0	63.5	11.5
Morley	14	28.0	43.5	15.5	16	22.8	34.0	11.2	7	27.1	45.8	18.7	10	40.8	51.0	10.2	6	32.0	51.1	19.1	9	28.2	39.5	11.3
J. Rouse	9	25.4	43.7	18.3	6	49.3	53.6	4.3	8	28.0	32.0	4.0	1	38.0	34.0	- 4.0	3	28.6	24.0	- 4.6	2	35.0	42.0	7.0
Saline	15	20.4	41.2	20.8	4	39.5	34.0	- 5.5	2	44.5	24.5	-20.0	2	41.0	34.0	- 7.0	6	42.8	55.0	12.2	1	45.0	42.0	- 3.0
Stone	10	26.9	38.7	11.8	10	34.2	34.7	0.5	10	33.9	48.3	14.4	4	19.5	24.0	4.5	7	39.2	48.4	9.2	6	30.8	38.5	7.7
Webber Ele.	18	24.0	51.2	27.2	7	36.7	39.8	3.1	18	38.2	41.7	3.5	6	50.5	34.6	-15.9	14	37.7	39.4	1.7	7	32.2	43.2	11.0
Zilwaukee	1	39.0	68.0	29.0	2	41.0	60.5	19.5	2	49.0	62.5	13.5	3	62.6	45.3	-17.3	3	44.0	49.3	5.3	3	41.0	47.3	6.3
TOTAL	256	26.8	46.0	19.2	182	34.9	38.7	3.8	174	35.1	41.5	6.4	176	38.6	40.3	1.7	105	34.7	39.6	4.9	83	33.8	38.1	4.3

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TABLE B.5. MEAN NORMAL CURVE EQUIVALENT GAIN BY BUILDING AND GRADE FOR ALL 7-9 CHAPTER 1 PUPILS IN TOTAL READING (BASIC SKILLS) AND READING COMPREHENSION (ADVANCED SKILLS) BASED ON APRIL-MAY, 1991 PRE-TESTING AND APRIL-MAY, 1992 POST-TESTING ON CAT (SPRING TO SPRING).

Subject/ School	Grade 7 Normal Curve Equivalents				Grade 8 Normal Curve Equivalents				Grade 9 Normal Curve Equivalents			
	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss
TOTAL READING												
Central	79	29.3	24.2	-5.1	49	26.6	26.9	0.3	37	28.5	32.1	3.6
North	13	30.6	32.6	2.0	27	24.9	27.3	2.4	38	28.2	33.4	5.2
South	0	--	--	--	0	--	--	--	0	--	--	--
Webber	61	30.6	24.8	-5.8	82	27.1	26.2	-0.9	47	29.7	31.0	1.3
System	153	29.9	25.2	-4.7	158	26.6	26.6	0.0	122	28.9	32.1	3.2
READING COMPREHESION												
Central	79	34.2	31.0	-3.2	49	32.2	33.8	1.6	37	33.2	32.7	-0.5
North	13	35.2	33.3	-1.9	27	27.0	29.6	2.6	38	33.2	33.6	0.4
South	0	--	--	--	0	--	--	--	0	--	--	--
Webber	61	34.3	27.2	-7.1	82	29.9	29.1	-0.8	47	33.0	29.4	-3.6
System	153	34.3	29.7	-4.6	158	30.1	30.7	0.6	122	33.1	31.7	-1.4

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TABLE B.6. MEAN NORMAL CURVE EQUIVALENT GAIN BY BUILDING AND GRADE FOR ALL 7-9 CHAPTER 1 PUPILS IN TOTAL MATHEMATICS (BASIC SKILLS) AND MATHEMATICS CONCEPTS AND APPLICATIONS (ADVANCED SKILLS) BASED ON APRIL-MAY, 1991 PRE-TESTING AND APRIL-MAY, 1992 POST-TESTING ON CAT (SPRING TO SPRING).

Subject/ School	Grade 7 Normal Curve Equivalents				Grade 8 Normal Curve Equivalents				Grade 9 Normal Curve Equivalents			
	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss
TOTAL MATHEMATICS												
Central	18	30.2	28.2	-2.0	17	26.5	26.7	0.2	17	29.7	32.3	2.6
North	5	28.6	26.8	-1.8	16	25.9	35.0	9.1	13	30.0	35.0	5.0
South	0	—	—	—	0	—	—	—	0	—	—	—
Webber	33	29.2	24.3	-4.9	49	26.4	31.1	4.7	26	25.7	30.1	4.4
System	56	29.5	25.8	-3.7	82	26.3	30.9	4.6	56	27.9	31.9	4.0
CONCEPTS AND APPLICATIONS												
Central	18	31.4	28.8	-2.6	17	26.5	30.1	3.6	17	31.1	36.7	5.6
North	5	33.8	35.4	1.6	16	28.6	38.3	9.6	13	34.9	38.6	3.7
South	0	—	—	—	0	—	—	—	0	—	—	—
Webber	33	31.2	26.5	-4.7	49	30.2	32.5	2.3	26	26.9	31.7	4.8
System	56	31.5	28.0	-3.5	82	29.1	33.1	4.0	56	30.0	34.8	4.8

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TABLE B.7. MEAN NORMAL CURVE EQUIVALENT GAIN BY BUILDING AND GRADE FOR ALL 10-12 CHAPTER 1 PUPILS IN TOTAL READING (BASIC SKILLS) AND READING COMPREHENSION (ADVANCED SKILLS) BASED ON APRIL-MAY, 1991 PRE-TESTING AND APRIL-MAY, 1992 POST-TESTING ON CAT (SPRING TO SPRING).

Subject/ School	Grade 10 Normal Curve Equivalents				Grade 11 Normal Curve Equivalents				Grade 12 Normal Curve Equivalents			
	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss
TOTAL READING												
Arthur Hill	0	—	—	—	0	—	—	—	0	—	—	—
Saginaw High	36	23.6	25.8	2.2	0	—	—	—	16	22.2	25.6	3.4
System	36	23.6	25.8	2.2	0	—	—	—	16	22.2	25.6	3.4
READING COMPREHENSION												
Arthur Hill	0	—	—	—	0	—	—	—	0	—	—	—
Saginaw High	36	30.9	30.9	0.0	0	—	—	—	16	28.5	30.0	1.5
System	36	30.9	30.9	0.0	0	—	—	—	16	28.5	30.0	1.5

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TABLE B.8. MEAN NORMAL CURVE EQUIVALENT GAIN BY BUILDING AND GRADE FOR ALL 10-12 CHAPTER 1 PUPILS IN TOTAL MATHEMATICS (BASIC SKILLS) AND MATHEMATICS CONCEPTS AND APPLICATIONS (ADVANCED SKILLS) BASED ON APRIL-MAY, 1991 PRE-TESTING AND APRIL-MAY, 1992 POST-TESTING ON CAT (SPRING TO SPRING).

Subject/ School	Grade 10 Normal Curve Equivalents				Grade 11 Normal Curve Equivalents				Grade 12 Normal Curve Equivalents			
	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss
TOTAL READING												
Arthur Hill	0	--	--	--	0	--	--	--	0	--	--	--
Saginaw High	23	30.3	30.6	0.3	0	--	--	--	13	25.9	19.6	-6.3
System	23	30.3	30.6	0.3	0	--	--	--	13	25.9	19.6	-6.3
READING COMPREHENSION												
Arthur Hill	0	--	--	--	0	--	--	--	0	--	--	--
Saginaw High	23	33.0	31.1	-1.9	0	--	--	--	13	28.3	20.6	-7.7
System	23	33.0	31.1	-1.9	0	--	--	--	13	28.3	20.6	-7.7

TABLE B.9. MEAN NORMAL EQUIVALENT GAIN BY BUILDING AND GRADE FOR ALL 1-6 ARTICLE 3 PUPILS IN TOTAL READING (BASIC SKILLS) BASED ON APRIL-MAY, 1991 PRE-TESTING AND APRIL-MAY, 1992 POST-TESTING ON CAT (SPRING TO SPRING).

BUILDING	GRADE 1 Normal Curve Equivalents				GRADE 2 Normal Curve Equivalents				GRADE 3 Normal Curve Equivalents				GRADE 4 Normal Curve Equivalents				GRADE 5 Normal Curve Equivalents				GRADE 6 Normal Curve Equivalents			
	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss
Baillie	8	17.2	30.6	13.4	0	--	--	--	8	29.8	29.5	- 0.3	16	35.0	21.0	-14.0	15	34.6	27.4	- 7.2	0	--	--	--
Coulter	16	27.6	34.2	6.6	1	15.0	32.0	17.0	0	--	--	--	13	36.8	34.9	- 1.9	0	--	--	--	7	34.1	36.0	1.8
Emerson	5	20.6	39.6	19.0	24	14.5	23.2	8.7	3	43.6	35.3	- 8.3	11	31.4	27.4	- 4.0	1	34.0	20.0	-14.0	3	27.3	29.6	2.3
Fuerbringer	0	--	--	--	0	--	--	--	5	35.0	32.6	- 2.4	1	44.0	35.0	- 9.0	5	35.8	34.8	- 1.0	1	35.0	30.0	- 5.0
Nelle Haley	17	23.1	53.1	30.0	6	27.3	38.3	11.0	10	32.2	41.0	8.8	21	32.2	33.5	1.3	2	36.0	32.5	- 3.5	0	--	--	--
Handley	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--
Heavenrich	0	--	--	--	20	20.8	25.1	4.3	8	28.5	37.7	9.2	12	22.5	25.5	3.0	16	27.0	28.0	1.0	0	--	--	--
Herig	9	28.7	47.6	18.9	1	7.0	19.0	12.0	8	34.5	44.7	10.2	4	34.2	34.5	0.3	1	32.0	46.0	14.0	0	--	--	--
Houghton	2	22.0	31.0	9.0	0	--	--	--	8	27.5	26.3	- 1.2	0	--	--	--	8	32.7	39.2	6.5	0	--	--	--
Jerome	0	--	--	--	13	25.8	36.7	10.9	0	--	--	--	3	35.3	42.3	7.0	8	34.2	38.2	4.0	9	33.4	33.7	0.3
Jones	0	--	--	--	1	7.0	7.0	0.0	7	31.1	40.7	9.6	1	22.0	10.0	-12.0	5	29.2	27.6	- 1.6	13	31.6	30.0	- 1.6
Kempton	1	15.0	66.0	51.0	3	13.0	27.0	14.0	3	37.0	49.3	12.3	4	33.5	33.2	- 0.3	2	37.0	42.5	5.5	6	32.3	35.0	2.7
Longfellow	2	22.0	20.5	- 1.5	26	19.4	28.6	9.2	15	31.5	33.0	1.5	10	33.1	42.6	9.5	12	29.6	33.2	3.6	1	34.0	32.0	- 2.0
Longstreet	9	24.4	40.0	15.6	1	22.0	36.0	14.0	10	28.3	33.0	4.7	5	32.4	31.0	- 1.4	7	28.7	29.7	1.0	5	30.8	36.8	6.0
J. Loomis	1	45.0	46.0	1.0	23	20.5	27.4	6.9	1	26.0	15.0	-11.0	11	30.0	38.0	8.0	8	28.8	31.6	2.8	17	30.8	23.9	- 6.9
Merrill Park	0	--	--	--	14	22.5	30.5	8.0	14	28.8	37.3	8.5	0	--	--	--	10	33.8	33.8	0.0	10	31.4	34.6	3.2
Chester Miller	0	--	--	--	0	--	--	--	5	31.6	38.0	6.4	4	40.0	36.0	- 4.0	0	--	--	--	5	33.4	35.0	1.6
John Moore	8	24.2	42.3	18.1	0	--	--	--	5	27.4	34.8	7.4	8	29.8	39.2	9.4	1	34.0	26.0	- 8.0	0	--	--	--
Morley	0	--	--	--	15	20.1	28.2	8.1	8	28.7	40.6	11.9	4	35.0	38.0	3.0	1	30.0	30.0	0.0	11	26.8	35.2	8.4
J. Rouse	4	29.7	34.7	5.0	1	32.0	35.0	3.0	3	22.6	20.0	- 2.6	1	44.0	39.0	- 5.0	13	32.0	27.4	- 4.6	9	36.6	32.1	- 4.5
Salina	0	--	--	--	3	33.6	24.0	- 9.6	0	--	--	--	0	--	--	--	12	32.8	31.0	- 1.8	11	36.3	35.5	- 0.8
Stone	7	22.4	20.1	- 2.3	0	--	--	--	14	24.5	31.1	6.6	13	26.4	29.6	3.2	9	35.3	31.8	- 3.5	0	--	--	--
Webber Ele.	2	28.0	33.5	5.5	16	24.6	35.3	10.7	26	24.5	30.2	5.7	0	--	--	--	19	34.2	35.7	1.5	21	32.5	38.3	5.8
Zilwaukee	0	--	--	--	5	30.8	29.4	- 1.4	4	32.0	37.7	5.7	4	34.2	36.5	2.3	6	32.6	40.5	7.9	4	35.0	43.2	8.2
TOTAL	91	24.4	39.4	15.0	173	20.9	28.8	7.9	165	29.0	34.6	5.6	146	31.9	32.3	0.4	161	32.2	32.3	0.1	133	32.3	33.5	1.2

TABLE B.10. MEAN NORMAL EQUIVALENT GAIN BY BUILDING AND GRADE FOR ALL 1-6 ARTICLE 3 PUPILS IN READING COMPREHENSION (ADVANCED SKILLS) BASED ON APRIL-MAY, 1991 PRE-TESTING AND MAY-APRIL, 1992 POST-TESTING ON CAT (SPRING TO SPRING).

BUILDING	GRADE 1 Normal Curve Equivalents				GRADE 2 Normal Curve Equivalents				GRADE 3 Normal Curve Equivalents				GRADE 4 Normal Curve Equivalents				GRADE 5 Normal Curve Equivalents				GRADE 6 Normal Curve Equivalents			
	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss
Baillie	8	22.1	30.3	8.2	0	--	--	--	8	32.3	31.1	- 1.2	16	39.1	26.7	-12.4	15	38.8	32.7	- 6.1	0	--	--	--
Coulter	16	35.3	37.7	2.4	1	26.0	24.0	- 2.0	0	--	--	--	13	43.7	40.2	- 3.5	0	--	--	--	7	38.7	39.1	0.4
Emerson	5	30.2	40.0	9.8	24	19.2	24.8	5.6	3	43.6	35.3	- 8.3	11	41.3	28.9	-12.4	1	38.0	15.0	-23.0	3	31.6	29.6	- 2.0
Fuerbringer	0	--	--	--	0	--	--	--	5	40.6	35.8	- 4.8	1	52.0	40.0	-12.0	5	39.6	34.2	-54.0	1	34.0	32.0	- 2.0
Helle Haley	17	30.5	52.4	21.9	6	31.5	43.3	11.8	10	38.1	41.4	3.3	21	36.4	37.6	1.2	2	40.0	32.0	- 8.0	0	--	--	--
Handley	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--
Heavenrich	0	--	--	--	20	29.0	25.3	- 3.7	8	26.0	31.3	5.3	12	26.7	29.8	3.1	16	29.8	28.5	- 1.3	0	--	--	--
Herig	9	39.5	45.4	5.9	1	7.0	19.0	12.0	8	38.7	51.5	12.8	4	39.0	39.5	0.5	1	33.0	39.0	6.0	0	--	--	--
Houghton	2	27.0	42.5	15.5	0	--	--	--	8	30.0	28.7	- 1.3	0	--	--	--	8	35.3	36.6	1.3	0	--	--	--
Jerome	0	--	--	--	13	31.1	39.8	8.7	0	--	--	--	3	38.6	40.6	2.0	8	32.2	41.3	9.1	9	34.8	33.4	- 1.4
Jones	0	--	--	--	1	19.0	19.0	0.0	7	35.2	43.7	8.5	1	26.0	25.0	- 1.0	5	30.6	29.4	- 1.2	13	36.0	32.7	- 3.3
Kempton	1	13.0	59.0	46.0	3	21.3	29.0	7.7	3	41.0	54.0	13.0	4	35.5	33.7	- 1.8	2	39.0	46.0	7.0	6	38.1	38.3	0.2
Longfellow	2	29.5	23.0	- 6.5	26	27.4	27.1	- 0.3	5	36.7	33.8	- 2.9	10	36.6	44.3	7.7	12	30.8	32.9	2.1	1	34.0	33.0	- 1.0
Longstreet	9	31.5	36.8	5.3	1	24.0	31.0	7.0	14	36.3	35.5	- 0.8	5	36.8	35.8	- 1.0	7	31.2	32.1	0.9	5	41.8	41.4	- 0.4
J. Loomis	1	54.0	46.0	- 8.0	23	26.2	29.6	3.4	1	19.0	17.0	- 2.0	11	34.8	42.9	8.1	8	30.6	32.2	1.6	17	32.5	28.7	- 3.8
Merrill Park	0	--	--	--	14	29.6	35.1	5.5	14	34.9	38.8	3.9	0	--	--	--	10	34.7	34.8	0.1	10	32.3	34.9	2.6
Chester Miller	0	--	--	--	0	--	--	--	5	38.8	39.6	0.8	4	51.0	32.7	-18.3	0	--	--	--	5	36.2	35.8	- 0.4
John Moore	8	31.7	42.0	10.3	0	--	--	--	5	32.2	35.8	3.6	8	38.3	43.1	4.7	1	38.0	28.0	-10.0	0	--	--	--
Morley	0	--	--	--	15	25.2	34.0	8.8	8	34.0	44.0	8.0	4	38.5	37.2	- 1.3	1	36.0	28.0	- 8.0	11	31.2	34.7	3.5
J. Rouse	4	30.7	35.2	4.5	1	34.0	44.0	10.0	3	19.3	23.0	3.7	1	60.0	45.0	-15.0	13	36.8	31.2	- 5.6	9	40.5	38.1	- 2.4
Saline	0	--	--	--	3	42.0	28.0	-14.0	0	--	--	--	0	--	--	--	12	36.1	34.0	- 2.1	11	41.0	40.9	- 0.1
Stone	7	28.5	26.1	- 2.4	0	--	--	--	14	30.0	35.7	5.7	13	31.1	33.3	2.2	9	39.0	35.0	- 4.0	0	--	--	--
Webber Ele.	2	29.5	38.0	8.5	16	30.2	38.4	8.2	26	31.0	34.5	3.5	0	--	--	--	19	36.1	40.1	4.0	21	37.4	38.9	1.5
Zilwaukee	0	--	--	--	5	36.6	35.8	- 0.8	4	33.7	45.7	12.0	4	39.0	35.2	- 3.8	6	32.6	39.6	7.0	4	38.2	43.7	5.5
TOTAL	91	31.5	40.1	8.6	173	27.2	31.0	3.8	165	33.7	37.0	3.3	146	37.3	35.8	- 1.5	161	34.6	34.2	- 0.4	133	36.1	35.9	- 0.2

TABLE B.11. MEAN NORMAL EQUIVALENT GAIN BY BUILDING AND GRADE FOR ALL 1-6 ARTICLE 3 PUPILS IN TOTAL MATH (BASIC SKILLS) BASED ON APRIL-MAY, 1991 PRE-TESTING AND APRIL-MAY, 1992 POST-TESTING ON CAT (SPRING TO SPRING).

BUILDING	GRADE 1 Normal Curve Equivalents				GRADE 2 Normal Curve Equivalents				GRADE 3 Normal Curve Equivalents				GRADE 4 Normal Curve Equivalents				GRADE 5 Normal Curve Equivalents				GRADE 6 Normal Curve Equivalents			
	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss
Baillie	10	1.0	32.1	31.1	1	20.0	61.0	41.0	6	24.6	29.3	4.7	15	34.6	27.9	- 6.7	1	19.0	39.0	20.0	0	--	--	--
Coulter	17	--	40.0	--	0	--	--	--	0	--	--	--	3	39.3	41.6	2.3	0	--	--	--	3	30.3	48.6	18.3
Emerson	13	--	46.9	--	22	22.6	24.7	2.1	1	46.0	76.0	30.0	17	32.1	37.2	5.1	0	--	--	--	2	24.0	24.5	0.5
Fuerbringer	0	--	--	--	0	--	--	--	5	28.8	45.2	16.4	1	32.0	34.0	2.0	1	36.0	26.0	-10.0	1	31.0	22.0	- 9.0
Nelle Haley	16	31.0	45.9	14.9	6	23.3	42.1	18.8	4	39.5	50.0	10.5	13	26.2	36.8	10.6	1	22.0	25.0	3.0	0	--	--	--
Handley	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--
Heavenrich	0	--	--	--	15	25.4	25.9	0.5	11	25.1	37.0	11.9	17	30.1	28.5	- 1.6	16	25.5	29.0	3.5	0	--	--	--
Herig	16	37.0	52.8	15.8	1	31.0	20.0	-11.0	9	32.4	56.5	20.1	13	34.3	41.7	7.4	0	--	--	--	0	--	--	--
Houghton	3	--	33.3	--	0	--	--	--	5	28.0	35.4	7.4	0	--	--	--	3	27.3	48.3	21.0	0	--	--	--
Jerome	0	--	--	--	9	26.2	43.8	17.6	0	--	--	--	4	33.5	49.7	16.2	7	29.5	44.7	15.1	5	20.0	31.0	11.0
Jones	0	--	--	--	1	15.0	41.0	26.0	4	21.2	43.5	22.3	1	29.0	27.0	- 2.0	1	27.0	15.0	-12.0	3	23.3	40.6	17.3
Kempton	6	--	57.1	--	2	33.5	30.5	- 3.0	7	34.8	47.1	12.3	4	31.0	39.7	8.7	7	40.0	49.2	9.2	2	24.5	39.5	15.0
Longfellow	0	--	--	--	17	27.6	28.5	0.9	11	31.5	39.7	8.2	7	27.1	43.5	16.4	5	32.2	40.6	8.4	1	23.0	27.0	4.0
Longstreet	12	16.5	61.2	44.7	1	10.0	40.0	30.0	4	35.5	38.6	3.1	5	29.2	36.2	7.0	2	30.0	38.0	8.0	1	1.0	37.0	36.0
J. Loomis	0	--	--	--	17	25.3	48.5	23.2	2	26.5	26.0	- 0.5	19	31.1	50.2	19.1	5	28.4	34.4	4.0	4	42.0	28.2	-13.8
Merrill Park	0	--	--	--	11	32.8	34.5	1.7	7	29.1	49.2	20.1	0	--	--	--	6	26.1	27.1	1.0	6	27.5	37.5	10.0
Chester Miller	0	--	--	--	0	--	--	--	2	30.5	44.5	14.0	1	41.0	50.0	9.0	0	--	--	--	2	36.0	41.5	5.5
John Moore	7	--	41.5	--	0	--	--	--	7	32.2	47.4	15.2	7	33.5	42.2	8.7	0	--	--	--	0	--	--	--
Morley	0	--	--	--	16	19.8	39.5	19.7	7	21.0	44.7	23.7	10	33.7	48.2	14.5	0	--	--	--	9	28.2	39.5	11.3
J. Rouse	8	24.0	40.5	16.5	0	--	--	--	8	20.5	28.8	8.3	0	--	--	--	3	27.3	19.3	- 8.0	2	31.0	42.0	11.0
Saline	0	--	--	--	4	29.5	29.5	0.0	0	--	--	--	1	32.0	28.0	- 4.0	6	35.8	56.6	20.8	1	40.0	41.0	1.0
Stone	10	19.0	38.6	19.6	0	--	--	--	10	27.7	46.3	18.6	4	19.5	20.0	0.5	6	32.3	46.6	15.3	0	--	--	--
Webber Ele.	1	--	47.0	--	7	29.2	34.2	5.0	19	30.0	41.1	11.1	0	--	--	--	14	31.8	35.8	4.0	7	24.0	43.0	19.0
Zilwaukee	0	--	--	--	2	37.5	48.5	11.0	2	34.0	60.0	26.0	3	47.0	46.6	- 0.4	3	35.0	44.3	9.3	3	36.0	46.0	10.0
TOTAL	119	22.7	45.6	22.9	132	25.6	34.7	9.1	131	28.9	42.4	13.5	145	31.6	38.7	7.1	87	30.3	37.8	7.5	52	27.8	38.0	10.2

APPENDIX B

TABLE B.12. MEAN NORMAL CURVE EQUIVALENT GAIN BY BUILDING AND GAIN FOR ALL 1-6 ARTICLE 3 PUPILS IN MATHEMATICS CONCEPTS AND APPLICATIONS (ADVANCED SKILLS) BASED ON APRIL-MAY, 1991 PRE-TESTING AND APRIL-MAY, 1992 POST-TESTING ON CAT (SPRING TO SPRING).

BUILDING	GRADE 1				GRADE 2				GRADE 3				GRADE 4				GRADE 5				GRADE 6			
	Normal Curve Equivalents				Normal Curve Equivalents				Normal Curve Equivalents				Normal Curve Equivalents				Normal Curve Equivalents				Normal Curve Equivalents			
	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss
Baillie	10	23.6	38.2	14.6	1	17.0	81.0	64.0	6	29.0	31.3	2.3	15	35.6	26.6	- 9.0	1	33.0	38.0	5.0	0	--	--	--
Coulter	17	25.2	42.0	16.8	0	--	--	--	0	--	--	--	3	45.0	40.0	- 5.0	0	--	--	--	3	31.3	44.3	13.0
Emerson	13	22.6	43.7	21.1	22	30.5	30.0	- 0.5	1	64.0	80.0	16.0	17	39.9	37.9	- 2.0	0	--	--	--	2	21.5	25.5	4.0
Fuerbringer	0	--	--	--	0	--	--	--	5	36.0	49.2	13.2	1	44.0	40.0	- 4.0	1	43.0	17.0	-26.0	1	30.0	13.0	-17.0
Nelle Haley	16	28.5	54.0	25.5	6	27.8	46.6	18.8	4	51.7	56.0	4.3	13	29.7	36.5	6.8	1	25.0	26.0	1.0	0	--	--	--
Handley	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--	0	--	--	--
Heavenrich	0	--	--	--	15	30.2	24.0	- 6.2	11	27.1	40.6	13.5	17	33.8	30.1	- 3.7	16	29.5	32.0	2.5	0	--	--	--
Herig	16	33.1	58.1	25.0	1	25.0	27.0	2.0	9	42.3	58.2	15.9	13	41.8	48.3	6.5	0	--	--	--	0	--	--	--
Houghton	3	24.3	22.3	- 2.0	0	--	--	--	5	34.8	31.6	- 3.2	0	--	--	--	3	36.3	39.6	3.3	0	--	--	--
Jerome	0	--	--	--	9	44.3	48.3	5.0	0	--	--	--	4	43.5	60.2	16.7	7	32.0	49.5	17.5	5	22.6	31.8	9.2
Jones	0	--	--	--	1	13.0	41.0	28.0	4	29.0	51.2	22.2	1	34.0	28.0	- 6.0	1	28.0	24.0	- 4.0	3	27.6	40.0	12.4
Kempton	6	31.1	69.8	38.7	2	47.0	30.5	-16.5	7	42.0	53.4	11.4	4	35.7	44.0	8.3	7	53.2	53.1	- 0.1	2	32.0	36.0	4.0
Longfellow	0	--	--	--	17	32.5	28.1	- 4.4	11	37.1	43.0	5.8	7	33.5	47.2	13.7	5	36.2	44.2	8.0	1	17.0	27.0	10.0
Longstreet	12	25.4	52.4	27.0	1	7.0	20.0	13.0	4	42.0	42.0	0.0	5	34.0	37.4	3.4	2	33.5	39.0	5.5	1	10.0	58.0	48.0
J. Loomis	0	--	--	--	17	32.3	44.7	12.4	2	38.0	32.0	- 6.0	19	36.1	46.6	10.5	5	29.8	34.8	5.0	4	41.5	28.2	-13.3
Merrill Park	0	--	--	--	11	37.8	39.1	1.3	7	33.4	52.2	18.8	0	--	--	--	6	33.1	29.0	- 4.1	6	34.0	37.1	3.1
Chester Miller	0	--	--	--	0	--	--	--	2	39.5	47.0	7.5	1	47.0	58.0	11.0	0	--	--	--	2	47.0	46.0	- 1.0
John Moore	7	29.5	51.4	21.9	0	--	--	--	7	42.1	50.7	8.6	7	46.0	43.7	- 2.3	0	--	--	--	0	--	--	--
Morley	0	--	--	--	16	22.8	34.0	11.2	7	27.1	45.8	18.7	10	40.8	51.0	10.2	0	--	--	--	9	31.4	39.1	7.7
J. Rouse	8	26.5	40.7	14.2	0	--	--	--	8	28.0	32.0	4.0	0	--	--	--	3	28.6	24.0	- 4.6	2	35.0	42.0	7.0
Salina	0	--	--	--	4	39.5	34.0	- 5.5	0	--	--	--	1	41.0	27.0	-14.0	6	42.8	55.0	12.2	1	45.0	42.0	- 3.0
Stone	10	26.9	38.7	11.8	0	--	--	--	10	33.9	48.3	14.4	4	19.5	24.0	4.5	6	40.1	50.1	10.0	0	--	--	--
Webber Ele.	1	29.0	50.0	21.0	7	36.7	39.8	3.1	19	38.6	41.5	2.9	0	--	--	--	14	37.7	39.4	1.7	7	32.2	43.2	11.0
Zilwaukee	0	--	--	--	2	41.0	60.5	19.5	2	49.0	62.5	13.5	3	62.6	45.3	-17.3	3	44.0	49.3	5.3	3	41.0	47.3	6.3
TOTAL	119	27.1	47.8	20.7	132	32.0	35.7	3.7	131	36.1	45.3	9.2	145	37.4	40.0	2.6	87	36.1	40.2	4.1	52	32.0	36.1	6.1

APPENDIX B

TABLE B.13. MEAN NORMAL CURVE EQUIVALENT GAIN BY BUILDING AND GRADE FOR ALL 7-9 ARTICLE 3 PUPILS IN TOTAL READING (BASIC SKILLS) AND READING COMPREHENSION (ADVANCED SKILLS) BASED ON APRIL-MAY, 1991 PRE-TESTING AND APRIL-MAY, 1992 POST-TESTING ON CAT (SPRING TO SPRING).

Subject/ School	Grade 7 Normal Curve Equivalents				Grade 8 Normal Curve Equivalents				Grade 9 Normal Curve Equivalents			
	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss
TOTAL READING												
Central	0	--	--	--	46	25.7	26.2	0.5	30	25.3	29.3	3.9
North	1	37.0	41.0	4.0	27	24.9	27.3	2.4	38	28.2	33.4	5.2
South	17	32.7	34.9	2.1	24	30.9	30.1	-0.7	26	32.9	32.8	-0.1
Webber	0	--	--	--	82	27.1	26.2	-0.8	47	29.7	31.0	1.2
System	18	33.0	35.2	2.2	179	26.9	26.9	0.0	141	28.9	31.6	2.7
READING COMPREHESION												
Central	0	--	--	--	46	31.7	33.5	1.8	30	30.4	29.2	-1.2
North	1	40.0	44.0	4.0	27	27.0	29.6	2.6	38	33.2	33.6	0.4
South	17	37.8	37.4	-0.4	24	35.8	34.1	-1.7	26	37.7	32.1	-5.6
Webber	0	--	--	--	82	29.9	29.1	-0.8	47	33.0	29.4	-3.6
System	18	37.9	37.7	-0.2	179	30.7	31.0	0.3	141	33.4	31.0	-2.4

TABLE B.14. MEAN NORMAL CURVE EQUIVALENT GAIN BY BUILDING AND GRADE FOR ALL 7-9 ARTICLE 3 PUPILS IN TOTAL MATHEMATICS (BASIC SKILLS) AND MATHEMATICS CONCEPTS AND APPLICATIONS (ADVANCED SKILLS) BASED ON APRIL-MAY, 1991 PRE-TESTING AND APRIL-MAY, 1992 POST-TESTING ON CAT (SPRING TO SPRING).

Subject/ School	Grade 7 Normal Curve Equivalents				Grade 8 Normal Curve Equivalents				Grade 9 Normal Curve Equivalents			
	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss	Number Tested	Pre Mean	Post Mean	Mean Gain/ Loss
TOTAL MATHEMATICS												
Central	0	--	--	--	15	23.9	24.9	1.0	14	27.2	31.0	3.8
North	0	--	--	--	16	25.9	35.0	9.1	13	30.0	35.0	5.0
South	7	37.4	38.8	1.4	17	31.7	33.5	1.8	20	32.4	34.1	1.7
Webber	0	--	--	--	49	26.4	31.1	4.6	26	25.7	30.1	4.4
System	7	37.4	38.8	1.4	97	26.9	31.2	4.3	73	28.6	32.2	3.6
CONCEPTS AND APPLICATIONS												
Central	0	--	--	--	15	24.0	28.1	4.1	14	29.2	34.8	5.6
North	0	--	--	--	16	28.6	38.3	9.7	13	34.9	38.6	3.7
South	7	47.5	45.1	-2.4	17	35.7	35.4	-0.3	20	38.5	36.7	-1.8
Webber	0	--	--	--	49	30.2	32.5	2.3	26	26.9	31.7	4.8
System	7	47.5	45.1	-2.4	97	29.9	33.3	3.4	73	31.9	34.9	3.0

CHECKLIST FOR MIDDLE SCHOOL PRINCIPALS

(Conditions Under Which the HOTS Program is Effective for Chapter 1 and LD Students)

HOTS is a general thinking skills program designed primarily for Chapter 1 and mildly impaired Learning Disabled students in Grades 5-8. The thinking skills are designed to also enhance social interaction and basic skills. HOTS students are currently out-performing national averages for basic skill gains in reading and math, and the program has been validated by the National Diffusion Network.

HOTS represents a new approach to compensatory education. Instead of reteaching the information the students did not previously learn, HOTS provides the types of thinking skills that students need to be able to learn content the first time it is taught in the classroom. Producing basic skill gains, however, requires implementing the program in accordance with the recommendations that follow.

1. HOTS requires a very good teacher. A weak teacher simply cannot be successful. The pedagogical techniques are very sophisticated. The ideal teacher is someone who is very bright, energetic, flexible yet organized, and who above all loves to get kids to talk.

2. HOTS requires a good overall school improvement effort in the regular classroom. HOTS is designed to help a good, or improving, school get better. HOTS should not be implemented in a school with a weak staff, or where extensive school improvement has not already taken place. Since HOTS does not teach content, if the needed content is not covered in the regular classes, basic skills scores will not go up. This means high time-on-task, and quality direct instruction each day in reading and math activities aligned with test objectives.

3. Proper scheduling. The HOTS program is designed to substitute for, and replace, the remedial activities in the school. It needs a minimum of 35 minutes of instruction a day, 4 days a week, on an ongoing basis for 1½—2 years. This can be done either as a pullout or as a separate course. Schools that want to raise math scores can optionally use the fifth day, or 10-15 minutes at the end of each period, for computerized math drill and practice.

   Students should ideally be kept in the program for 1½—2 years, even if they test out at the end of the first year. This extra service is legal and helps students automate their new problem solving skills. First and second year HOTS students should be in separate sections.

   Students should be put into HOTS at the lowest grade level in the school (or when they first arrive). HOTS can be implemented either with a limited number of students, or as a school-wide model serving all needy students at the lowest grade level.

   A teacher can handle up to about 10 students at a time with 9 Apple II computers. A teacher and aide can handle up to about 16 students at a time with 13-15 computers.* Other pupil-teacher ratios with various combinations of personnel can be considered. HOTS project staff will assist in identifying other possible combinations.

   * (It's possible to do the program in the first year with a few less computers, but only for a year.)

4. Quality, classroom instruction available to HOTS students. It is critical that HOTS students get good content instruction in reading and math in their regular classes.

5. **Proper budgeting.** Costs include: a) purchasing the needed equipment from local vendors, and b) training and support costs. The training and support costs per school are as follows:

Number of students served	Up to 25	25-85	More than 85
First year *	$750	$900	$1100
Second year	300	400	600
Thereafter	50	50	100

* Includes the support fee for the school and training one HOTS teacher and aide. Each additional HOTS teacher adds $450 to the first year costs. (No added cost the second year).

The support fee includes the curriculum, phone support, the HOTSTUFF newsletter, videotapes, and updates for as long as you use the program.

6. **General support by the principal.** There are a number of general leadership activities that increase the effectiveness of the program. The most important leadership activity is to implement and monitor a good overall school effectiveness program. It is also important to support the HOTS teacher who will have to work very hard, particularly the first year when the curriculum and techniques are unfamiliar. Additional support needs include:

   a) HOTS linkage activities consist of HOTS students writing eight questions and answers around a block of content every three weeks. These questions and answers are then brought to the HOTS lab and entered into the computer to make games and quizzes based on the content. Content teachers interested in working with the students on their writing of the questions in their class should be identified and encouraged to work with the HOTS students.

   b) Schedule presentations about HOTS for the entire staff early in the school year. This includes a 15 minute video overview of the program, and a 1½—2 hour workshop to train content area teachers on how to help students write questions. The latter should be conducted within the first three months by the HOTS teacher.

   c) Support public display of the HOTS students' prowess.

7. **Evaluating HOTS instruction.** DO NOT USE EEI EVALUATION TECHNIQUES. HOTS lessons are different. The best measure of the HOTS teacher's effectiveness is the number of complete answers he/she obtains from students—as opposed to one word answers—without giving obvious hints. The more one-word answers or hints, the weaker the lesson. There should be little talk by the teacher, and a lot by the students.

   DO NOT WORRY IF EARLY IN A UNIT STUDENTS SEEM CONFUSED ABOUT HOW TO PROCEED. Learning to use textual information to deal with uncertainty is one of the key skills that HOTS develops. The students will be successful by the end of the unit.

Feel free to contact Dr. Stanley Pogrow if you have further questions. Dr. Pogrow can be reached at: University of Arizona, College of Education, Tucson AZ 85721 or at (602) 621-1305.

1989-90 BASIC APPLICATION

APPENDIX D

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(Page 13)

J. PROGRAM DESCRIPTION

Check only ONE. A separate page must be completed for each type of service.

___	PREK	___	SECONDARY READING
___	ELEMENTARY READING	___	SECONDARY MATH
___	ELEMENTARY MATH	X	OTHER (Specify) Home-School Aides

BUILDINGS SERVED: See list of eligible schools on page 2, Item A-3

GRADE LEVELS SERVED 1-12

DESCRIPTION OF CHAPTER 1 SERVICES (Must include activities to improve basic and more advanced skills):

Chapter 1 Home/School Aides will assist the building principal and Chapter 1 staff in the accounting and monitoring of Chapter 1 students attendance and academic progress. Activities will include: regularly scheduled home contacts, observation and notation of problems occurring in the home, assisting in the planning and organization of parent-teacher meetings, and maintenance of attendance records for Chapter 1 students.

___ Pull Out
___ In Regular Classroom
___ Replacement Class
X Other (specify) Home-School Aides

(check ALL that apply)

PLAN FOR COORDINATION WITH REGULAR INSTRUCTIONAL PROGRAM:

The Chapter 1 Home/School Aides will work with both Chapter 1 and regular teachers to provide information and assistance in working with the parents of Chapter 1 students. Key factors in academic success such as attendence and problems occurring in the home will be monitored and this information will be shared with the building staff.

AVERAGE WEEKLY TIME EACH CHILD RECEIVES CHAPTER 1 SERVICES:

CHAPTER 1 STAFF FOR THIS COMPONENT:

FTE:	
___	Teachers
26	Paraprofessionals Home/School Aides
___	Other (describe) ___

J. PROGRAM DESCRIPTION

Check only ONE. A separate page must be completed for each type of service.

- ☐ PREK
- ☐ ELEMENTARY READING
- ☐ ELEMENTARY MATH
- ☐ SECONDARY READING
- ☐ SECONDARY MATH
- ☒ OTHER (Specify) Parent Involvement/Training

BUILDINGS SERVED: See list of eligible buildings on Page 3, Item A3.

GRADE LEVELS SERVED: 1-12

DESCRIPTION OF CHAPTER 1 SERVICES (Must include activities to improve basic and more advanced skills):

Parent involvement and training activities will be conducted on district-wide, cluster, and individual school levels. Opportunities will be provided for regular meetings to formulate parental input into the program. The Chapter 1 Parent Coordinator will develop programs, activities, and procedures that support the efforts of parents to work with their children in the home to attain the instructional objectives of the program. In addition, the Chapter 1 Parent Coordinator will provide training to parents, teachers, and principals to help build a partnership between home and school.

- ☐ Pull Out
- ☐ In Regular Classroom
- ☐ Replacement Class
- ☐ Other (specify) _____

(Check ALL that apply)

PLAN FOR COORDINATION WITH REGULAR INSTRUCTIONAL PROGRAM:

The Chapter 1 Parent Coordinator will work with both Chapter 1 and regular teachers to provide training to the staff on the Chapter 1 parent involvement requirements and activities designed to build a stronger bond and partnership between the home and the school. Activities will include information on how parents and the school can work together, opportunities within the Chapter 1 and regular school program for parents to become involved, and specific learning activities parents can use with their children at home.

AVERAGE WEEKLY TIME EACH CHILD RECEIVES CHAPTER 1 SERVICES:

CHAPTER 1 STAFF FOR THIS COMPONENT:

FTE:

- 1.0 Teachers
- Paraprofessionals/Aide:
- .85 Other (describe) Parent Coordinator

APPENDIX D

1989-90 BASIC APPLICATION

J. PROGRAM DESCRIPTION

Check only ONE. A separate page must be completed for each type of service.

- [ ] PREK
- [ ] ELEMENTARY READING
- [ ] ELEMENTARY MATH
- [ ] SECONDARY READING
- [ ] SECONDARY MATH
- [X] OTHER (Specify) Staff Development

BUILDINGS SERVED: See list of eligible buildings on Page 3, Item A3.

GRADE LEVELS SERVED

DESCRIPTION OF CHAPTER 1 SERVICES (Must include activities to improve basic and more advanced skills):

In mathematics, various inservice sessions at different grade levels (1-6) will be conducted focusing on math manipulatives. Teachers in grades 1-6 will receive inservice in the area of reading. Teachers in grades 7-9 will receive information and strategies related to the Thinking Skills Program.

- [ ] Pull Out
- [ ] In Regular Classroom
- [ ] Replacement Class
- [ ] Other (specify) _____

(CHECK ALL THAT APPLY)

PLAN FOR COORDINATION WITH REGULAR INSTRUCTIONAL PROGRAM:

In mathematics, Chapter I teachers and classroom teachers will instruct students together in the classroom at grades 1-6 on a voluntary basis. As a result of the training received (in both subject areas), Chapter I and classroom teachers will instruct students using the same information, strategies and materials. Teachers will be surveyed after the inservice to determine the need for follow-up by one of the trainers. Teacher conferences will be provided for Chapter I, Language Arts, Mathematics, and teachers to coordinate the new thinking skills strategies in the content area with the remedial instruction.

AVERAGE WEEKLY TIME EACH CHILD RECEIVES CHAPTER 1 SERVICES:

CHAPTER 1 STAFF FOR THIS COMPONENT:

FTEs

____	Teachers
____	Paraprofessionals
1.0	Other (describe) 1.0 Subject Area Coordinator

APPENDIX D

1989-90 BASIC APPLICATION

SP.4065
(Page 10)

J. PROGRAM DESCRIPTION

Check only ONE. A separate page must be completed for each type of service.

- ☐ PREK
- ☐ ELEMENTARY READING
- ☐ ELEMENTARY MATH
- ☐ SECONDARY READING
- ☐ SECONDARY MATH
- ☒ OTHER (Specify) Student Assistance Team

BUILDINGS SERVED:
See list of eligible schools on page 2, Item 3A

GRADE LEVELS SERVED
PreK-12

DESCRIPTION OF CHAPTER 1 SERVICES (Must include activities to improve basic and more advanced skills):

Student Assistance Teams (consisting of counselors, social workers, and psychologists) will be established to provide Chapter 1 student assistance with academic, attendance, socio-emotional, and health problems. Services will include screening, diagnosis, evaluation, and intervention as necessary. In addition, the Student Assistance Teams will assist the families of students who have exhibited identified problems and will make referrals to appropriate agencies within the community.

- ☐ Pull Out
- ☐ In Regular Classroom
- ☐ Replacement Class
- ☒ Other (specify) Student Assistance Team

(check ALL that apply)

PLAN FOR COORDINATION WITH REGULAR INSTRUCTIONAL PROGRAM:

The Student Assistance Teams will provide information and training to parents, teachers, and principals on the purpose and services available from the teams. The Student Assistance Teams will coordinate their efforts with the Chapter 1 and regular education teachers to plan and implement alternative instructional methods, techniques, or adjustments which could be made in the classroom. Assistance will also be provided in dealing with socio-emotional and behavioral problems.

AVERAGE WEEKLY TIME EACH CHILD RECEIVES CHAPTER 1 SERVICES:

CHAPTER 1 STAFF FOR THIS COMPONENT:

FTE:	
____	Teachers
____	Paraprofessionals
3.5	Other (describe) (1.5 FTE Counselors, 1.5 FTE Social Workers, .5 FTE Psychologists)

SP-4668
(Page 10)

J. PROGRAM DESCRIPTION

Check only ONE. A separate page must be completed for each type of service.

- ☐ PREK
- ☐ ELEMENTARY READING
- ☐ ELEMENTARY MATH
- ☐ SECONDARY READING
- ☐ SECONDARY MATH
- ☒ OTHER (Specify) Elementary After-School/Extended Day Program

BUILDINGS SERVED: See list of eligible buildings on Page 3, Item A3 - Program is Voluntary.

GRADE LEVELS SERVED: 1-6

DESCRIPTION OF CHAPTER 1 SERVICES (Must include activities to improve basic and more advanced skills):

- ☐ Pull Out
- ☐ In Regular Classroom
- ☐ Replacement Class
- ☒ Other (specify) After-School/Extended Day Program

(check ALL that apply)

The After-School/Extended Day Program serves students who participate in the Chapter 1 Program during the regular school day. The program provides for additional instruction in reading and/or mathematics. Entry into the program is based on need. Class sizes range from 5 to 10 and operates for one hour after school, two to four days per week. The program focuses in on different approaches, use of computers, newspapers, Scholastic and Reading For Success Programs, and manipulatives. Learning approaches and materials will focus on the development of both basic skills (e.g., vocabulary development, computation) and more advanced skills (e.g., comprehension, concepts and applications).

PLAN FOR COORDINATION WITH REGULAR INSTRUCTIONAL PROGRAM:

After-School/Extended Day teachers will reinforce, extend, and support classroom lessons in reading and mathematics and district-wide objectives in reading and mathematics at each grade level.

AVERAGE WEEKLY TIME EACH CHILD RECEIVES CHAPTER 1 SERVICES: 2 to 4 hours

CHAPTER 1 STAFF FOR THIS COMPONENT:

FTE:

- 83 Teachers
- ____ Paraprofessionals
- ____ Other (describe) ____

Participating teachers are paid on an hourly rate.

APPENDIX D

1989-90 BASIC APPLICATION

SP-4065
(Page 13)

J. PROGRAM DESCRIPTION

Check only ONE. A separate page must be completed for each type of service.

- ☐ PREK
- ☐ ELEMENTARY READING
- ☐ ELEMENTARY MATH
- ☐ SECONDARY READING
- ☐ SECONDARY MATH
- ☒ OTHER (Specify) Computer Assisted Learning Lab/ After School, 7th thru 9th

BUILDINGS SERVED: Central Jr. , North Intermediate, Webber Jr.

GRADE LEVELS SERVED 7th thru 9th

DESCRIPTION OF CHAPTER 1 SERVICES (Must include activities to improve basic and more advanced skills):

The Computer Assisted Learning Lab serves students who participate in the regular Chapter 1 program during the regular school day. The program provides for additional instruction in Reading and/or Mathematics. Class sizes range from 10-15 and operates for 2 hours after school for four days per week. The program will use specially designed interactive software. Learning approaches and materials will focus on the development of both basic skills (vocabulary development and computation) and advanced skills (comprehension, concepts and applications).

- ☐ Pull Out
- ☐ In Regular Classroom
- ☐ Replacement Class
- ☒ Other (specify) Computer Assisted Learning Lab/After School, 7th thru 9th

(check ALL that apply)

PLAN FOR COORDINATION WITH REGULAR INSTRUCTIONAL PROGRAM:

The Computer Assisted Learning Lab teachers will reinforce, extend and support classroom lessons in reading and mathematics and district-wide objectives in reading and mathematics at each grade level.

AVERAGE WEEKLY TIME EACH CHILD RECEIVES CHAPTER 1 SERVICES:

1 to 4 hrs.

CHAPTER 1 STAFF FOR THIS COMPONENT:

FTE:

3 Teachers (participating teachers are paid on an hourly rate)

____ Paraprofessionals

____ Other (describe) _____

APPENDIX D

1989-90 BASIC APPLICATION

J. PROGRAM DESCRIPTION

Check only ONE. A separate page must be completed for each type of service.

- [ ] PREK
- [ ] ELEMENTARY READING
- [ ] ELEMENTARY MATH
- [ ] SECONDARY READING
- [ ] SECONDARY MATH
- [x] OTHER (Specify) Secondary After School Tutoring Grades 7 thru 12th

BUILDINGS SERVED:	GRADE LEVELS SERVED
Central, North, Webber Jr. and Saginaw High School	7 thru 12th

DESCRIPTION OF CHAPTER 1 SERVICES (Must include activities to improve basic and more advanced skills):

The Secondary After School Tutoring program serves students who participate in the Chapter 1 program during the regular school day. The program provides for additional instruction in reading and/or mathematics. Class sizes will range from 5 to 10 students per teacher and operate for 2 hours after school for four days of the week. Learning approaches and materials will focus on the development of both basic skills (vocabulary development, computation) and more advanced skills (comprehension, concepts and applications).

- [ ] Pull Out
- [ ] In Regular Classroom
- [ ] Replacement Class
- [x] Other (specify) _____

(check ALL that apply)

PLAN FOR COORDINATION WITH REGULAR INSTRUCTIONAL PROGRAM:

The Secondary After School Tutoring program will reinforce, extend and support classroom lessons and district-wide objectives in Reading and Mathematics at each grade level.

AVERAGE WEEKLY TIME EACH CHILD RECEIVES CHAPTER 1 SERVICES:

1 to 4 hrs.

CHAPTER 1 STAFF FOR THIS COMPONENT:

FTE:	
8	Teachers (participating teachers are paid on an hourly rate)
____	Paraprofessionals
____	Other (describe) _____

APPENDIX D

1989-90 BASIC APPLICATION

J. PROGRAM DESCRIPTION

Check only ONE. A separate page must be completed for each type of service.

- [ ] PREK
- [ ] ELEMENTARY READING
- [ ] ELEMENTARY MATH
- [ ] SECONDARY READING
- [ ] SECONDARY MATH
- [X] OTHER (Specify) Project SUCCESS

BUILDINGS SERVED: See list of eligible schools on page 2, Item A-3

GRADE LEVELS SERVED: 1-12

DESCRIPTION OF CHAPTER 1 SERVICES (Must include activities to improve basic and more advanced skills):

Project SUCCESS will focus in on those students who have not made any academic gains in the past two years and for whom a special plan for assistance must be developed. Activities will include: establishment of study centers in churches and community centers, recruitment of business and industry for mentors and an Adopt-A-School Program, recruitment of other volunteers to assist with the program, providing information and training to parents, and making referrals to other agencies in the community.

- [ ] Pull Out
- [ ] In Regular Classroom
- [ ] Replacement Class
- [X] Other (specify) Project SUCCESS

(check ALL that apply)

PLAN FOR COORDINATION WITH REGULAR INSTRUCTIONAL PROGRAM:

Project SUCCESS staff will work with Chapter 1 and regular education teachers to identify, assess, and develop plans for student program improvement for students who have not gained in performance for the past two years.

AVERAGE WEEKLY TIME EACH CHILD RECEIVES CHAPTER 1 SERVICES:

CHAPTER 1 STAFF FOR THIS COMPONENT:

FTE:

- ____ Teachers
- ____ Paraprofessionals
- 5 Other (describe) 1.0 FTE Project SUCCESS Specialist and

APPENDIX E

SCHOOL DISTRICT OF THE CITY OF SAGINAW

DEPARTMENT OF EVALUATION, TESTING & RESEARCH

TO: Foster B. Gibbs
Mary Ciolek
Ron Schneider
Don Scott

FROM: Barry E. Quimper
Richard N. Claus
Paul Kurecka

RE: Phase 1 Process Evaluation Fact Finding and Suggestions Concerning Chapter 1/Article 3 Pupil Service Team (PST) Process and Project Success

DATE: December 2, 1991

Eight respondents (Ron Schneider, Gene Nuckolls, William Cheaney, Bob Jamison, Craig Tatum, Mary Ciolek, Don Scott, and Chris Dundas) were interviewed between November 14 - 22, 1991 using a structured interview guide (see attachment A). Their responses were tabulated and analyzed to determine operational details. As part of this analysis a number of variations were also determined. Below are the results of this analysis and suggestions for improving operations.

Agreed Upon Operational Details

- The Pupil Service Team (PST) process is run by the social worker and initiated by teacher recommendations. Social worker puts together the PST.
- They understand the three year, two year and one year student need criteria. PST meetings result in action plans. There are (ill-defined) periodic reviews and a case review at the end.
- If an action plan is initiated and Success service is indicated, Project Success is in play. Success also does some things independently, e.g., Mentoring and Adopt-A-School.
- Commitment varies from site to site. The building principal is seen as key.
- It is too early to determine success of these ventures.
- PST is behind its established timeline. Time constraints are evident.
- Craig Tatum recruits volunteers for study centers and Adopt-A-School and Mentor programs.
- Craig Tatum does not monitor whether child is Chapter 1/Article 3 or not.
- One person should oversee entire PST and/or Success Process.

- There is a need for an overall inservice, but it is unclear who is responsible.

Variations in Operational Details

- PST review process (timelines, etc.) are not defined.
- The procedures for filing action plans (copies) beyond the CA-60 and social workers is unclear.
- Definition of what constitutes a completed action plan is needed.
- Volunteers' roles seem unclear.
- Specify the number and location of all study centers.
- Success and PST are serving some students who are not identified for Chapter 1/Article 3 services.

Suggestions

The following suggestions are not meant as directives nor meant to be an exhaustive list of enhancements. There may be other methods by which the intent they seek to address could be achieved.

- One person should be assigned to oversee PST and Success activities. Such a person would be in a better position to bring consistency to PST/Success. This consistency of operation would include the following: Chapter 1/Article 3 eligibility verification processes, provide communication between and within organization units involved with PST/Success and inspire, where lacking, commitment to PST/Success outreach efforts.
- A specific definition of what constitutes a completed plan should be developed, with attention given to whether completed refers solely to fact-finding, discussion, and prescription or if treatment and case reviews are included.
- Volunteer roles, e.g., how the roles are determined and how volunteers are screened for abilities, should be specified. As well, a listing of all study center sites (both on and off campus) should be completed.
- An inservice, or set of inservices, should be developed to fully inform personnel (district-wide) of the scope, nature, and importance of the PST/Success processes.
- The PST/Success process should not be limited to just those students recommended by a teacher. All Chapter 1/Article 3 students with three and two (and perhaps one) years no gian status should have action plans developed for them.

BEQ;RNC;PK/ms

Attachment

APPENDIX E

1991-92 CHAPTER 1 PROJECT SUCCESS AND PUPIL SERVICE TEAM (PST)
PROCESS EVALUATION INTERVIEW FORM
(PHASE I)

Interviewer: _____

Interviewee: _____

Date: _____

1. Could you explain how Project Success and PST process work together?

____ Yes ... If so, indicate the relationship between different staffs and departments and also outside agencies that may support the activities?

_____

_____

_____

_____

_____

____ No ... If so, explain the PST process or Project Success in isolation?

_____

_____

_____

_____

_____

2. To your knowledge, has any inservice training which focuses on Project Success and the PST process occurred during this school year?

____ Yes ... If so, what training has been held? Who was trained?

Training Session	Who
_____	_____
_____	_____
_____	_____
_____	_____

____ No ... If so, why not?

_____

_____

_____

_____

3. Ultimately, is there a single person who oversees all these activities in charge of both Project Success and the PST process?

____ Yes ... If so, who? What type of administrative function does he/she perform (supervise, coordinate, etc.)?

_____

_____

_____

To whom does this person report about progress of these activies?

_____

_____

____ No ... If no, why not? _____

_____

_____

4a. What supervisory task do you have relative to Project Success?

_____

_____

_____

4b. What supervisory tasks do you have relative to the PST process?

_____

_____

_____

5. What are you telling your staff relative to prioritizing student needs (with which students to work first)?

_____

_____

_____

6. Do you or your staff maintain a student action plan file?

____ Yes ... If so, where? _____

_____

____ No ... If so, why not? _____

_____

7. What communication systems are used by you or your staff to keep Project Success and/or the PST process on track?

_____

_____

_____

8. What on-going diagnosis, assessment, and progress reporting do you or your staff use for Project Success and/or the PST process?

_____

_____

_____

NOTE: If respondent works with Project Success, ask the following questions (if not, skip to the next note after question 17).

9. Who helps Project Success recruit volunteers?

_____

_____

_____

10. How are volunteers being used by Project Success?

_____

_____

_____

11. Which businesses are participating as mentors or adopt-a-school workers?

_____

_____

_____

12. What population does GAP serve and what type of service do they receive?

13. What Project Success activities are coordinated with REAP and GAP?

14a. What involvement, if any, do you or your staff have in the establishment/operation of the elementary school mentor program?

14b. What involvement, if any, do you or your staff have in the establishment/operation of the adopt-a-school program?

15. What procedures do you or your staff use to verify that only compensatory education students are served by the PST process and Project Success?

16. Where are the Project Success student centers located?

17. What types of arrangements and commitments do you and your staff have for operating the study centers?

NOTE: If this person is directly involved in the PST process, please ask the following questions. (If not, skip to the next note following question 23.)

18. At each building what person is responsible for initiating and coordinating the PST process?

19. In general, how successful are they at completing the PST process?

20. Who receives a copy of the student action plans once they are developed?

21. How do you or your staff know that an action plan is complete?

22. How many action plans have been completed to date?

23. Do you monitor the amount of time your staff logs for reimbursement by the compensatory education program?

____ Yes ... If so, what do you look for? What action, if any, have you taken to date regarding your monitoring?

_____

_____

_____

____ No ... If so, why not? _____

_____

_____

NOTE: Ask the following questions of those respondents involved with either Project Success or the PST process.

24. What expected and unexpected positive outcomes of the Project Success and/or the PST process have you found?

Circle All That Apply		Expected Outcomes	Unexpected Outcomes
PST	Success	_____	_____
PST	Success	_____	_____
PST	Success	_____	_____
PST	Success	_____	_____
PST	Success	_____	_____

25. What expected and unexpected negative outcomes of the Project Success and/or the PST process have you found?

Circle All That Apply		Expected Outcomes	Unexpected Outcomes
PST	Success	_____	_____
PST	Success	_____	_____
PST	Success	_____	_____
PST	Success	_____	_____
PST	Success	_____	_____

26. If you had more authority/power, what changes would you make to improve Project Success and/or the PST process? Why?

Circle All That Apply		Change	Why
PST	Success	_____	_____
PST	Success	_____	_____
PST	Success	_____	_____
PST	Success	_____	_____
PST	Success	_____	_____
PST	Success	_____	_____
PST	Success	_____	_____
PST	Success	_____	_____

APPENDIX F

DIAGNOSTIC SURVEY'S TEXT READING NUMERICAL SCORE CONVERSION TO BASIC READING LEVELS.

The Text Reading Levels are roughly equivalent to the following basal reader levels:

A-2	Readiness	22-24	Grade 3 Readers
3-4	PP1	26	Grade 4
5-6	PP2	28	Grade 5
7-8	PP3	30	Grade 6
9-12	Primer	32	Grade 7
14-16	Grade 1 Readers	34	Grade 8
18-20	Grade 2 Readers		