

DOCUMENT RESUME

ED 362 843

CS 011 437

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 TITLE Improving the Reading Scores of Students Who Fall below Grade Level Expectations.
 PUB DATE Dec 92
 NOTE 113p.; Ed.D. Major Applied Research Project Report, Nova University.
 PUB TYPE Dissertations/Theses - Doctoral Dissertations (041)

EDRS PRICE MF01/PC05 Plus Postage.
 DESCRIPTORS Elementary Education; Elementary School Students; *Instructional Effectiveness; Peer Teaching; Program Descriptions; Reading Ability; *Reading Achievement; *Reading Improvement; Student Motivation; Tutoring
 IDENTIFIERS New Jersey (Bergen County)

ABSTRACT

This report describes the process used by a small, one-building kindergarten-through-grade-six school district in New Jersey to improve the reading scores of students who had fallen below their current grade in reading. Areas of need included improving the reading scores of students in regular education, special education, and English-as-a-Second-Language programs. In addition, the need to increase incentive programs to help motivate students, increase teacher awareness of specific student deficiencies, and develop classroom techniques to help improve student reading ability were recognized. Three major strategies were employed: student incentive programs; peer tutoring of second-grade remedial students by sixth-grade students; and learning style identification along with individualized instruction within the classroom. An average student reading grade level equivalent gain of 0.83 was recorded for students tested from April 1990 to April 1991, while students tested from April 1991 to April 1992 realized a gain of 0.8. Despite the positive reading grade equivalent score realized during that period, non-mastery deficiencies were unchanged and partial-mastery deficiencies increased by 45. Thirty-two of the 38 students tested in April 1990 and 22 of the 28 students tested in April 1991 received a final reading grade of C or above. An increase of 42% in students receiving recognition from 1990-1991 to 1991-1992 was realized for the combined implemented student incentive programs. Eight students showed no change, 12 students improved moderately, and 8 students improved greatly on teacher self-esteem appraisals. Twenty-eight tables and one figure of data are included; 20 references and 14 appendixes of data are attached. (Author/RS)

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Improving the Reading Scores of Students Who Fall Below Grade Level Expectations

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A Major Applied Research Project Report
presented in partial fulfillment of the requirements
for the degree of Doctor of Education

Nova University
National Ed. D. Program for Educational Leaders
Wilmington Cluster

December 1992

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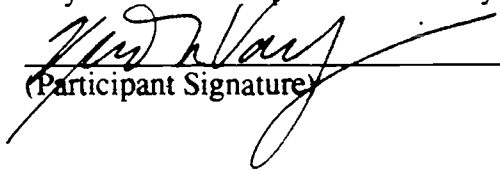
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Abstract

Improving the Reading Scores of Students Who Fall Below Grade Level Expectations

This report describes the process used by a small, one building kindergarten through grade six school district, to improve reading scores of students who have fallen below their current grade as indicated by the grade level equivalent score on the California Achievement Test from January 1991 through June 1992. Possible causes stem from a blue-collar community that placed little emphasis on academic achievement, teaching strategies that were not targeted for students in need of a more individualized approach, and a lack of student incentive programs designed to promote academic and social achievement. Areas of need that were addressed included improving the reading scores of students in regular education, special education, and English as a second language programs. In addition, the need to increase incentive programs to help motivate students, increase teacher awareness of specific student deficiencies, and develop classroom techniques to help improve student reading ability were recognized.

Three major strategies were employed to improve reading abilities of students. The use of student incentive programs, peer tutoring by sixth grade students for second grade remedial students, and the use of learning style identification along with individualized instruction within the classroom were employed. Meetings with the teachers and project updates were accomplished during classroom visitations, meetings in the vice principal's office during teacher preparation periods and/or after school, and during informal meetings at lunch and in the halls.

As a result of the project intervention from April 1990 to April 1991, an average student reading grade level equivalent gain of 0.83 was recorded for students tested from April 1990 to April 1991. For students tested from April 1991 to April 1992, the average student reading grade level equivalent gain was 0.8. Although a positive reading grade equivalent score was realized from April 1991 to April 1992, non-mastery deficiencies were unchanged from April 1991 to April 1992 and partial-mastery deficiencies increased by 45. Thirty-two out of 38 students tested in April 1990 received a final reading grade of C or above (84%) and 22 out of the 28 students tested in April 1991 received a final reading grade of C or above (79%). An increase of 42% in students receiving recognition from 1990-1991 to 1991-1992 was realized for the combined implemented student incentive programs. Based on teacher self-esteem appraisals for their students from September 1991 to April 1992, 8 students showed no change, 12 students improved moderately, and 8 students improved greatly.

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Chapter I

Problem Statement and Community Background

General Statement of Problem

The results from the California Achievement Test (CAT) administered in April 1990 to students in grades one through four indicated that 38 students out of 106 (36%) scored below grade level in the total reading subtest of the CAT. After the April 1991 administration of the CAT, 10 students improved their scores above grade level and 7 students moved (see Table 1).

Table 1

Distribution of Students who Scored Below Grade Level in the Total Reading Subtest on the California Achievement Test

Student types	Enrollment Apr-90	Enrollment Apr-91	No. of students Apr-90	No. of students Apr-91
Regular ed. students	158	156	18	10
ESL students	30	35	8	3
Special ed. students	19	32	9	15
Both ESL & special ed.	3	4	3	0
Total students	207	223	38	28

Description of Immediate Problem Context

This district is located on the Hudson River south of the George Washington Bridge in Bergen County, New Jersey. This school is the only school in this kindergarten through grade six district. During the 1990-1991 school year the student population was 207, with 18 teachers, 3 aides, 1 nurse, 1 social worker, 1 psychologist, 1 learning disabilities/speech specialist, 3 secretaries, 1 board secretary, 1 vice principal/child study team (CST) chairperson, and 1 chief school administrator. During the 1991-1992 school year the student population had grown to 229 students, 20 teachers, and 6.5 aides. The board of education consists of 5 members.

Each grade consisted of one class (1990-1991) with the exception of the first, fourth

and fifth grades, which were divided into two sections due to increases in enrollment for the 1990-1991 school year. All classes were self-contained. Class sizes during the 1989-1990 school year were very large. Grades four and five had approximately 30 students. Grade three had reached 32 students and was divided into two sections in March 1990. Grades one, two, and six had an average of 25 students per class. Students had separate teachers for music, art, science, and physical education. Other services such as remedial instruction, English as a second language (ESL), resource room, gifted and talented, and special education were available. During the 1991-1992 school year all classes were divided into two sections with the exception of the third and fourth. Average class size consisted of 17 students.

The public school enrollment had increased from 172 students at the end of the 1988-1989 school year to 209 students at the close of the 1989-1990 school year, and had increased to 224 students at the end of the 1990-1991 school year. As of June 1991 the enrollment had further increased to 236 students. This increase in school population is a reflection of the town population which is increasing rapidly. The many expensive high rise complexes located on the Hudson River waterfront are attracting many new residents. The reputation of the school has improved over the past several years (based on the writer's conversations with community residents and parents from the high rise complexes inquiring about the school) and more families from the high rise complexes are sending their children to the public school as opposed to private schools. During the 1989-1990 school year, 17 students attended the public school from the high rise complexes and increased to 24 students during 1990-1991 school year. During the 1991-1992 school year, 33 students attended the public school from the high rise complexes.

Based on the enrollment figures for the 1989-1990 school year, 59% of the student population was white, 18% was Hispanic, 9% was black, 5% was Oriental, and 9% was Indian/other. Fourteen percent of the students were in need of English as a second language services and 31% of the students came from single family homes.

Description of Surrounding Communities

This town, which is located in Bergen County, New Jersey, is 3.25 miles long (north/south) and .25 miles wide (east/west). The east boundary of the town is the Hudson River, which separates New York from New Jersey. To the north is Fort Lee, a mixed community of various ethnic groups, many of whom work in New York City. To the west is Cliffside Park, a middle/upper middle class community. To the south is North Bergen in Hudson County. The community where this study took place is actually "under the cliff" of the New Jersey Palisades. Due to geographical perimeters, only two roads run north/south in this community enabling the development of bus routes to be handled with ease by the district.

This town is a blue collar community with a moderate to high socioeconomic level (New Jersey School Boards 1989-1990) due to a growing affluent element moving into the waterfront high rise complexes. According to school office records, 140 families are categorized as blue collar, 51 as professional and 19 with no listing. Blue collar is defined as any family that is earning a salary in the trades (carpenter, mason, plumber, factory worker) or any other position that does not require a college degree or the need to wear a suit and tie. There were 39 families on welfare. According to school office records from March 1991, 80 students received free lunches and two students received reduced price lunches. Twenty-five percent of the established community with children attending the public school lived in Edgewater all their lives. They attended the public school systems, had children, and remained as part of the cultural fabric.

Chapter 2

Problem Definition and Evidence

Problem Background

In the past, as well as the present, the test scores of the students have been good. Each year 100% of the students scored above the New Jersey minimum state standards in reading and language arts. Although this is a positive figure, in some instances students can score above the minimum state standards and still score below their grade level as indicated by the grade level equivalent results reported on the California Achievement Test. It was through close scrutiny that the selected students were identified. In the past, this district had employed only one administrator. My position as vice principal was created for the 1989-1990 school year. This new position allowed for greater administrative attention to detail. In summary, there has been no past history of attempts to improve grade level equivalents of identified students based on the California Achievement Test.

Evidence of Problem Discrepancy, General

The results from the California Achievement Test administered in April 1990 to students in grades one through four, indicated that 38 students out of 106 (36%) scored below grade level in the total reading subtest of the CAT. In 9 cases the grade level deficiency was more than 1.0 grade below grade level, and in 25 cases the deficiency was less than 1.0 grade level, or less than one full grade level equivalent below the student's grade at the time of testing. Four students fell below two full grade level equivalents (see Table 2). Of the original 38 identified students, 12 students have been classified perceptually impaired and 11 students were receiving ESL services.

Evidence of Problem, Item Analysis for Students Tested in April 1990

Based on the objectives performance index of the California Achievement Test, which contained non-mastery, partial mastery, and mastery indicators for vocabulary,

Table 2

Number of Students Reading Below Grade Level According to the California Achievement Test Administered in April 1990

<u>Reading below grade level</u>	<u>Number of students</u>
Less than 1.0	25
More than 1.0	9
Exactly 1.0	0
More than 2.0	4
More than 3.0	0
Total	38

comprehension, language mechanics, and language expression, an analysis was performed to determine patterns or trends in deficiencies of the 38 identified students tested in April 1990 and the 28 students tested in April 1991 who performed below grade level on the California Achievement Test.

Analysis for Regular Education Students Tested in April 1990

Of the 38 students who scored below grade level in total reading, 18 students were regular education students. In the subtest section labeled non-mastery vocabulary, 10 students showed no deficiency while 11 deficiencies were identified for the remaining 8 students. The most frequent deficiencies were synonyms, antonyms, and homonyms. In the subtest section labeled non-mastery comprehension, 10 students showed no deficiency. Student #13 (see Appendix A) had three deficiencies, and student #27 had one. Students #34 through #38 showed writing techniques was the most common deficiency. In the subtest section labeled non-mastery language mechanics, 12 students showed no deficiency while the remaining 6 students showed a combined 13 deficiencies. Beginning words, titles; and comma, colon, semi, quote; were the most common identified deficiencies. In the subtest section labeled non-mastery language expression, 10 students showed no deficiency. Eighteen deficiencies were identified for the remaining eight students. Nouns, sentence patterns, adjectives-adverbs were the

most common among the remaining students.

In the subtest section labeled partial-mastery vocabulary, one student showed no deficiency and 35 deficiencies were identified for the remaining 17 students. Synonyms, antonyms, homonyms, affixes, and words in context were the most common identified deficiencies. In the subtest section labeled partial-mastery comprehension, three students showed no deficiency while a total of 54 deficiencies were identified for the remaining 15 students. Passage details, character analysis, central thought, and interpreting events were the most common deficiencies. In the subtest section labeled partial-mastery language mechanics, 2 students showed no deficiency while a total of 33 deficiencies were identified for the remaining 16 students. Deficiencies varied for these students (see Appendix B). In the subtest section labeled partial-mastery language expression, seven students showed no deficiency and a total of 23 deficiencies were identified for the remaining students. Although the deficiencies for these students varied, sentence sequence was the most common.

Analysis for Special Education Students Tested in April 1990

In the subtest section labeled non-mastery vocabulary, 2 students showed no deficiency and 23 deficiency categories were identified for the remaining 10 students. Synonyms, antonyms, and words in context were the most common deficiencies. For non-mastery comprehension, four students showed no deficiency. A total of 33 deficiencies were identified for the combined eight students. Passage details, character analysis and interpreting events were the most common identified deficiencies. In the subtest section labeled non-mastery language mechanics, two students were not assessed and four students showed no deficiency. For the remaining six students, beginning words, titles was the most common deficiency. In the subtest section labeled non-mastery language expression, 2 students showed no deficiency while a total of 30 deficiencies were identified for the remaining 10 students. Verbs, adjectives-adverbs were the most common deficiencies.

In the subtest section labeled partial-mastery vocabulary, three students showed no deficiency and 24 deficiencies were identified for the remaining nine students. Synonyms, antonyms, and words in context were the most common deficiencies. In the subtest section labeled partial-mastery comprehension, five students showed no deficiencies while a total of 25 deficiencies were identified for the remaining seven students. Passage details, character analysis, central thought, and interpreting events were the most common found deficiencies. In the subtest section labeled partial-mastery language mechanics, one student was not assessed and two students showed no deficiency. For the remaining eight students a total of 17 deficiencies were identified. Pronoun I, noun, adjective; was the most common deficiency. In the subtest section labeled partial-mastery language expression, two students showed no deficiency while 24 deficiencies were identified for the remaining students. Verbs and pronouns were the most common found deficiencies.

Analysis for English as a Second Language Students Tested in April 1990

In the subtest section labeled non-mastery vocabulary, a total of 32 deficiencies were identified for all 11 students. Synonyms, antonyms, and homonyms were the most frequent identified deficiencies. In the subtest section labeled non-mastery comprehension, 31 total deficiencies were identified for all 11 students combined. Passage details, character analysis, interpreting events, central thought, and main idea were among the most common deficiencies. In the subtest section labeled non-mastery language mechanics, four students were not assessed and one student showed no deficiency. The remaining six students showed a total of 18 deficiency categories with varied sub-categories (see Appendix A). In the subtest section labeled non-mastery language expression, 2 students showed no deficiencies and a total of 38 deficiencies were identified for the remaining 10 students. Verbs, adjectives-adverbs, and sentence sequence were the most common found deficiencies.

In the subtest section labeled partial-mastery vocabulary, five students showed no

deficiencies and a total of six deficiencies were identified for students #02, #03, #04, #26, and #28. In the subtest section labeled partial-mastery comprehension, four students showed no deficiencies. A total of 22 deficiencies were identified for the remaining students. Interpreting events was the most common deficiency. Students #31 and #32 showed multiple deficiencies. In the subtest section labeled partial mastery language mechanics, three students were not assessed and two students showed no deficiencies. A total of 16 deficiencies were identified for the combined remaining students. Pronoun I, noun, adject; beginning words, titles; comma, colon, semi, quote; were the most common found deficiencies. In the subtest section labeled partial-mastery language expression, seven students showed no deficiency and a total of 12 deficiencies were identified for the remaining students. Deficiencies were sparse and varied (see Appendix B). For the four identified students in grade one, only six categories indicated proficiency for all students combined: three for student #3, three for student #4, and zero for students #01 and #02. This may be attributed to the students' limited experience in this country, and their limited exposure to the English language. These students' dominant language was Spanish.

Analysis for Students Tested in April 1991

Since the April 1990 CAT test administration, an additional seven students entered the program, three of whom were ESL students and four of whom were special education students. From the original 38 students, 10 raised their scores above their grade level equivalent in April 1991, and exited out of the program. Seven students moved leaving a remaining total of 21 students identified in April 1991. Seven new students entered the program raising the total number of students identified since April 1991 and the conclusion of the project to 28 (see Table 3).

Table 3

Number of Students Reading Below Grade Level According to the California Achievement Test Administered in April 1991

<u>Reading below grade level</u>	<u>Number of students</u>
Less than 1.0 below grade level	12
Between 1.1 and 1.9 below grade level	10
Exactly 1.0 below grade level	2
Between 2.1 and 2.9 below grade level	3
Exactly 3.0 below grade level	1
Total	28

ESL Students Tested in April 1991

The performance index range for ESL students varied. In two of the three cases, the language component of these ESL students may be attributed to low scores on the CAT because both students showed proficiency in mathematics (CAT 1991). Two of the four students exhibited total mastery in mathematics indicated on the objectives performance index which reinforces the theory that these students would be reading at or above grade level had it not been for their language deficit. The other student showed deficiencies in all areas.

Of the three students showing proficiency in mathematics, one student was .1 grade below grade level while the other was 1.6 grade below grade level. The other student was 2.6 grade below grade level.

Evidence of Problem. Analysis for Students Tested in April 1991

Based on the objectives performance index of the California Achievement Test, which indicates non-mastery, partial knowledge, and mastery indicators for various sub-categories of vocabulary, comprehension, language mechanics, and language expression, an analysis was performed to determine patterns or trends in deficiencies of the seven identified students entering the program after the April 1991 CAT test administration.

Analysis for ESL Students Tested in April 1991

In the subtest section labelled non-mastery vocabulary, eight deficiencies were evident for the three students combined. In the subtest section labelled non-mastery comprehension, 12 categories of deficiency were identified. Interpreting events was a deficiency present in all three students. In the subtest section labelled non-mastery language mechanics, seven categories of deficiency were identified for two of the three students. The remaining student was not tested in this area. For non-mastery language expression, 14 deficiency categories were identified.

Vocabulary partial-mastery showed a total of one deficiency category identified for student *01. In partial-mastery comprehension, one category of deficiency was identified for the same student. For partial-mastery language mechanics, one deficiency category was identified for student #02 while student *01 was not tested in this area. For partial-mastery language expression, one deficiency was identified for student #02. Student *14 showed no partial-mastery deficiencies. The symbol "#" represents a student who was originally tested in April 1990. The symbol "*" represents a student who entered this program based on his/her April 1991 CAT scores.

Appendix C shows non-mastery deficiency indicators for the 28 students tested in April 1991. Appendix D shows partial-mastery deficiency indicators for these same students. The range of deficiencies were widespread. Spanish was the dominant language for all three students. The three students were in first, second, and third grade in April 1991.

Analysis for Special Education Students Tested in April 1991

In the subtest section labelled non-mastery vocabulary, 22 deficiency categories were identified for all 15 students. Of the 15 students, 5 students showed no deficiency in the vocabulary category. In the the subtest section labelled non-mastery comprehension, 44 deficiency categories were identified for all 15 students while 4 students showed no

deficiency. The most common deficiencies among the 15 students were passage details, character analysis, and interpreting events. In the the subtest section labelled non-mastery language mechanics, five students were not assessed and five showed no deficiency. The remaining five students showed pronoun I, noun, adjunct; beginning words, titles; comma, colon, semi, quote; and proofreading to be the most common deficiencies. In the subtest section labelled non-mastery language expression, 44 categories were identified for all 15 students while only 2 students showed no deficiency.

In the subtest section labelled partial-mastery vocabulary, 25 deficiencies were identified for all 15 students while 4 students showed no deficiency. Synonyms was the most common deficiency. In the subtest section labelled partial-mastery comprehension, 24 categories were identified for all 15 students while 7 students showed no deficiency. The most common deficiencies were passage details, character analysis, and interpreting events. For partial-mastery language mechanics, five students were not assessed on this form of the test and four students showed no deficiency. For the remaining six students, the deficiencies varied (see Appendix D). In the subtest section labelled partial-mastery language expression, 19 deficiencies were identified. The deficiencies varied among the students. Four students showed no deficiency.

Analysis for Regular Education Students Tested in April 1991

In the subtest section labelled non-mastery, for regular education students, four students showed no deficiencies and 18 deficiencies were identified for the remaining six students. Synonyms, antonyms, homonyms, words in context, and affixes were the most common identified deficiencies. In the subtest section labelled non-mastery comprehension, six students showed no deficiencies and nine deficiencies were identified for the remaining four students. The deficiencies varied. In the subtest section labelled non-mastery language mechanics, eight students showed no deficiencies and seven were identified for the remaining two students. In the subtest section labelled non-mastery language expression, six students showed no deficiencies and 14 deficiencies were

identified for the remaining four students. The deficiencies varied.

In the subtest section labelled partial-mastery vocabulary, one student showed no deficiency and 17 deficiencies were identified for the remaining nine students. Synonyms, antonyms, and homonyms were the most frequent deficiencies. In the subtest section labelled partial-mastery comprehension, the same student showed no deficiencies as in vocabulary (student #23, see Appendix D) and 28 deficiencies were identified for the remaining nine students. Passage details, character analysis, central thought, interpreting events, and forms of writing were the most common found deficiencies. In the subtest section labelled partial-mastery language mechanics, four students showed no deficiencies and nine deficiencies were identified for the remaining six students. Deficiencies varied for these students. In the subtest section labelled partial-mastery language expression, one student showed no deficiency and 14 deficiencies were identified for the remaining nine students. Sentence patterns, sentence sequence, nouns, and pronouns were the most common found deficiencies.

In summary, for the subtest section labelled non-mastery vocabulary (April 1990), for regular education students, homonyms was the most deficient item. For special education students, antonyms was the most deficient item. For ESL students, antonyms, homonyms, and words in context were the most deficient items, and for students who were both ESL and special education students, synonyms was the most frequent deficiency item.

In the subtest section labelled non-mastery comprehension (April 1990), for regular education students, no pattern of deficiencies was evident. For special education students, passage details, character analysis, and central thought were the most deficient items. For ESL students, passage details, and character analysis were the most deficient items. For students who were both ESL and special education students, passage details was the most deficient item.

In the subtest section labelled non-mastery language mechanics, for regular education students (April 1990), beginning words titles; and comma, colon, semi, quote; were the

most deficient items. For special education students, beginning words, titles; was the most deficient item. For ESL students, beginning words, titles; comma, colon, semi, quote; were the most deficient items. For students who were both ESL and special education students no pattern was evident. For the language mechanics category, beginning words, titles; was common for regular education, special education, and ESL students.

In the subtest section labelled non-mastery language expression, for regular education students (April 1990), no pattern was evident for regular education and students who

Table 4

Summary of CAT Deficiency Items for Non-Mastery, April 1990

	Reg. ed. # of students	Occurrence of deficiency	Sp. ed. # of students	Occurrence of deficiency	ESL # of students	Occurrence of deficiency	Both sp. ed. & ESL # of students	Occ. of Def.
Vocabulary								
Synonyms	18	2	9	3	8	5	3	3
Antonyms	18	2	9	5	8	6	3	1
Homonyms	18	6	9	4	8	6	3	0
Words in context	18	1	9	3	8	6	3	1
Categories/definition	18	0	9	0	8	2	3	0
Affixes	18	0	9	3	8	2	3	0
Definitions/words	18	0	9	0	8	0	3	0
Comprehension								
Passage details	18	1	9	5	8	5	3	3
Sentence meaning	18	0	9	0	8	2	3	0
Main idea	18	0	9	0	8	2	3	1
Character analysis	18	1	9	4	8	5	3	1
Interpreting events	18	0	9	5	8	3	3	2
Central thought	18	0	9	5	8	2	3	1
Forms of writing	18	1	9	3	8	2	3	0
Writing techniques	18	0	9	3	8	2	3	0
Language mechanics								
Not assessed	18	0	9	0	8	2	3	2
Pronoun I, noun, adject	18	1	9	2	8	2	3	0
Beginning words, titles	18	3	9	4	8	5	3	1
Comma, colon, semi, quote	18	3	9	3	8	5	3	0
Proofreading	18	2	9	2	8	3	3	0
Question, exclam	18	0	9	3	8	2	3	0
Language expression								
Verbs	18	1	9	4	8	6	3	2
Adjectives-adverbs	18	2	9	6	8	6	3	2
Sentence formation	18	0	9	1	8	2	3	1
Sentence patterns	18	0	9	2	8	5	3	0
Sentence sequence	18	1	9	2	8	4	3	0
Sentence recognition	18	0	9	3	8	1	3	0
Sentence combining	18	0	9	2	8	1	3	0
Topic sentence	18	0	9	1	8	1	3	0
Nouns	18	0	9	3	8	4	3	0

were both ESL and special education students. For special education students, adjectives-adverbs was the most deficient item. For ESL students, verbs, adjectives-adverbs were the most deficient items (see Table 4).

In the subtest section labelled partial-mastery vocabulary (April 1990), for regular education students, homonyms was the most deficient item. For special education and ESL students, synonyms was the most deficient item. For students who were both ESL and special education students, no pattern was evident.

In the comprehension partial-mastery category for regular education students (April 1990), interpreting events and central thought were the most frequent deficiency items. For special education students character analysis was the most frequent deficiency item. Interpreting events was the most frequent deficiency item for ESL students. No pattern was evident for students who were both ESL and special education students.

In the language mechanics partial-mastery category for regular education students (April 1990), comma, colon, semi, quote; was the most frequent deficiency item. For special education students, pronoun I, noun; was the most frequent deficiency item. For ESL students, pronoun I, noun; and period, question, exclam; were the most frequent deficiency items. For students who were both ESL and special education students, no pattern of deficiency was evident.

In the subtest section labelled partial-mastery language expression, for regular education students (April 1990), sentence sequence was the most frequent deficiency item. Nouns was the most common deficiency item for ESL and special education students. For students who were both ESL and special education students, no pattern of deficiency was evident (see Table 5).

In the subtest section labelled non-mastery vocabulary (April 1991), for regular education students, homonyms was the most frequent deficiency item. For special education students, synonyms was the most frequent deficiency item. For ESL students, no pattern of deficiency was evident.

In the subtest section labelled non-mastery comprehension, for regular education

Table 5

Summary of CAT Deficiency Items for Partial-Mastery, April 1990

	Reg. ed. # of students	Occurrence of deficiency	Sp. ed. # of students	Occurrence of deficiency	ESL # of students	Occurrence of deficiency	Both sp ed & ESL # of students	Occ. of Def
Vocabulary								
Synonyms	18	6	9	6	8	3	3	1
Antonyms	18	6	9	4	8	0	3	0
Homonyms	18	11	9	0	8	0	3	0
Words in context	18	6	9	4	8	1	3	0
Categories/definitions	18	0	9	0	8	0	3	0
Affixes	18	6	9	0	8	0	3	0
Definitions/words	18	0	9	0	8	0	3	1
Comprehension								
Passage details	18	7	9	3	8	2	3	1
Sentence meaning	18	0	9	0	8	0	3	0
Main idea	18	0	9	0	8	0	3	0
Character analysis	18	10	9	5	8	2	3	2
Interpreting events	18	13	9	4	8	4	3	2
Central thought	18	12	9	4	8	2	3	1
Forms of writing	18	8	9	0	8	3	3	1
Writing techniques	18	1	9	0	8	1	3	0
Language mechanics								
Not assessed	18	0	9	0	8	2	3	1
Pronoun I, noun, adject	18	4	9	4	8	3	3	2
Beginning words, titles	18	7	9	3	8	1	3	1
Comma, colon, semi. quote	18	9	9	0	8	1	3	0
Proofreading	18	8	9	1	8	2	3	1
Question, exclaim	18	5	9	2	8	3	3	2
Language expression								
Verbs	18	5	9	3	8	0	3	1
Adjectives-adverbs	18	0	9	1	8	0	3	1
Sentence formation	18	1	9	2	8	0	3	1
Sentence patterns	18	2	9	1	8	0	3	0
Sentence sequence	18	7	9	0	8	1	3	0
Sentence recognition	18	3	9	0	8	1	3	0
Sentence combining	18	2	9	1	8	0	3	0
Topic sentence	18	1	9	1	8	1	3	0
Nouns	18	1	9	4	8	3	3	1

students (April 1991) writing techniques was the most deficient item. Interpreting events, character analysis, and passage details were the most deficient items for special education students. For ESL students, interpreting events was the most deficient item.

In the subtest section labelled non-mastery language mechanics, for regular education, special education, and ESL students (April 1991) no pattern was evident. In the subtest section labelled non-mastery language expression, for regular education students, topic sentence and nouns were the most frequent deficiency items. For special education and

Table 6

Summary of CAT Deficiency Items for Non-Mastery, April 1991

	Reg. ed. # of students	Occurrence of deficiency	Sp ed. # of students	Occurrence of deficiency	ESL # of students	Occurrence of deficiency
Vocabulary						
Synonyms	10	3	15	6	3	2
Antonyms	10	3	15	4	3	2
Homonyms	10	5	15	3	3	1
Words in context	10	4	15	4	3	1
Categories/definitions	10	0	15	0	3	0
Affixes	10	3	15	2	3	1
Definitions/words	10	0	15	0	3	1
Comprehension						
Passage details	10	2	15	8	3	2
Sentence meaning	10	0	15	0	3	0
Main idea	10	0	15	4	3	0
Character analysis	10	1	15	8	3	2
Interpreting events	10	1	15	9	3	3
Central thought	10	1	15	5	3	2
Forms of writing	10	1	15	4	3	1
Writing techniques	10	3	15	5	3	1
Language mechanics						
Not assessed	10	0	15	5	3	1
Pronoun I, noun, adject	10	1	15	3	3	2
Beginning words, titles	10	2	15	4	3	2
Comma, colon, semi, quote	10	2	15	4	3	1
Proofreading	10	1	15	5	3	1
Question, exclamation	10	1	15	3	3	1
Language expression						
Verbs	10	1	15	6	3	2
Adjectives-adverbs	10	1	15	8	3	3
Sentence formation	10	0	15	2	3	1
Sentence patterns	10	2	15	6	3	1
Sentence sequence	10	2	15	3	3	1
Sentence recognition	10	2	15	4	3	1
Sentence combining	10	1	15	2	3	1
Topic sentence	10	3	15	5	3	1
Nouns	10	3	15	5	3	1

ESL students, adjectives-adverbs was the most frequent deficiency item (see Table 6).

In the subtest section labelled partial-mastery vocabulary (April 1991), for regular education students in the category of vocabulary, synonyms, antonyms, and affixes were the most frequent deficiency items. For special education students, synonyms and words in context were the most frequent deficiency items. Categories/definitions was the only deficiency item identified for ESL students.

In the subtest section labelled partial-mastery comprehension, for regular education

students (April 1991), central thought was the most deficient item. For special education students, passage details, and interpreting events were the most frequent deficiency items. For ESL students, no pattern was evident.

In the subtest section labelled partial-mastery language mechanics, for regular education students (April 1991), beginning words, titles was the most frequent deficiency item. For special education students, beginning words, titles and period, question, exclam were the most frequent deficiency items. For ESL students, no pattern of deficiency was evident.

In the subtest section labelled partial-mastery language expression, for regular education students (April 1991), no pattern of deficiency was evident. For special education students, verbs was the most frequent deficiency item and for ESL students, nouns was the only identified deficiency item (see Table 7).

Possible Causes of Problem (Underlying Factors)

It was the project manager's goal to improve the selected students' reading ability as measured by the grade level equivalent score of the CAT. In the process, the number of deficiencies should decrease. This project focused on three types of students: regular education students, ESL students, and perceptually impaired students.

Instructional techniques of teachers needed to be addressed. Teachers taught the same way to all students. Teacher evaluation and observations were favorable for all staff, and therefore, not a concern of this project. In addition, teachers have given their free time to help students on an individual basis. Further strategies and techniques needed to be developed in the classroom for students in need of special assistance. McCarthy (1990), described the matching of student learning styles with prescribed intervention strategies.

Student aspirations to excel in school was lacking. Although teachers motivated students in the context of their regular classroom, a school-wide program of recognizing academic and social achievement was non-existent.

A comprehensive curriculum designed to meet the needs of the students was adopted

Table 7

Summary of CAT Deficiency Items for Partial-Mastery, April 1991

	Reg. ed. # of students	Occurrence of deficiency	Sp. ed. # of students	Occurrence of deficiency	ESL # of students	Occurrence of deficiency
Vocabulary						
Synonyms	10	4	15	6	3	0
Antonyms	10	4	15	4	3	0
Homonyms	10	3	15	3	3	0
Words in context	10	2	15	6	3	0
Categories/definitions	10	0	15	1	3	1
Affixes	10	4	15	2	3	0
Definitions/words	10	0	15	3	3	0
Comprehension						
Passage details	10	5	15	5	3	1
Sentence meaning	10	0	15	1	3	0
Main idea	10	0	15	1	3	1
Character analysis	10	4	15	4	3	1
Interpreting events	10	5	15	5	3	0
Central thought	10	7	15	3	3	0
Forms of writing	10	4	15	2	3	0
Writing techniques	10	3	15	1	3	0
Language mechanics						
Not assessed	10	0	15	5	3	1
Pronoun I, noun, adject	10	1	15	1	3	0
Beginning words, titles	10	3	15	3	3	0
Comma, colon, semi, quote	10	2	15	1	3	0
Proofreading	10	2	15	2	3	0
Question, exclam	10	1	15	3	3	1
Language expression						
Verbs	10	2	15	5	3	0
Adjectives-adverbs	10	0	15	4	3	0
Sentence formation	10	0	15	2	3	0
Sentence patterns	10	3	15	1	3	0
Sentence sequence	10	2	15	0	3	0
Sentence recognition	10	0	15	0	3	0
Sentence combining	10	0	15	1	3	0
Topic sentence	10	2	15	2	3	0
Nouns	10	3	15	3	3	1

and in place. A review of the curriculum by the administration and several teachers was done, and it was decided that no modifications were needed. The vice principal concentrated on the delivery of this curriculum during his meetings with the teachers involved in this project. However, a comprehensive item analysis of the April 1990 CAT test provided areas of weaknesses for each individual student which were shared with each teacher.

The ESL program is a pull-out program. Students are referred for ESL services by

teachers, who are given a student assessment form from the ESL teacher for every new student who enters the school. A student is also referred if the dominant language (indicated on the student's enrollment form) spoken at home is not English. Students are administered the Language Assessment Battery test (Form A) in the fall to determine eligibility. At the end of the school year, each student enrolled in the ESL program is administered the Language Assessment Battery test (Form B). This test (Form B) determines whether the student will continue in the program the next school year, or be exited from the program. The ESL teacher works collaboratively with the classroom teachers in scheduling students for ESL services.

For students with limited English proficiency, improvement will develop over time if the language barrier is the only factor and cause for the low grade level equivalency in reading. If this is true, improvement should occur under normal circumstances in the educational life of the student. With the results of the analysis, a specific program for each student will be developed based on the indicated sub-categories of deficiency.

For special education students who are perceptually impaired, the remedy may not be so easy. In many cases, the reason for classifying these students as perceptually impaired is attributed to a discovered learning deficiency. The same improvement procedure for ESL students was attempted for these students. A plan was developed for each child based on his/her sub-category deficiency results. The teacher had spent the maximum time on task within the confines of the classroom with each of these students for improvement to occur. Pinnell (1990) described Reading Recovery, which is a specific set of design interventions developed by Marie Clay. The program involves one on one tutoring for 30 minutes each day in addition to classroom instruction. When the child becomes an independent reader, the tutoring is discontinued. This one on one tutoring will, due to the students' learning disability, provide the extra needed assistance to special education students. Student needs were not fully met in a large self-contained special education class with varying ability levels.

As the vice principal, I saw the need to motivate students to succeed and to create

competition among the student body. In meetings with teachers, it was decided that many social and academic problems could be improved through the use of incentive programs. The writer, in collaboration with the entire staff, developed various incentive programs which were geared to motivate all students in the population. Such programs included the Student of the Month program. Every child has a chance to be nominated by his/her teacher for this recognition either through academic achievement or through social improvement. Another program was called BUG. This idea originated at the 1990 Nova University Summer Institute after an artifact presentation. BUG stands for brought up grades. Any student who improves one grade without going down in any other received a BUG tee shirt. Canfield (1990) stated that in order to raise students' self-esteem, the teaching staff must have high self-esteem. Students learn through modeling and imitation of their teachers. Teachers who have low self-esteem are likely to pass it on to their students. Through preservice and inservice training, administrators must ensure that the student/teacher relationship is positive, valid, and encouraging. Sharp (1990) described remedies for at-risk students who are reading below grade level. Individualized education plans are essential for every student so that the student can receive the specific attention needed to improve his/her reading ability.

Generally, students who experience difficulty in an area will not engage in the activity of which the difficulty arises. This problem is two fold. First, a difficulty or deficiency in reading is detected and the student is aware of his/her difficulty. Second, the student does not take personal steps to correct the problem, either because of age or maturity level, lack of parental support at home, or because the difficult activity is not enjoyable. Carbo (1990) stated that all students should be taught to read in accordance with the method that is the most beneficial. The heart of the literacy problem is the notion that all children are expected to learn how to read in the same way. Seldom are attempts made to discover the reading interests of the student. There is a need to develop incentive programs which motivate students to read books of interest and choice with the hope that students will begin reading for the incentive reward and ultimately improve their reading

skills and discover the joys of reading in itself.

In summary, the following possible causes were considered as substantially affecting intended academic performance and were addressed in the solution strategy and the process objectives. The possible causes include: low student self-esteem, lack of different teaching techniques, limited student ability and low student aspirations.

Chapter 3
Problem Situation and Context

The Staff

This district is a small one building district. During the past two years, several new teaching positions were added to the faculty because of increasing student population. The new teachers fell into the lower age bracket (see Figure 1).

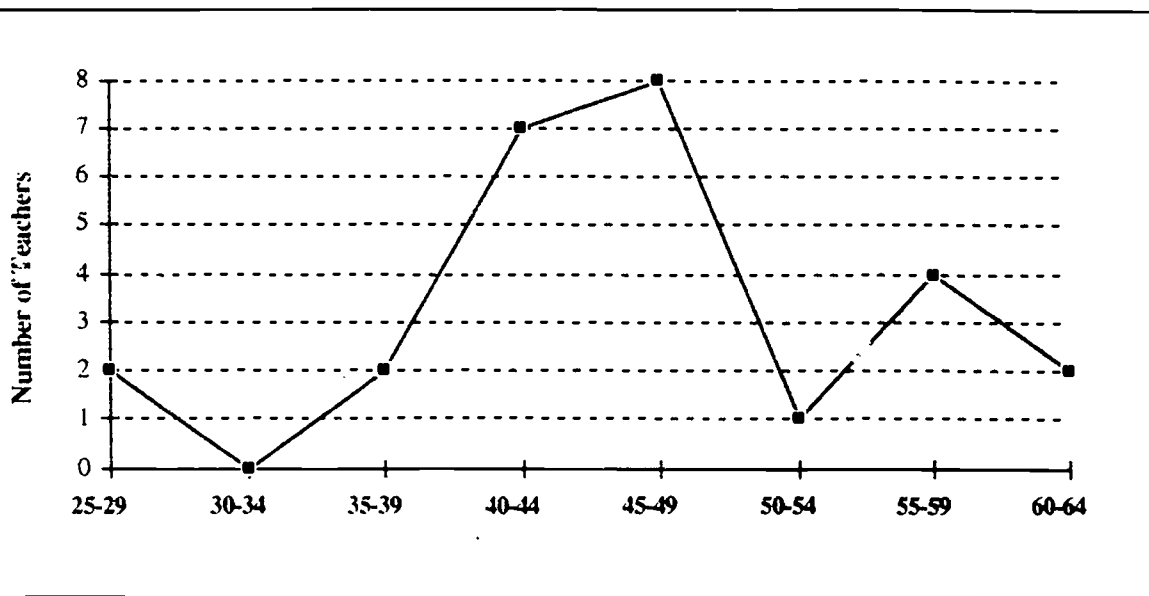


Figure 1. Faculty Age Distributions

In summary, this district has a middle age, veteran staff. The teachers will not be moving to another district because too much time and seniority has been invested locally and they will not be moving to administrative posts because no one has chosen to pursue that route in their careers thus far. Although cognizant of their contract, they are very dedicated to the students they teach. These teachers will spend time after school to provide students with extra help, or to spend time giving students detention when warranted. They will make phone calls to parents in the evenings and their attendance rate is good.

Test Scores

During the four years I have served as vice principal, our test scores have been good. 100% of the students scored above minimum New Jersey state standards in reading and language arts and 98% scored above minimum standards in math. Test scores have never been an issue with this faculty. The identified students do not involve the entire teaching staff. As the vice principal, I have a positive relationship with the staff. To delve deeper, the objective of this project is not to raise test scores alone, but to improve the reading skills of the selected students in the area of identified deficiencies.

The Physical Plant

This school does not have an intercom system where teachers and the main office can communicate directly. The building consists of three floors. The kindergarten, gym, nurse, and cafeteria, are on the ground floor. The second or main floor houses the main office, grades one, two, three, and the perceptually impaired classes. The third floor houses grades four, five, six, science, music, and the vice principal/child study team suite. This small set up lends itself to personal communication. The physical proximity of the classrooms to the offices are such that direct communication is easily facilitated. There are no interruptions by intercom, and personal administrative visits are held between classes in most cases. Our visits are positive because we get a chance to leave the office, witness what takes place in the halls, and observe informally what is taking place in the classrooms that we are visiting. Communication, therefore, was easily facilitated in the implementation and procedure of this project.

In the process of this project, teachers worked with students on an individual basis and I, in turn, have worked with teachers individually. As examples, I may walk by a classroom and obtained feedback on a student's progress, or a teacher may stop by my office to discuss strategy. The entire project proceeded in this fashion. I possess a controlling leadership style which is based upon efficiency and getting the job done, usually quickly and efficiently. I am goal oriented, and I have set high standards for

myself in terms of dedication to the job, cooperating with others, and achieving desired job related goals. Oral communication was the most important factor because of the small setting that had been described. It was through this dimension that I motivated and worked with teachers in improving the reading ability of the identified students.

The superintendent had been supportive of my efforts as an administrator in this district. I have have had his complete trust and confidence in my abilities to get the job done. This was a definite facilitating factor in accomplishing the goals of this project.

Parental Influences

One influence on poor reading skills of some regular education students is that the parents do not read at home. This community is a blue collar community whose emphasis is on work and earning a living from my experience in communicating with parents and community members.

In the professional opinion of various staff members in the district who have 15 years of experience or more, reading problems stem from either problems in the home or limited student ability. This district has a high special education population totaling 27% of pupil enrollment. Teachers have stated, and the project manager has personally witnessed the fact, that some students come to school unprepared, without the proper homework assignments. Homework is not completed, and parents have not helped their children when requested by teachers, administrators, and child study team members. Due to single parent homes and the need for one parent to work, time allotted to spend with children is, therefore, limited, and the time spent reading to children is non-existent based on the experiences I have had communicating with our parents. Although the Public Library is available and free, a combination of the above factors place little importance on reading and education as a whole. These factors are unchangeable by this project, but notice of mention is important as it presents the reader with a comprehensive understanding of this environment. Although these statements do not apply to everyone in the community, based on the writer's experience, they may be generalized to the

identified students of this project.

The Community

This community was receptive to innovative ideas that were proposed by the project manager. The fact that interest was taken, and test scores improved, were secondary considerations for these parents. The community and parents, therefore, were facilitating factors because they were not aware of alternative methods, or they did not hold opposing views about reading techniques or ideas. Alternately, the children may not have received support from parents in the home setting.

In summary, while there were constraining factors such as the lack parental involvement in their children's academic life, this project consisted of many facilitating factors such as having a dedicated, competent teaching faculty, a small informal setting in which to communicate with teachers, and support from the superintendent that has helped in the achievement and accomplishment of the project's goals and objectives.

Chapter 4

Problem Conceptualization, Solution Strategy, and Project Outcomes

Review of the Literature and Consultation with Others

Results of this review of the literature were grouped into three main categories: (a) strategies used for students with socioeconomic settings similar to family backgrounds as the project setting, (b) teaching techniques, and (c) student incentives. Also, literature addressing at-risk students, or students receiving special education services, was included in the first category. The second category of literature addressed various classroom techniques such as reading recovery, cooperative learning, student teacher ratios, grouping, and learning styles. The third category of literature covered motivational techniques and student self-esteem. All of the references cited closely relate to this project's environment, either through the similarity in the types of students the literature covers, or in the types of solutions suggested which could be applicable within this present project.

Strategies Used for Students With Similar Family/Socioeconomic Settings

The setting of this project consisted of one to two classes per grade level. Students were randomly selected for each class creating heterogenous class groups. Braddock and McPartland (1990) described methods utilized to improve untracked classes thereby helping those students at lower levels of class ability. Extra help provided through peer tutoring services and coaching sessions by the teacher can help students who are experiencing learning difficulties. Teachers should be equipped with the proper methods such as cooperative learning techniques that involve all students in heterogenous classes. Mastery learning techniques also provide assistance to students in need of extra chances for success. Students' opportunities should be expanded by rewarding individual effort and progress regardless of the current educational level of the student.

Connell (1990) stated that common practices used with preschool children will provide

students with a chance for achievement in the primary grades. The author explained several steps in achieving this process. First, human variance should be accepted instead of labeling students slow or failing. Schools provide more time for oral language as opposed to written language. "The written or unwritten rule saying that all third graders should read and write at the same third grade level is wrong - or at least unfair" (Connell, 1990, p. 14). The project manager feels that attempts should be made to improve student ability so that students are functioning at their grade level or above. Second, the student teacher ratio should be as low as possible. For the younger child, more direct instructional contact between the student and the teacher is needed. When parents or siblings help out at home that ratio becomes one to one. Two year old children can be taught to read if they have two full time teachers, or both parents available. Three year old children can be taught to read if the ratio is one to one. As the child gets older, the ratio can increase. Therefore, students experiencing reading difficulty in the primary grades are in need of the lowest student teacher ratio.

Knapp, Turnbull, and Shields (1990) compare conventional wisdom in educational practice with alternatives designed to reach students who come from poor homes where the family structure has broken down. The setting of this project is similar in that the students come from low socioeconomic backgrounds. The conception of the disadvantaged learner is one where the student is deficient in his/her preparation for school and that the family has provided a disadvantaged start in life. By focusing on these stereotypes or deficiencies, the teacher can miss the strengths of cultures and experiences many students possess. Adverse consequences for these conceptions are low expectations and failure of schools to provide solutions to learning problems. Disadvantaged students are better able to meet academic challenges of schools when teachers respect the students' cultural/linguistic backgrounds, the program is designed to build upon the students' experiences while providing new and unfamiliar ways of thinking, and when the procedures, assumptions, and expectations of the program are explained clearly to students. According to Knapp Turnbull, and Shields (1990),

students are not provided with the chance to think and motivate themselves, which is evident when the lesson is broken down into small fragments and the teacher must explain each step. Teachers should balance this approach with others that enable students to think and motivate themselves independently, either through reward systems or self monitoring programs.

Teaching Techniques

"Both theory and research evidence lead to the prediction that academic risk taking activities are a powerful means of increasing the success of our educational efforts," (Clifford 1990, p. 24). Clifford (1990) stated that for risk taking to succeed, first, students must be given the opportunity to freely select materials and activities that vary in difficulty levels and probability of success. Second, as the level of task difficulty increases, the rewards and payoffs must increase. Third, an atmosphere and environment in the classroom must be tolerant and supportive of error making. Error correction must be guaranteed.

Pinnell (1990) described Reading Recovery, a program designed to aide students in reading. Identified first grade students in need of reading assistance are provided with one on one tutoring for 30 minutes a day in addition to the regular classroom instruction. When a child can read independently, he/she is discontinued from the tutoring and receives only regular class instruction.

The basis for the program is to enable students to use what they know, and to obtain what they do not know. Teachers help students monitor their learning progress and self correct their reading, as well as utilize many different kinds of information. New Zealand studies of Reading Recovery indicate that regardless of race, socioeconomic status or sex, the lowest achieving students make progress while in the program and after they are released from the program according to Clay (1990).

Alderman (1990) described four attributions that effect students' future expectations about their performance, such as not having the ability, being able to complete a task if

full effort was made, task difficulty, and luck. For some students, the experiencing of success is not enough to ensure motivation. The teacher must have high expectations for students while demonstrating self-efficacy or confidence in the student's projected performance and motivation. The key attitudes that teachers must possess are confidence and determination. The author had developed links to help the deficient student become successful. The first link is to establish proximal goals for the student. Bandura (1986) stated that the use of goal setting is important in developing self-motivation. Creating motivational levels or stages can then be monitored in the accomplishment of reaching designated goals. The second is learning strategies. In the second link, learning strategies which help accomplish and reach goals are identified by the student. The third link is successful experience. A learning goal, rather than a performance goal, is what is desirable in this link. Orsak (1990) described learning style strategies used to improve students who failed the minimum standards test in reading and math. A perceptual strength was identified for those students such as tactile/kinesthetic. Teachers then developed hands-on tasks for these students, as well as forming small groups and implementing peer coaching. After eight months, these students successfully passed their state exam. Student learning styles must first be assessed, then best shot instruction should be developed based on individual learning styles. McCarthy (1990) discussed the 4MAT concept which consisted of four quadrants of learning styles. These learning styles were described as imaginative learners, analytic learners, common sense learners, and dynamic learners. Listed behaviors were associated with each learning style.

"At the heart of our literacy problem are the dangerous notions that all youngsters should be taught to read in the same way and that failure is nearly always the fault of the student. These misguided beliefs, coupled with the subskills lessons and worksheets used in America's classrooms for the past 20 years, have made learning to read needlessly difficult and boring," (Carbo, 1990, pp. 26-27). Carbo (1990) stated that children are not given the proper choices, or any choices at all in the reading material that would stimulate and create an interest to read. When reading styles are matched to the

instruction, gains are made in reading comprehension according to Carbo (1987). Five recommendations were made by Carbo (1990) for successful reading styles programs. First, identify each student's reading style. Second, utilize materials and methods that match the student's strengths and styles. Third, demonstrate high expectations. Fourth, utilize reading materials that are of interest to the student and last, the teacher should try to remove as much stress from the process as possible.

Slavin, Madden, and Stevens (1990) explained the Cooperative Integrated Reading and Composition, or CIRC program. The program consists of three elements: basal related activities (which are used in this setting), direct instruction in reading comprehension, and integrated language arts/writing. Students are grouped and then assigned pairs or triads within the reading group. Remedial and mainstreamed students are included in these groups. The subpairs or triads are used for peer encouragement. Student's scores on tests and quizzes contribute to a team score. The teams with the higher scores are given super awards. All teams receive some kind of recognition. Research done by the authors indicate that CIRC classes received a gain of 30% to 36% of grade level equivalent more than control students in reading comprehension and reading vocabulary, 52% more of a grade level equivalent in language expression, 25% more of a grade level equivalent in language mechanics and 72% of a grade level equivalent more in spelling as indicated on the California Achievement Test. This program was evaluated over a 12 week period.

Sava (1989) stated that with the declining family structure, children who need help must receive it early, as the foundation for their education is being laid, especially between the ages of three and six. This means that programs like Head Start, or other preschool programs in many cases have to take the place of the parent in the home as far as the child's educational training is concerned.

Student Incentives

Two excellent incentive programs have been helpful in motivating and recognizing students and their achievements. Student of the Month is a program where students were selected based on academic and/or social excellence. BUG (bought up grades) enables students to earn tee shirts for improving a grade in any subject without going down in others, stated Wright (1990).

In summary, the main points from this literature review for effectively helping students achieve in reading with family backgrounds similar to this setting are: reduced student teacher ratios through individualized instruction whenever possible, extra help provided by the teacher and peer tutoring, recognition and incentives, high teacher expectations, and identifying learning styles matched with the appropriate methods.

Proposal Solution Components

Based on the literature review and in light of this setting, four solution strategies were identified. The first strategy considered was the implementation of individualized instruction and peer tutoring as suggested by Connell (1990). As mentioned earlier, the 1990-1991 school year had seen the return to a fully self-contained kindergarten through grade six program. Previously, grades four through six were semi-departmentalized. The main reason for returning to a self-contained format was the need for grouping in reading and math, which was not possible under the semi-departmentalized program. Also, a fully self-contained program with grades one through three scheduled for reading at the same time, and grades four through six scheduled at the same time, the possibility exists for a second grade student who is reading at a third grade level to receive reading instruction with a third grade reading group functioning at the same level. This same scenario works for students reading below grade level. This grouping situation facilitated more individualized instruction by reducing the number of students in each group as well as reducing the varying levels of ability.

Once the students have been identified, extra attention and emphasis was provided to

these students by the teacher through awareness of the students' identified needs. Emphasis here means providing individualized attention in the confines of the classroom, during lunch, and after school.

The second strategy is the use of various incentive plans to motivate and promote excellence in the classroom as well as motivation to read at home. Clifford (1990) and Carbo (1990) suggested that students should be permitted to select materials and activities of interest. This concept can be considered through incentives. Currently, students and their families can earn free coupons for pizza at a neighborhood pizzeria based on the number of books a child has read. When a student successfully completed the chosen books, the teacher issued a coupon. The coupon was only redeemable when the student was present with a parent. Although it would be extremely difficult (and will not be a solution strategy) to engage parents in reading activities, as stated earlier in this paper, parents joining their children for lunch or dinner with free food obtained because of a successful reading activity helped parents to understand that their children can benefit and enjoy reading as an activity and ultimately provide reading material in the home.

Other programs such as Student of the Month and BUG were implemented and were utilized to promote motivation for academic excellence. Student of the Month candidates were selected by their classroom teachers for academic and social excellence. A photograph was displayed in the center corridor on the main floor of the building. A caption stated the reason(s) for being selected accompanied the photograph. Students had their pictures taken at a monthly incentive assembly. A personal letter was mailed home to the parents of each selected student and was signed by the vice principal and the superintendent.

The second incentive program is BUG. Students must improve one grade without going down in any other to qualify for a BUG tee shirt. Tee shirts were sponsored by the Parent Teacher Organization. Both were excellent incentive programs.

The third incentive program, Reading for Pizza, was sponsored by a neighborhood

pizzeria. Students earned a certificate for a free slice of pizza when a specified number of books per grade books were completed by the student. In order to receive a certificate in grade one, a student had to have read four books. In grade two, the requirement was five books; grade three, six books; and grades four through six, eight books. The parent had to sign a form that the child read the books. Implementation for the program was from January 1991 to June 1991, and from January 1992 to June 1992.

The third group of solution strategies include classroom techniques. Braddock and McPartland (1990), and Orsak (1990) suggested peer tutoring as a strategy for the improvement of student skills. This is a viable solution strategy which was implemented for the identified students in second grade. The peer tutor was a sixth grade student. Sixth grade students have been helping teachers as playground monitors for students in kindergarten through third grade during lunch. The sixth grade students had written stories in conjunction with the kindergarten class. The tutoring program was a natural extension from other activities implemented at the school.

Braddock and McPartland (1990) also suggested cooperative learning techniques. The faculty received in service training about cooperative learning, whole language approach, and discipline techniques in January 1990 and January 1991. Each of these workshops consisted of one full day. In addition, two teachers were sent out of district with the vice principal to observe another school district employing cooperative learning.

McCarthy (1990) discussed learning style strategies. Teachers find and develop methods of teaching that are similar to a student's style of learning. A learning style assessment sheet was developed based on the learning styles concepts described by McCarthy (1990). Teachers identified learning styles and indicated strategies used to meet each student's learning style. Informal meetings were held between the project manager and the teachers involved on an individual basis to explain and discuss the assessment sheet and the four learning styles. Teachers gave examples of strategies to be used. Space was provided on the document for strategies not listed. In addition, a self-esteem index was developed to determine, in the teachers' professional judgement,

changes in each child's self-esteem level (see Appendix E). In the discussions between the writer and the teachers, it was evident that all the teachers had a common understanding and perception of what self-esteem was and how it was to be assessed. Therefore, evidence of validation was not pursued.

A fourth solution strategy was the informal discussion with individual teachers concerning each pupil's attitudes, achievements, and strengths and weaknesses. In addition, discussion of teacher intervention strategies, based on each student's individual learning style, was discussed, developed, and implemented by the teacher.

Project Outcomes

The projected outcome of this project was to improve the reading abilities of the identified students from below grade level performance on the California Achievement Test to grade level or above when tested in April 1992. Specific terminal and process objectives were developed as follows:

Terminal Objective 1

Ten out of the original 38 students will achieve at grade level or above according to their grade level equivalent scores on the total reading subtest of the California Achievement Test administered April 1991.

Terminal Objective 2

Ten out of 28 students achieving below grade level in April 1991 will achieve at or above their grade level according to the grade level equivalent scores on the total reading subtest of the California Achievement Test administered April 1992. (These 28 students consist of 21 students continuing in the program from the original 38 students and 7 new students who entered the program after the April 1991 CAT test administrations).

Terminal Objective 3

Seventy-five percent of the 38 students will have an average final reading grade of C or above in June 1991.

Terminal Objective 4

Seventy-five percent of the 28 students will have an average final reading grade of C or above in June 1992. These 28 students consist of 21 students continuing in the program from the original 38 students and 7 new students who entered the program after the April 1991 CAT test administration.

Process objective 1

Incentive plans such as Student of the Month, BUG, and Reading for Pizza will be implemented by January 1991.

Process Objective 2

The vice principal will discuss each student's individual case with the teacher(s) involved at least two times a year.

Process Objective 3

A peer tutoring program will be developed and implemented by November 1991.

Process objective 4

The vice principal will discuss and develop teaching techniques to be used by the individual teachers in this project to meet specific identified learning styles of identified students by November 1991.

Chapter 5

Action Plan for Strategy Implementation

Specifications of Action

As an overview, four main strategies have been developed in reaching this project's goals. These strategies are: (a) use of incentive programs for student achievement, (b) individual concentrated instruction, (c) motivation and specific classroom techniques designed to improve student reading scores, and (d) the development of teaching strategies.

This project began in January 1990 and ended in June 1992. In January 1991, 38 students were identified based on their CAT scores from April 1990. In June 1991 these 38 students were reassessed based on the CAT performance in April 1991. In September 1991, 28 students became part of this project which ended in June 1992 (see Table 1). A time line was developed in January 1991 and although there were minor variations from the original plan, this next section describes how the real implementation proceeded from that plan.

In January 1991, results from the California Achievement Test administered in April 1990 were assessed for students in grades one through four. Thirty-eight students who scored below grade level in the total reading subtest of the CAT were identified.

Two 45 minute faculty meetings were held with the entire staff (September 1990 and September 1991), to discuss and develop the Student of the Month, Reading for Pizza, and BUG incentive programs. Communication with teachers was accomplished through a memo every other month for the purpose of obtaining the names of students who qualified for the above mentioned incentive programs. An incentive assembly was held after each marking period to issue awards to students.

The first grade teacher coordinated the Reading for Pizza program which was implemented from January to June during both the 1990-1991 and 1991-1992 school years. The program was developed and discussed informally between the writer and teacher. Meetings were held once a month for approximately 10 to 15 minutes during

classroom visitations by the project manager.

An analysis of the CAT results was conducted by the writer for the identified students in January 1991 and in June 1991 for the purpose of sharing this information with teachers in September 1991. The writer initially met with the six individual teachers to discuss identified students and the analysis in February 1991. Information concerning each individual student's deficiencies was shared during meetings that lasted for 30 minutes.

In September 1991 the writer met with the six individual teachers to discuss each student's individual case based on the objective performance index taken from the CAT. Through these individualized meetings it was clear that a refined way of identifying and documenting student learning styles needed to be developed. A check-off form learning style assessment sheet, developed by the writer, was based upon the 4MAT approach described by McCarthy (1990). In addition, a student self-esteem questionnaire was developed for teachers to use in evaluating their student's self-esteem. Since the concern for such a format did not arise until September 1991, data based on the learning styles assessment sheet and the self-esteem questionnaire will only be available for the 28 students who were administered the CAT in April 1991.

In June 1991 results from the California Achievement Test administered in April 1991 were assessed. Seven additional students were identified who scored below grade level on the total reading subtest. In addition, the status of the original 38 students were assessed.

The writer met with the six teachers to determine the percentage of students who would obtain a final grade of a C in reading in June 1991 and June 1992. Meetings were conducted by the writer during classroom visitations. The writer's suggestion that 75% of the original 38 students tested in April 1990, and 75% of the 28 students tested in April 1991 would obtain a C or above in reading was accepted as an objective by all teachers involved.

In November 1991 the project manager met with the sixth grade teacher to discuss

implementing a peer tutoring program for the identified second grade students in the remedial program who were tested in April 1991. Follow-up discussions were held on a weekly basis during classroom visitations. The program was implemented in January 1992. Meetings were held between the writer and the remedial teacher and the sixth grade teacher every Wednesday in January 1992 through June 1992 during classroom visitations for the purpose of coordinating the teacher/student schedule of the peer tutor and for the purpose obtaining progress of the program.

In June 1992 the project manager assessed the results of the California Achievement Test for the 28 students in the program. Also assessed were the final reading grades obtained for the 28 students.

Concerning the topic of student teacher ratios/individualized instruction, the first task was to make the teachers of the identified students aware that a reading problem existed. The project manager personally met with these teachers and discussed the nature of the student's reading difficulty. Student reading level deficiencies were discussed, as indicated by the California Achievement Test for each student, so that the teacher was made aware of the exact nature and degree of the deficiency. A facilitating factor was the small setting of this district. Strong oral communication skills of the vice principal, also facilitated this process. An anticipated side effect of this first process objective was the development of a closer working relationship between the teachers and me. A negative side effect was that certain teachers felt burdened by the extra work. Monitoring of this task was accomplished by the weekly discussions between the vice principal and each individual teacher involved in the project.

The second task was to provide more individualized instruction in the confines of the regular classroom which was accomplished through increased teacher awareness of a student's problem. Teachers spent additional time with students during lunch, after school, or with peer tutors. It was not feasible to hire more staff. Teachers provided extra help and spent time with children during remedial periods (if the child did not receive remedial) or extra time during lunch or after school. An example of this teacher

concern was the second grade teacher who arrived early every morning in March 1992 to provide individualized instruction to a student. If the child qualified for remedial instruction, the student/teacher ratio was lower, as the remedial teachers work with smaller groups of children. In summary, individualized instruction was enhanced through the teachers's awareness of the problem enabling him/her to spend more time, or give the child more attention during class, lunch, and after school. Again the target group was the teacher of the identified student. Oral communication skills in this small district setting was essential throughout this process. Measurement of this objective was determined by the actual student/teacher ratio from project implementation until its conclusion.

The third task was to introduce a sixth grade peer tutor in the classroom of students in grade two, focusing on remedial students receiving extra help. Peer tutoring was designed to further reduce the student/teacher ratio through individualized instruction. Specific assignments by the regular classroom teacher were given to the peer tutor. A positive side effect was that this experience improved the self-esteem and self-worth of the sixth grade peer tutor. Assessment of this task was determined by the progress of the second grade remedial students and the positive feelings and attitudes of the teachers and peer tutor through personal interviews by the project manager and the classroom teachers. The time line was from September 1991 until the California Achievement Test in April 1992.

Incentive plans are the second main category to be discussed. Student of the Month was the first incentive program to be implemented for reading improvement. Selection for this recognition was based on academic or social excellence. Once teachers were made aware, and emphasis was placed on improving these students' reading abilities through the various techniques discussed, further attention was given for consideration in the selection of these students for Student of the Month. Students for whom the incentive was geared for were the primary target group and the secondary target group was the teacher. Side effects of this objective were positive ones such as increased self-esteem,

goal setting, motivation and personal student satisfaction. Measurement for this program used the percentage of students who qualified for this award. The time line for this incentive had begun before this project and will continue well after its conclusion, but will now be used as a vehicle to target the identified students.

BUG was the second program to be used as a vehicle for student incentive. Every student was eligible for this recognition based on performance. When improvement was made in one subject without going down in any other, the student earned a BUG tee shirt. Students of this project were the target group for this objective and the time line for this incentive had begun before this project and will continue after its conclusion. Measurement of this program was determined by the percentage of identified students who had improved their grades in reading enabling them to earn a BUG award.

Each teacher discussed deficiencies and the scores received on the California Achievement Test administered April 1990 and April 1991 with each student. These discussions enabled each student to be cognizant of the fact that the teacher will be working with him/her for the specific purpose of improving reading scores. Students who were made aware of their deficiencies were the primary target group. Side effects were positive and consisted of the student knowing the teacher had an interest in helping improve reading ability. The time line for this goal began in the initial stages of this project's implementation. Program assessment was accomplished by personal interviews between the vice principal and the teacher and the teacher's input on the self-esteem index (see Appendices E and F).

A certificate, which signified achievement in reading improvement, was issued by the vice principal to each of the identified students when they received recognition for Student of the Month or BUG. Students receiving certificates were the target group and the time line commenced at the beginning of this project and extended until reading scores improved. Side effects of this objective were positive ones such as increased self-esteem, goal setting, motivation and personal student satisfaction.

Earning coupons at the neighborhood pizzeria for independent reading was the fourth

incentive. This objective was designed to involve the parents as well as reward the student for independent reading. Coupons could not be redeemed unless the child was accompanied by his/her parent. Students who earned coupons for independent reading were the target group for this objective and the secondary target group was the parent(s) who recognized the importance and the interest their child had taken in reading books and literature. Measurement for this program assessed the number of books read by the students. From January 1991 to June 1991 and from January 1992 to June 1992 was the time line for this objective.

Educational classroom techniques were the next improvement strategy that focused on individual student learning styles. The vice principal met with each teacher and discussed the four learning styles concept as described by McCarthy (1990). Teachers then identified a learning style for each student. After each student was identified with a specific learning style, the teacher and the vice principal discussed each student's specific learning style and the strategies used to academically meet the child's individual learning style. Implementation of the plan followed. To facilitate this process, the project manager developed a learning style assessment sheet, in check-off form, for the teacher to complete after a need for this type of format was discovered from the previous year. Cohesiveness of the learning styles concept was obtained through this format. Students were the primary target group for this objective. Each teacher identified their students' learning style strengths, developed a plan for each student, and implemented the plan. Students who were the beneficiary of this approach were the target group for this objective. Implementation of this objective began in the fall of 1991. Measurement of this objective was determined by student test scores and the success of student learning style identification, which was assessed through personal interviews and discussion between the vice principal and the teacher.

Two full day faculty inservice workshops were held for the entire staff. The theme for the first workshop held in January 1991 was the "Whole Language Approach" conducted by a supervisor from another school district. Examples of the "Whole

Language Approach" were presented. Evaluations by the professionals attending, based on informal interviews and conversations, were favorable. Written evaluations did not exist. A second workshop held in January 1992 was entitled "Cooperative Learning." Criteria for the establishment of groups, activities for the students in each group, and rewards and incentives were presented. Teachers were the primary target group and the secondary target group was the students. Implementation for this project was January 21, 1991.

Selection of a peer tutor was discussed by the vice principal, the remedial teacher, and the sixth grade teacher. Criteria for selecting the student was established. Academic standing and social performance were criterion used to choose a student. Teachers were the target group. Negative side effects could include dislike for the program by the teachers, resentment by the parents of having their children taught by other students and distraction to the other students in the class. Fortunately this was not the case. Positive side effects were increased attention for the children of need, positive self-esteem and responsibility for the sixth grade students, and lower student/teacher ratios.

Implementation was from September 1991 to June 1992. This strategy was measured by the success of the peer tutoring program through personal interviews and discussions between the project manager and the teachers, the sixth grade student, and results from the self-esteem index as completed by the teacher for second grade identified students. Data were previously reported.

Peer tutoring was implemented in September 1991. A list of names was presented to the project manager by the sixth grade teacher. Names were forwarded based on academic and social performance. Students were then selected by the vice principal based on their academic schedule. For example, peer tutoring was needed during period five with the remedial teacher for students in grade two. Reading would be missed by the student peer tutor during that time. Missed work was made up during the sixth grade remedial period. The peer tutor could not be a remedial student, or have instrumental lessons as they are scheduled during remedial periods. Students receiving the peer

tutoring were the primary target group. the first secondary target group was the teacher who trained the sixth grade student, and the second primary target group was the peer tutor. Anticipated side effects were increased responsibility and self-esteem of the sixth grade student and a lower student/teacher ratio further facilitating student achievement. There were no negative side effects.

Actions for Establishing and Maintaining this Project

The plan of action for maintaining and sustaining this project was to enable the staff to adjust and be comfortable with the concepts and processes, and by the vice principal not being over bearing in the beginning stages. Enabling this staff to function on their own has proved to be most important. As outlined, the initial stages of this project evolved slowly and continued to develop, and by the beginning of the 1991-1992 school year, the process was functioning at peak performance. Peak performance means the process of the project's revisions and fine tuning have been improved to the point where functional process alone had become the emphasis. The reason for this slow development was because this project was an extra program, which constituted more work for the teachers. With my veteran staff, it would have been a mistake to constantly discuss this project because the teachers would feel burdened. Secondly, this staff takes its own initiative when it is in the best interest of students. After the initial conferences with the individual teachers, they knew how to begin, implement and handle the students as they have done in the past. This staff works at its best when an idea is presented and then accepted, and then they are left alone to carry out their work.

The monitoring process followed the same informal format. Some of the staff members came to me with questions or progress reports, but generally the project was carried out smoothly, with results. Weekly monitoring was accepted when it was not done in excess. Informal meetings and monitoring occurred when the project manager dropped by classrooms or during informal conversations before and after school, while passing in the hallway, and by teachers stopping by the office.

During my discussions with each individual teacher, the information found in Appendices A through D and Appendices L and M was used as a basis for introducing student deficiencies to teachers. This information along with identified learning styles and matching strategies became the foundation for the intervention used by the teachers for increased student achievement.

Chapter 6

Evaluation of Results and Process

Practicum Outcome and Processes Used in Achievement of Outcomes

The first terminal objective, which stated that 10 out of 38 students will score at or above grade level, according to the grade level equivalent on the California Achievement Test administered in April 1991, was partially fulfilled. While a complete summary of all students' test scores can be found in Appendices G and H, Table 8 shows the scores of each of the nine students who scored above grade level. Table 9 shows the scores and

Table 8

Summary of the CAT Grade Level Scores of Nine Students Performing Above Grade Level on the April, 1992 CAT

Student no.	Grade level score	Grade level	No. of years	ESL	Sp. ed.
#01	2.8	2.7	0.1	X	
#06	5.9	4.7	1.2		X
#10	3.3	2.7	0.6	X	X
#13	4.8	3.7	1.1		
#14	5.0	4.7	0.3		
#16	5.2	4.7	0.5		
#24	5.3	4.7	0.6		
#27	5.3	4.7	0.6		
#34	5.9	5.7	0.2		
Total number of years above grade level			5.2		
Mean number of years above grade level			0.6		

gain or loss of the remaining students (who did not score at or above grade level) based on their grade level equivalent CAT score from April 1990 to April 1991. The average reading grade level equivalent score gain per student was 0.7. Two students (#07 and #28) recorded a loss from the April 1990 to April 1991 CAT administration. Both students were special education students.

Terminal objective 2 stated that 10 out of 28 students tested in April 1991 will score at

Table 9

CAT Test Scores of Students from April 1990 to April 1991 who did not
Improve their Subtest Total Reading Score to be At or Above Grade Level Equivalent

Student no.	Grade level score	Grade level	No. of years	ESL	Sp. ed.
#02	0.9	1.7	0.8	X	
#03	1.4	1.6	0.2	X	
#04	1.5	2.0	0.5	X	
#07	2.2	2.1	-0.1		X
#08	2.3	2.6	0.3		X
#09	2.2	2.4	0.2		X
#11	2.4	2.7	0.3		
#12	1.8	2.7	0.9		
#18	3.3	4.4	1.1		
#20	3.0	3.0	0.0		X
#21	2.0	3.1	1.1	X	
#23	1.6	2.2	0.6	X	
#25	3.6	4.0	0.4		
#26	3.0	4.1	1.1	X	
#28	2.8	2.4	-0.4		X
#29	1.8	3.3	1.5		X
#30	2.6	2.7	0.1		X
#31	3.0	3.8	0.8	X	
#32	3.1	4.5	1.4	X	
#33	3.3	4.2	0.9		
#35	3.5	5.0	1.5		
#36	3.8	5.6	1.8		
Total number of years above grade level			15.0		
Mean number of years above grade level			0.7		

or above grade level according to grade level equivalent scores on the CAT total reading subtest administered in April 1992. Two students out of the 28 scored above their current grade level at the time of the test. The average gain per student was 0.35 grade level equivalents. Table 10 provides these data.

Table 11 shows the scores of the remaining 22 students tested in April 1992 and their gain or loss based on their grade level equivalent total reading subtest CAT score from April 1991 to April 1992. The average gain per student was 0.9 grade level equivalents. This table only includes students who did not improve their scores at or above their current grade level. Scores of students who moved can be found in a

Table 10

Students who Scored Above Reading Grade Level Equivalents Administered in April 1992

Student no.	Grade level score	Grade level	No. of years	ESL	Sp. ed.
*06	2.9	2.7	0.2		X
#36	7.2	6.7	0.5		
Total number of years above grade level			0.7		
Mean number of years above grade level			0.35		

Table 11

CAT Test Scores of Students from April 1991 to April 1992 who did not Improve their Total Reading Subtest Score to be At or Above Grade Level Equivalent

Student no.	Grade level score	Grade level	No. of years	ESL	Sp. ed.
*01	1.6	1.9	0.3	X	
#02	1.7	3.7	2.0	X	
#03	1.6	2.6	1.0		X
#04	2.0	2.6	0.6		X
#07	2.1	2.6	0.5		X
#08	2.6	3.6	1.0		X
#09	2.4	2.6	0.2		X
*10	1.5	2.2	0.7		X
#11	2.7	3.5	0.8		
#12	2.7	2.9	0.2		
*15	3.1	5.1	2.0		
#18	4.4	5.3	0.9		
#20	3.0	4.1	1.1		X
#23	2.2	3.1	0.9		
#25	4.0	5.3	1.3		
#26	4.1	5.0	0.9		
#29	3.3	2.8	-0.5		X
#30	2.7	4.3	1.6		X
#31	2.7	4.3	1.6		X
#32	4.5	6.3	1.8		X
#33	4.2	4.9	0.7		X
#35	5.0	5.9	0.9		
Total number of years above grade level			20.5		
Mean number of years above grade level			0.9		

complete summary in Appendix H.

For terminal objective 2, two out of 10 students improved their reading score above their current grade level equivalent at the time of the CAT test administration in April 1992. One student showed a loss. This student was a special education student (#29). The largest gain was 2.0 (students #02 and *15) and the smallest gain was 0.2 (students #09 and #12).

Terminal objective 3 stated that 75% (or 29 students) of the original 38 students tested in April 1990, would have an average final reading grade of C or above. Appendix I shows that 32 students out of 38 (82%) obtained a final grade of C or above. Of the 32 students, 18 obtained a grade of C (or S-satisfactory), 11 students obtained a grade of B, and 3 students obtained a grade of A. This objective was successfully achieved. The grade A represented the numerical score of 90 to 100, B represented 80 to 89, C represented 70 to 79, D represented 60 to 69, and F represented a numerical score below 60.

Terminal objective 4 stated that 75% (or 21 students) of the 28 students tested in April 1991 would obtain a final reading grade of C or above. Of the 28 students, 22 students obtained a final reading grade of C or above while 3 students moved. Thirteen students obtained a final score of C (or S-satisfactory), and nine students obtained a score of B (or G-good). Complete results can be found in Appendix J.

In the comparing of students' reading grades from June 1991 to June 1992, Appendix K shows that nine students maintained their grades from 1991 to 1992, while six students improved one full grade and one student improved two full grades (student #36). This objective was successfully achieved.

This next section will address process objectives that have yielded specific data. For the Reading for Pizza incentive program, of the original 38 students tested in April 1990, a total of 22 books were read. Table 12 shows the number of books read by the specified student types from January 1991 to June 1991.

For students tested in April 1991, a total of 18 books were read from January 1992 to

Table 12

Number of Books Read from January 1991 to June 1991 in the Reading for Pizza Program for Students Tested in April 1990

Student types	Total no. of students	No. of books read
Reg. ed.	18	10
ESL only	8	3
Sp. ed. only	9	2
ESL and sp. ed.	3	7
Total	38	22

Table 13

Number of Books Read from January 1992 to June 1992 in the Reading for Pizza Program for Students Tested in April 1991

Student types	Total no. of students	No. of books read
Reg. ed.	10	4
ESL	3	1
Sp. ed.	15	13
Total	28	18

June 1992. Table 13 shows the number of books read by the specified student types. In summary, 22 of the original 38 students tested in April 1990 (58%) received awards based on the number of books read. In contrast, 18 of the 28 students tested in April 1991 (64%) received awards based on the number of books read. A gain of six percentage points was realized from the first student group (tested in April 1990) to the second student group (tested in April 1991).

The Student of the Month and BUG incentive program results are displayed in Tables 14 through 17. Of the four ESL students tested in April 1990, two students (#02 and #22) received BUG awards for three marking periods. Of the six regular education students, two students (#12 and #13) received BUG awards for two marking periods. For the 28 students tested in April 1991, student #03 received BUG awards for three marking periods and student #36 received BUG awards for two marking periods. Students numbered *10 and #03 were selected twice for Student of the Month during the

Table 14

Number of Students Tested in April 1990 Receiving BUG Awards

Student types	Total no. of students	No. of students
Reg. ed.	18	6
ESL only	8	4
Sp. ed. only	9	4
ESL and sp. ed.	3	1
Total	38	15

Table 15

Number of Students Tested in April 1990 Receiving Student of the Month Awards

Student types	Total no. of students	No. of students
Reg. ed.	18	3
ESL only	8	1
Sp. ed. only	9	3
ESL and sp. ed.	3	0
Total	38	7

Table 16

Number of Students Tested in April 1991 Receiving BUG Awards

Student types	Total no. of students	No. of students
Reg. ed.	10	5
ESL	3	2
Sp. ed.	15	4
Total	28	11

Table 17

Number of Students Tested in April 1991 Receiving Student of the Month Awards

Student types	Total no. of students	No. of students
Reg. ed.	10	4
ESL	3	0
Sp. ed.	15	11
Total	28	15

1991-1992 school year.

In summary, for students tested in April 1990, 39% of the students received BUG awards while 18% of the students received Student of the Month awards. In contrast, 39% of the students tested in April 1991 received BUG awards. There was no change in the percentage of students receiving awards from the 1990 student group to the 1991 student group. Fifty-four percent of the students tested in April 1991 received Student of the Month awards which was an increase of 36 percentage points from the previous year.

Category deficiencies for the 28 students tested in April 1991 will be discussed based on student performance on the CAT test in April 1992. I assessed how many deficiencies were improved upon (improved), how many deficiencies remained (maintained) from the April 1991 to April 1992 CAT administrations, and how many deficiencies occurred that were not present (increased deficiencies) in April 1991. Table 18 shows that for non-mastery deficiency indicators, 12 students improved, 8 students increased deficiencies, 5 students maintained, and 3 students moved when totalling all the changes for the 28 students combined. A complete list of sub-category deficiencies for non-mastery can be found in Appendix L and for partial-mastery, Appendix M.

In the subtest section labeled non-mastery vocabulary for special education students, synonyms, homonyms, and antonyms were the most frequent deficiencies. For regular education students, a clear pattern of deficiencies was non-existent. For ESL students, synonyms occurred in two out of the three cases.

In the subtest section labelled non-mastery comprehension for special education students showing deficiencies, passage details, character analysis, central thought, interpreting events, forms of writing, and writing techniques were common deficiencies. For regular education students and ESL students, a clear pattern was non-existent.

In the subtest section labelled non-mastery language mechanics for special education students, beginning words, titles; period, and quest, exclamation were common deficiencies. For ESL students, beginning words, titles was common in two out of the three cases.

In the subtest section labelled non-mastery language expression for special education

Table 18

Non-Mastery Category Deficiency Gain or Loss on the CAT Reading Subtest from April 1991 to April 1992

Student no.	Improved	Maintained	Increased	Gain or loss
*01	1	3	6	-5
#02	8	3	6	2
#03	6	1	2	4
#04	0	0	0	0
*05	Moved	Moved	Moved	Moved
*06	7	0	0	7
#07	1	6	16	-15
#08	3	0	6	-3
#09	0	0	16	-16
*10	6	2	1	5
#11	1	1	1	0
#12	2	1	9	-7
*13	3	0	0	3
*14	Moved	Moved	Moved	Moved
*15	7	0	0	7
#18	4	0	0	4
#20	6	12	0	6
#21	Moved	Moved	Moved	Moved
#23	1	18	4	-3
#25	0	0	3	-3
#26	0	0	0	0
#29	0	21	0	0
#30	6	7	4	2
#31	11	3	1	10
#32	3	0	2	1
#33	5	0	3	2
#35	1	0	2	-1
#36	0	0	0	0
Total				0
Average change per student				0

students, nouns, sentence patterns-recognition-sequence-combining, and topic sentence were common deficiencies. For regular education students, nouns, sentence patterns, and topic sentence were common deficiencies. For ESL students, verbs was a common deficiency in the two students (*01, #02).

Table 19 shows the results from the comparison between partial-mastery indicators on the CAT reading subtest administered in April 1991 and April 1992. This comparison shows an increase in 45 deficiencies for the 28 students tested in April 1991. The

Table 19

Partial-Mastery Category Deficiency Gain or Loss on the CAT Reading Subtest from April 1991 To April 1992

Student no.	Improved	Maintained	Increased	Gain or loss
*01	3	1	2	1
#02	1	1	6	-5
#03	2	0	8	-6
#04	3	3	3	0
*05	Moved	Moved	Moved	Moved
*06	3	0	2	1
#07	4	0	2	2
#08	2	1	10	-8
#09	5	3	4	1
*10	1	0	7	-6
#11	3	4	4	-1
#12	5	5	5	0
*13	0	1	3	-3
*14	Moved	Moved	Moved	Moved
*15	8	3	6	2
#18	4	2	4	0
#20	3	4	5	-2
#21	Moved	Moved	Moved	Moved
#23	0	1	2	-2
#25	3	5	5	-2
#26	2	4	3	-1
#29	0	2	0	0
#30	1	3	8	-7
#31	1	5	5	-4
#32	7	7	4	3
#33	7	5	3	4
#35	2	1	7	-5
#36	1	4	8	-7
Total				-45
Average loss per student				-1.8

average loss per student was 1.8 deficiencies.

In the subtest section labelled partial-mastery vocabulary for special education students, synonyms, antonyms, and words in context were common found deficiencies. For regular education students, synonyms, antonyms, affixes, and words in context were also common. For ESL students, antonyms (student *01) and words in context (student #02) were the only identified deficiencies.

In the subtest section labelled partial mastery comprehension for special education students, passage details, central thought, character analysis, and interpreting events were common deficiencies. For regular education students, deficiencies varied with no common pattern evident. For ESL students, character analysis was a common deficiency for both students.

In the subtest section labelled partial-mastery language mechanics for special education students, no clear pattern was evident except for students, #30, #31, and #32 where beginning words, titles; period, quest, exclam; comma, colon, semi, quote; and proofreading were common. For regular education students, the same deficiencies listed for special education students were common for students #12, *15, #25, and #36. For ESL students, no pattern was evident.

In the subtest section labelled partial-mastery language expression for special education students, adjectives-adverbs was the most common found deficiency. For regular education students, no pattern of deficiency was evident and for ESL students, nouns was present for student *01 and adjectives-adverbs was present for student #02.

In comparing the subtest section labelled non-mastery vocabulary from April 1991 to April 1992, a deficiency loss of 6 resulted with an average deficiency loss per student of 0.24. Table 20 shows these results. For special education students, a deficiency loss of 8 was found, and for ESL students a deficiency loss of 2 was recorded. For regular education students, a deficiency gain of 4 was recorded.

In comparing the subtest section labelled non-mastery comprehension from April 1991 to April 1992, Table 21 shows a deficiency gain of 10 resulted for all 28 students with an average deficiency gain per student of 0.42. ESL students had a deficiency gain of 2 and special education students had a deficiency gain of 12. Regular education students recorded a deficiency loss of 4 due to student #12 who increased his deficiencies by 6 from the April 1991 test.

In comparing the subtest section labelled non-mastery language mechanics from April 1991 to April 1992, Table 22 shows a deficiency loss of 3 was recorded for all 28

Table 20

Non-Mastery Vocabulary Comparisons of the CAT Reading Subtest from April 1991 to April 1992

Student no.	Improved	Maintained	Increased	Gain or loss
*01	1	0	2	-1
#02	0	2	1	-1
#03	1	0	0	1
#04	0	0	0	0
*05	Moved	Moved	Moved	Moved
*06	1	0	0	1
#07	0	2	3	-3
#08	2	0	2	0
#09	0	0	2	-2
*10	0	1	1	-1
#11	1	1	1	0
#12	2	1	0	2
*13	3	0	0	3
*14	Moved	Moved	Moved	Moved
*15	3	0	0	3
#18	0	0	0	0
#20	1	2	0	1
#21	Moved	Moved	Moved	Moved
#23	0	4	0	0
#25	0	0	0	0
#26	0	0	0	0
#29	0	4	0	0
#30	0	0	4	-4
#31	1	0	1	0
#32	0	0	1	-1
#33	0	0	3	-3
#35	1	0	2	-1
#36	0	0	0	0
Total				-6
Average loss per student				-0.24

students with an average deficiency loss per student of 0.16. Five students were not assessed in the language mechanics portion of the exam during the April 1991 CAT test administration. For ESL students, one was not assessed and the other showed a category loss of 1. Special education students recorded no gain or loss and regular education students recorded a category loss of 2.

In comparing the subtest section labelled non-mastery language expression from April 1991 to April 1992, Table 23 shows a deficiency loss of 1 was recorded for all 28

Table 21

Non-Mastery Comprehension Comparisons of the CAT Reading Subtest
from April 1991 to April 1992

Student no.	Improved	Maintained	Increased	Gain or loss
*01	0	1	2	-2
#02	4	0	0	4
#03	4	0	0	4
#04	0	0	0	0
*05	Moved	Moved	Moved	Moved
*06	4	0	0	4
#07	0	4	2	-2
#08	0	0	0	0
#09	0	0	6	-6
*10	4	0	0	4
#11	0	0	0	0
#12	0	0	6	-6
*13	Not taken	Not taken	Not taken	Not taken
*14	Moved	Moved	Moved	Moved
*15	1	0	0	1
#18	1	0	0	1
#20	1	0	0	1
#21	Moved	Moved	Moved	Moved
#23	1	5	0	1
#25	0	0	1	-1
#26	0	0	0	0
#29	0	6	0	0
#30	0	6	0	0
#31	4	1	0	4
#32	0	0	0	0
#33	3	0	0	3
#35	0	0	0	0
#36	0	0	0	0
Total				10
Average gain per student				0.42

students tested in April 1991 with an average deficiency loss per student of 0.04. ESL students showed a category loss of 2, special education students showed a gain of 2 and regular education students recorded a deficiency loss of 1.

For the subtest section labelled partial-mastery vocabulary, Table 24 shows a deficiency loss of 15 was recorded for special education, ESL, and regular education students combined with an average deficiency loss per student of 0.6. Regular education students showed a deficiency loss of 12 from the April 1991 test administration. ESL

Table 22

Non-Mastery Language Mechanics Comparisons of the CAT Reading Subtest
from April 1991 to April 1992

Student no.	Improved	Maintained	Increased	Gain or loss
*01	N/A	N/A	N/A	N/A
#02	1	1	2	-1
#03	N/A	N/A	N/A	N/A
#04	N/A	N/A	N/A	N/A
*05	Moved	Moved	Moved	Moved
*06	N/A	N/A	N/A	N/A
#07	0	0	4	-4
#08	0	0	4	-4
#09	0	0	2	-2
*10	N/A	N/A	N/A	N/A
#11	0	0	0	0
#12	0	0	0	0
*13	Not taken	Not taken	Not taken	Not taken
*14	Moved	Moved	Moved	Moved
*15	2	0	0	2
#18	0	0	0	0
#20	1	4	0	1
#21	Moved	Moved	Moved	Moved
#23	0	1	4	-4
#25	0	0	0	0
#26	0	0	0	0
#29	0	5	0	0
#30	3	0	0	3
#31	5	0	0	5
#32	0	0	0	0
#33	1	0	0	1
#35	0	0	0	0
#36	0	0	0	0
Total				-3
Average loss per student				-0.16

Note. N/A denotes the fact that these students were not assessed in language mechanics on the April 1991 California Achievement Test.

students showed a category loss of 1 and special education students showed a category loss of 2.

For the subtest section labelled partial-mastery comprehension, Table 25 shows a deficiency loss of 2 for regular, special education, and ESL students with an average

Table 23

Non-Mastery Language Expression Comparisons of the CAT Reading Subtest
from April 1991 to April 1992

Student no.	Improved	Maintained	Increased	Gain or loss
*01	0	2	2	-2
#02	3	0	3	0
#03	1	1	2	-1
#04	0	0	0	0
*05	Moved	Moved	Moved	Moved
*06	2	0	0	2
#07	1	0	7	-6
#08	1	0	0	1
#09	0	0	6	-6
*10	2	1	0	2
#11	0	0	0	0
#12	0	0	3	-3
*13	Not taken	Not taken	Not taken	Not taken
*14	Moved	Moved	Moved	Moved
*15	1	0	0	1
#18	3	0	0	3
#20	3	6	0	3
#21	Moved	Moved	Moved	Moved
#23	0	8	0	0
#25	0	0	2	-2
#26	0	0	0	0
#29	0	6	0	0
#30	3	1	0	3
#31	1	2	0	1
#32	3	0	1	2
#33	1	0	0	1
#35	0	0	0	0
#36	0	0	0	0
Total				-1
Average loss per student				-0.04

deficiency loss per student of 0.08. Regular education students showed a gain of 4, while ESL students recorded a category loss of 1, and special education students showed a deficiency loss of 5.

For the subtest section labelled partial-mastery language mechanics, Table 26 shows a deficiency loss of 16 for regular, special education, and ESL students with an average deficiency loss per student of 0.84. Four students were not assessed during the April 1991 CAT administration. ESL students showed a category loss of 1, special education

Table 24

Partial-Mastery Vocabulary Comparisons of the CAT Reading Subtest
from April 1991 to April 1992

Student no.	Improved	Maintained	Increased	Gain or loss
*01	1	0	1	0
#02	0	0	1	-1
#03	1	0	2	-1
#04	0	0	3	-3
*05	Moved	Moved	Moved	Moved
*06	2	0	1	1
#07	1	0	0	1
#08	0	1	2	-2
#09	0	2	1	-1
*10	1	0	1	0
#11	0	1	0	0
#12	0	1	3	-3
*13	0	1	3	-3
*14	Moved	Moved	Moved	Moved
*15	0	2	3	-3
#18	0	2	3	-3
#20	1	1	0	1
#21	Moved	Moved	Moved	Moved
#23	0	0	0	0
#25	0	4	0	0
#26	0	3	2	-2
#29	0	0	0	0
#30	0	0	1	-1
#31	1	3	0	1
#32	3	2	0	3
#33	3	2	0	3
#35	1	0	2	-1
#36	1	0	2	-1
Total				-15
Average loss per student				-0.6

students showed a deficiency loss of 8, the largest of the three student types, and regular education students showed a deficiency loss of 7.

For the subtest section labelled partial-mastery language expression, Table 27 shows that the combined deficiency loss for regular, special education, and ESL students was 12 with an average deficiency loss per student of 0.5. Regular education students showed 0 gain while special education students recorded a deficiency loss of 11, the largest among the three student types. ESL students recorded a category loss of 1.

Table 25

Partial-Mastery Comprehension Comparisons of the CAT Reading Subtest
from April 1991 to April 1992

Student no.	Improved	Maintained	Increased	Gain or loss
*01	2	1	0	2
#02	0	0	3	-3
#03	0	0	4	-4
#04	3	1	0	3
*05	Moved	Moved	Moved	Moved
*06	0	0	0	0
#07	0	0	0	0
#08	0	0	4	-4
#09	4	0	0	4
*10	0	0	4	-4
#11	2	2	2	0
#12	4	0	0	4
*13	Not taken	Not taken	Not taken	Not taken
*14	Moved	Moved	Moved	Moved
*15	5	0	1	4
#18	3	0	0	3
#20	2	3	1	1
#21	Moved	Moved	Moved	Moved
#23	0	0	1	-1
#25	2	0	2	0
#26	1	1	1	0
#29	0	0	0	0
#30	0	0	1	-1
#31	0	2	0	0
#32	2	3	0	2
#33	1	2	3	-2
#35	0	1	4	-4
#36	0	0	2	-2
Total				-2
Average loss per student				-0.08

Subtest deficiency indicators compared between the April 1991 and April 1992 CAT test administrations showed that students improved more in the non-mastery area as opposed to the partial-mastery area. In calculating the total gain or loss for regular, special education, and ESL students in the vocabulary, comprehension, language mechanics, and language expression non-mastery areas, Table 28 shows that the non-mastery deficiency categories did not increase for all 28 students. For partial-mastery, 45 more deficiencies occurred for the combined 28 students with a

Table 26

Partial-Mastery Language Mechanics Comparisons of the CAT Reading Subtest
from April 1991 to April 1992

Student no.	Improved	Maintained	Increased	Gain or loss
*01	N/A	N/A	N/A	N/A
#02	0	1	1	-1
#03	N/A	N/A	N/A	N/A
#04	N/A	N/A	N/A	N/A
*05	Moved	Moved	Moved	Moved
*06	N/A	N/A	N/A	N/A
#07	1	0	1	0
#08	1	0	1	0
#09	0	0	2	-2
*10	N/A	N/A	N/A	N/A
#11	0	0	0	0
#12	0	2	1	-1
*13	Not taken	Not taken	Not taken	Not taken
*14	Moved	Moved	Moved	Moved
*15	2	1	2	0
#18	0	0	0	0
#20	0	0	1	-1
#21	Moved	Moved	Moved	Moved
#23	0	0	1	-1
#25	0	1	3	-3
#26	1	0	0	1
#29	0	0	0	0
#30	1	1	2	-1
#31	0	0	4	-4
#32	1	2	1	0
#33	0	1	0	0
#35	0	0	0	0
#36	0	1	3	-3
Total				-16
Average loss per student				-0.84

combined average deficiency loss per student of 1.6. The increase in partial-mastery deficiencies could be viewed as positive. The largest deficiency loss in partial-mastery deficiencies occurred for special education students (25, see Table 28). The fact that improvement was made for this student group in non-mastery deficiencies (6), caused partial-mastery deficiencies to increase. Since these students have learning disabilities, such incremental improvement should be noted, even though the desired improvement of total mastery was not realized at this time. This same theory is applied to regular

Table 27

Partial-Mastery Language Expression Comparisons of the CAT Reading Subtest
from April 1991 to April 1992

Student no.	Improved	Maintained	Increased	Gain or loss
*01	0	0	1	-1
#02	1	0	1	0
#03	1	0	2	-1
#04	0	2	0	0
*05	Moved	Moved	Moved	Moved
*06	1	0	1	0
#07	2	0	1	1
#08	1	0	3	-2
#09	1	1	1	0
*10	0	0	2	-2
#11	1	1	2	-1
#12	1	2	1	0
*13	Not taken	Not taken	Not taken	Not taken
*14	Moved	Moved	Moved	Moved
*15	1	0	0	1
#18	1	0	1	0
#20	0	0	3	-3
#21	Moved	Moved	Moved	Moved
#23	0	1	0	0
#25	1	0	0	1
#26	0	0	0	0
#29	0	2	0	0
*30	0	2	4	-4
#31	0	0	1	-1
#32	1	0	3	-2
#33	3	0	0	3
#35	1	0	1	0
#36	0	3	1	-1
Total				-12
Average loss per student				-0.5

Table 28

Comparison of Non-Mastery and Partial-Mastery Student Gain or Loss from the CAT
Reading Subtest from April 1991 to April 1992

Student types	Non-mastery	Partial-mastery
Reg. ed.	-3	-16
Sp. ed.	6	-25
ESL	-3	-4
Total	0	-45

education students. Due to the small number of ESL students in this study a determination of student deficiency results was not reached.

This next section concerns the identification of student learning styles and a self-esteem assessment, completed by the teacher. Teachers were asked to categorize students based on four learning styles (imaginative, analytic, common sense, dynamic), McCarthy (1990). Imaginative learners were students who listened and shared ideas in order to learn. They were personally involved in their work and were imaginative thinkers. Their learning experience had personal meaning. Teachers selected various strategies, in check-off form, that matched students' learning styles for the purpose of implementing these strategies during their lessons. Strategies included class discussion, teacher/student dialogue, group dynamics, opportunity to discuss and write about personal experiences, and use of manipulatives.

The analytic learner was one who thought through ideas, relied on the teacher expert, enjoyed structure of the traditional school setting, thereby, thriving on curriculum and content. This student was verbal. Strategies to meet this learning style included teacher lecturing, sequential presentation of the lesson, goals and objectives explained before the lesson, notes and outlines displayed on the board, and use of academic behavioral charts.

The common sense learner uses knowledge to test theories and applies common sense. If something works it will be used. These students like to know how things work and are skill oriented. They get to the heart of the matter. This student needs to see the immediate use of what is being taught. Strategies included the juxtapositioning of the lesson to the student's real life experiences, keeping a journal containing main themes of stories read that are incorporated with real life experiences, teacher identification of student interests, the presentation of a book list for independent reading, and class projects. The teacher provides bottom line reasons for concepts being taught, and establishes strictly enforced guidelines, use of academic behavioral charts, and the employment of a behavioral modification system with small rewards.

The dynamic learner incorporates personal experiences and concepts being taught.

This student learns by trial and error. He/she enjoys change and excels when flexibility is provided. This student is a risk-taker. School structure can be frustrating. Their interests are pursued in various ways and they are creative. Implemented strategies included the providing of follow-up assignments to reinforce skills, innovative means of practicing concepts (individualized instruction), student choice of assignment options provided, general guidelines established for student projects and presentations, use of computer programs, and a behavioral modification system with small rewards.

In summary, each student was identified by a specific learning style and strategies were provided on a check-off form for teachers to use as a guideline in tailoring a program of instruction for each of the 28 students tested in April 1991. This process evolved after it was determined, through informal meetings between the vice principal and the individual teachers, that a more structured format be developed. Implementation occurred in October 1991.

Student self-esteem appraisals, conducted by the teachers at the beginning of the 1991-1992 school year, and again in April 1992 (at the time of the CAT test), was assessed to determine progress in this area. The vice principal and the teachers collaboratively developed a self-esteem questionnaire that was completed for each of the 28 students tested in April 1991. As Appendix K indicates, eight students did not make positive progress in the improvement of their self-esteem, while eight students improved greatly. Initially, 14 students were evaluated to have low self-esteem while 14 students were evaluated to have moderate self-esteem. No student was assessed as having high self-esteem in September 1991.

Appendix N was developed to determine if self-esteem was an indication of the gain score from the April 1991 to the April 1992 administration of the California Achievement Test. Five students recorded a loss from April 1991 to April 1992. No clear pattern was discovered, except that all five students were determined to have low self-esteem in September 1991.

In conclusion, terminal objectives 1 and 2 were partially achieved, but more

importantly, positive student gains based on grade level equivalents on the CAT test were realized for both groups of students tested in April 1990 and April 1991. Terminal objectives 3 and 4 were fully achieved. The peer tutoring program was deemed successful by the vice principal, the teachers, and the peer tutor. Non-mastery deficiencies increased for ESL and regular education students and improved by 6 for special education students. Partial-mastery deficiencies increased for regular education, ESL, and special education students (see Table 28). Learning style concepts were developed and implemented for all 28 students tested in April 1991 along with a self-esteem appraisal form that was completed for each student. Positive gains were realized, as indicated, but no pattern of self-esteem could be found in relation to CAT score gains or losses from April 1991 to April 1992. A percentage increase in the awards earned by students for the BUG, Student of the Month, and Reading for Pizza program was realized during the 1991-1992 school year.

Reflections on the Solution Strategy

Due to the size of this one building school district in this small community, solution strategies were easily developed. Many of the solution strategies discussed in the literature were relevant to this setting. Those strategies included an individualized approach, peer tutoring, and learning style identification. One only needed to look into the students problems, their home situations, and educational data, to apply solution strategies discussed in the literature to this population. Again, this was easily accomplished due to the smallness of the district and community. Communication between project manager and teachers was easily accomplished.

The ability of the vice principal to discuss and monitor each student's case with his/her individual teacher was a major facilitating factor in this project. Direct one on one communication between the vice principal and the individual teachers enabled the project manager to adjust to individual teacher concerns and abilities. As an example, one teacher was very good at using individualized instruction techniques which did not

require much attention from the vice principal while another teacher was in need of major organizational techniques which did require the project manager's attention. In the latter case, monitoring of the class lessons and frequent conferences were required on a weekly basis.

This project proceeded as planned with little or no side effects. The major side effect resulted in the development and construction of the learning style concept and self-esteem appraisal forms, which was a positive improvement in this project during the 1991-1992 school year. These forms were developed after the teachers discovered the need to organize such information. These forms became a facilitating factor in analyzing data concerning self-esteem and test scores as reported previously. Other data was compiled in June 1992, when test scores and final grades became available.

The gathering of project data, such as test score results and final grades, were easily accomplished by the project manager. For student incentive information such as Reading for Pizza, Student of the Month, and BUG, a form was sent to teachers in which requested information was submitted. In addition, incentive information concerning student names and awards was published bi-monthly in the district newsletter. The learning style concepts and self-esteem appraisal information was presented to the teachers in a check-list form. Teachers completed the forms in September and October 1991 and used the individual student's learning style concept to proceed with an individual educational plan. Each student's self-esteem was assessed in September and October 1991 and reassessed in April 1992 at the time of the CAT test administration.

As specified from the literature and from Chapter 4, McPartland (1990) discussed helping students in lower ability levels by improving untracked classes, utilizing peer tutoring and establishing a reward system for recognizing individual student achievement. All areas were implemented during this project. Knapp, Turnbull, and Shields (1990) discussed the disadvantaged learner in comparison with the student's socioeconomic status and how the teacher can use this information to make a difference. In the self-esteem appraisal forms, teachers noted improvement in students' self-esteem,

an indicator that teachers were understanding of their students' home situation, and were able to make a difference in helping students feel better about their abilities. The learning style concepts discussed by McCarthy (1990) were implemented, but it is not known how effective the results were in relation to test scores and performance objective index deficiencies. Other variables come into play when a student takes a standardized test. Some students are excellent test takers, while others are poor. Final reading grades were a better success indicator of the learning style concept strategy because the final grade encompassed other data beyond the standardized test such as class test scores, homework, study skills, and projects.

In reviewing the situational setting of this project, the small informal one building school district definitely was a facilitating factor in the communication between the vice principal and the teachers. All communication was accomplished one on one, face to face, on an individual basis. The superintendent, board of education, and community were supportive of the programs, the most visible being the student incentive programs. As described in Chapter 3, the community did not question the peer tutoring program or the other strategies implemented for this project. The constraining factor, which was the lack of parental support in the home, was still evident in the lives of the students, especially student *13. The district became concerned with this student's poor attendance record and poor academic performance. Frequent attempts were made to speak with this parent, who needed to work evenings to make ends meet. She cancelled meetings or did not show for the appointments. As indicated on several tables the words "not taken" indicate that this child was absent for this portion of the exam beyond the allowable make-up time line. For this child, attendance was poor throughout the year, and a parent was not available for support during after school hours.

Implications of Outcomes and Processes

The main contribution to others in the educational field from this project is the organization of data. How the tables and appendices were developed will greatly

facilitate the kind of information that is needed in reproducing this project in another setting. This becomes the foundation in which the educator can build upon his/her individual educational setting.

The facilitating factor of the small educational setting, helped the communication process as mentioned previously. In a larger school district, it would still be important to meet and train teachers on an individual basis, but if this is not possible, staff inservice would be necessary in helping teachers understand the learning style concept approach. Concerning the constraining factor of lack of parental support in the home, this has become a universal problem in education today. With many single parent families in existence, along with two parent families, both working and with careers, quality time is at a premium. This factor is not unique to this educational setting. Side effects were non-existent, the project proceeded as originally planned.

Many of the strategies implemented in this project were the result of sound educational solutions as discussed by key educators in this field, and recorded in previous chapters. The community and school setting of this project are not unique to other communities and school districts in the State of New Jersey, or other states in the country. What was successful in this district could easily be duplicated in another, given the fact that the teachers and administration were committed to the project.

Chapter 7

Decisions on Future of Intervention

Maintain, Modify, Abandon

In this educational setting, this program will be continued for students in special education and ESL due to this concentrated need for students in these programs. At the conclusion of the 1991-1992 school year, 14% of the student population was classified and receiving special education services and 17% of the population received ESL services which equals 31% of the total student population. Of the 28 students tested in April 1991, 10 students were regular education students leaving the majority of the remaining students in special education and ESL.

The plan for the future includes a three year implementation period that would eventually encompass all students in the school who are reading below grade level equivalents on standardized tests. The plan for the 1992-1993 school year is to continue the program as it exists, and to include only those students in special education and ESL. Should that year prove to be successful, the students will be expanded to include regular education students receiving remedial instruction during the 1993-1994 school year and for the 1994-1995 school year, all students reading below grade level on standardized tests would be included.

The rationale for this three year incremental approach has to do with the small number of administrators in the building for coordination of this project. The other factor is the fact that this staff, as described previously, is independent and hard working, but has been left on their own by administration for many years. Before the vice principal was hired, the chief school administrator was responsible for all professional and non-professional staff, parents, students, and board members. Time was a major factor for the administration. With the addition of the vice principal, the administrative/teacher ratio had been cut in half, but due to the expanding population, each class in kindergarten through grade six had been split for the 1992-1993 school year, thereby, increasing

personnel. The current ratio between administrator and professional/non-professional staff member is 20 to 1.

The program has been accepted by the current staff and the vice principal feels that another year will cement this project into the minds of these teachers as a foundation to build upon for more teachers to accept in the future. It has been the project manager's experience, that to force programs on teachers will only enable them to do what is asked, and nothing more, but when teachers accept programs and buy into program philosophy through input and participation, ownership develops and programs flourish. This is the future plan for this project.

Additional Applications

As a professional administrator, whose aspirations go beyond this position in this district, this program has been a valuable tool in confronting a major issue in education in this country, which is improving student performance. This program can be applied to another school district, possibly with modifications due to student, professional and community populations, for the purpose of improving student performance. In addition, this project focused on reading scores, but may also be applied to other subjects. The vice principal, as a professional, has become a more viable candidate for other administrative positions, as experiences and past performance contribute to the wealth of knowledge that can be brought to other districts.

Dissemination of Information About Benefits

Since this is a one school building district, sharing information between schools is not possible. In this regional environment, meetings among administrators from neighboring school districts are non-existent. The project manager's plan is to implement this program as described above, and then after that time, if it continues to prove effective and a track record has been established, the program may possibly be shared with other colleagues through the initiative of the project manager.

Recommendations

As stated earlier, this project proceeded without conflict or side effects. The major element that the vice principal would utilize from the beginning of the project would be the learning style concept and self-esteem appraisal forms which were developed after the project began due to the need expressed by the teachers. The recommendation to other administrators would be to first select a small target population. This will enable the teachers and the administrator to get a feel for the program and to make adjustments based on the teacher's abilities and personality which is a major component in this project. Teachers must buy in to new programs, especially when they require more effort, as does this program. Individualization requires excellent classroom and personal organizational skills on the part of the teacher, and to adapt those skills in relationship to the various learning styles of students, is a key element in this type of project.

As stated earlier, this project has enabled the writer to be a **more knowledgeable**, experienced, and a more viable candidate for future administrative positions. It has also enabled the position to become one in which more interaction with students and teachers, for academic purposes, was realized. Before this project began, the major responsibility of the vice principal was the handling of student discipline. In addition to that major role, the writer developed computer systems for the district such as student attendance, data base management, and desktop publishing. Although teacher observations were conducted, little was done in the way of involvement in academic programs for students and techniques for teachers concerning such programs.

For other administrators attempting such a project, the intensity of the work involved, which includes individual meetings with teachers to discuss specific student needs, observing classes, collecting standardized test data, organizing and analyzing such data on a computer data base, and getting staff to buy in to the project, is a monumental task. The key element in this project involved attention to detail. For the administrator attempting to implement this project in his/her school without assistance requires organizational and political skills. Organizational skills, for recording student and

teacher statistics, and political skills needed to motivate staff, are essential. The fact that individual students, through the work of the individual teacher, can improve, requires the administrator to be cognizant of each student's portfolio. This was not a program where an idea was introduced, developed and implemented by teachers to a homogeneous/heterogeneous group of students in a class, this project concerned specific deficiencies in the lives of specific students that the individual teacher addressed.

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Appendices

Appendix A

Table 29

CAT Non-Mastery Indicators for the Reading Subtest Administered in April 1990

Student no	Grade	ESL	Sp. ed.	Vocabulary	Comprehension	Language Mechanics	Language Expression
#01	1.7	X		Categories/ definitions, synonyms, words in context	Sentence meaning, passage details, main idea, character analysis, interpreting events	Not assessed	Verbs, adjectives-adverbs, sentence formation
#02	1.7	X		Categories/ definitions, synonyms	Sentence meaning, passage details, main idea, character analysis	Not assessed	Verbs, adjectives-adverbs; sentence formation
#03	1.7	X	X	Synonyms	Passage details	Not assessed	None
#04	1.7	X	X	Synonyms	Passage details, main idea, character analysis, interpreting events	Not assessed	Verbs, adjectives-adverbs; sentence formation
#05	2.7		X	Antonyms	None	None	Adjectives- adverbs; sentence formation
#06	2.7		X	None	None	Pronoun I, noun, adject	Adjectives- adverbs
#07	2.7		X	Antonyms	Passage details, central thought, interpreting events	None	Adjectives-adverbs
#08	2.7		X	None	Passage details, character analysis, central thought, interpreting events	Beginning words, titles	Verbs, adjectives-adverbs
#09	2.7		X	Synonyms, antonyms	None	None	Verbs, adjectives-adverbs
#10	2.7	X	X	Synonyms, antonyms, words in context	Passage details, central thought, interpreting events	Beginning words, titles	Verbs, adjectives-adverbs
#11	2.7			Synonyms, antonyms	None	None	Adjectives-adverbs
#12	2.7			Synonyms, antonyms, words in context	Passage details, character analysis, words in context	Pronoun I, noun, adject; beginning words, titles	Verbs, adjectives-adverbs

Student no	Grade	ESL	Sp. ed.	Vocabulary	Comprehension	Language Mechanics	Language Expression
#13	2.7			None	None	None	None
#14	3.7			Homonyms	None	None	None
#15	3.7			Homonyms	None	None	Sentence sequence
#16	3.7			None	None	None	None
#17	3.7			None	None	None	None
#18	3.7			Homonyms	None	Beginning words, titles; comma, colon, semi, quote; proofreading	None
#19	3.7			None	None	Beginning words, titles; comma, colon, semi, quote; proofreading	None
#20	3.7		X	Homonyms	None	None	None
#21	3.7	X		Synonyms, antonyms, homonyms, words in context	Passage details, character analysis	Beginning words, titles; comma, colon, semi, quote; proofreading	Verbs, adjectives-adverbs; sentence patterns, sentence sequence
#22	3.7	X		Synonyms, antonyms, homonyms, words in context	Passage details, character analysis, central thought, interpreting events, forms of writing	Pronoun I, noun, adjective; beginning words, titles; period, question, exclamation; comma, colon, semi,	Nouns, pronouns, verbs, adjectives-adverbs; sentence patterns and sequence
#23	3.7	X		Synonyms, antonyms, homonyms, words in context	Passage details, character analysis, central thought, interpreting events, forms of writing	Pronoun I, noun, adjective; beginning words, titles; period, question, exclamation; comma, colon, semi, quote; proofreading	Nouns, pronouns, verbs, adjectives-adverbs; sentence patterns, sentence sequence
#24	3.7			None	None	None	None
#25	3.7			None	None	None	None
#26	3.7	X		Antonyms, homonyms	None	None	None
#27	3.7			Homonyms	Forms of writing	Comma, colon, semi, quote	None
#28	4.7		X	Homonyms, affixes, words in context	Passage details, character analysis, central thought, interpreting events, forms of writing, writing techniques	Beginning words, titles; period, question, exclamation; comma, semi, quote	Nouns, sentence recognition

Student no.	Grade	ESL	Sp. ed.	Vocabulary	Comprehension	Language Mechanics	Language Expression
#29	4.7		X	Synonyms, homonyms, antonyms, affixes, words in context	Passage details, character analysis, central thought, interpreting events, forms of writing, writing techniques	Pronoun I, noun, adject, beginning words, titles, period, question, exclam: comma, colon, semi, quote:proofreading	Nouns, verbs, sentence patterns- recognition- combining- sequence, topic sentence
#30	4.7		X	Synonyms, homonyms, antonyms, affixes, words in context	Passage details, character analysis, central thought, interpreting events, forms of writing, writing	Beginning words, titles, period, question, exclam, comma, colon, semi, quote: proofreading	Nouns, pronouns, adjectives-adverbs, verbs, sentence patterns- recognition- combining-
#31	4.7	X		Homonyms, antonyms, affixes, words in context	Writing techniques	Beginning words, titles; comma, colon, semi, quote	Nouns, pronouns, adjectives-adverbs, verbs, sentence patterns-recognition-combining- sequence, topic sentence
#32	4.7	X		Antonyms, homonyms, affixes, words in context	Writing techniques	Beginning words, titles, comma, colon, semi, quote	Nouns, sentence patterns
#33	4.7			Homonyms	Central thought, interpreting events, writing techniques	Beginning words, titles; comma, colon, semi, quote	Nouns, sentence patterns, topic sentence
#34	4.7			Homonyms	Writing techniques	Beginning words, titles; comma, colon, semi, quote	Nouns, sentence patterns-sequence, topic sentence
#35	4.7			None	Writing techniques	None	Nouns, sentence patterns
#36	4.7			None	Character analysis	None	Nouns, sentence patterns, topic sentence
#37	4.7			None	Writing techniques	None	None
#38	4.7			None	Central thought, forms of writing, writing techniques	None	Nouns, sentence recognition

Appendix B

Table 30

CAI Partial-Mastery Indicators for the Reading Subtest Administered in April 1990

Student no.	Grade	ESL	Sp ed	Vocabulary	Comprehension	Language Mechanics	Language Expression
#01	1.7	X		None	None	Not assessed	Nouns
#02	1.7	X		Words in context	Interpreting events	Not assessed	Nouns
#03	1.7	X	X	Definitions/words	None	Not assessed	Verbs, adjectives-adverbs
#04	1.7	X	X	Synonyms	Passage details, character analysis, central thought, interpreting events, forms of writing	Pronoun I, noun, adject; period, question, exclam; proofreading	None
#05	2.7		X	Synonyms, words in context	Passage details, character analysis, central thought, interpreting events	Beginning words, titles	Nouns, verbs
#06	2.7		X	Synonyms, antonyms	Passage details, character analysis, central thought, interpreting events	None	Pronouns, verbs
#07	2.7		X	Synonyms, words in context	Character analysis	Pronoun I, noun, adject; beginning words, titles; period, question, exclam	Pronouns, verbs
#08	2.7		X	Synonyms, antonyms	None	Pronoun I, noun, adject; period, question, exclam	Nouns, pronouns, sentence formation
#09	2.7		X	Words in context	Passage details, character analysis, central thought, interpreting events	Beginning words, titles	Nouns, pronouns, sentence formation
#10	2.7	X	X	None	Character analysis, interpreting events	Pronoun I, noun, adject; beginning words, titles; period, question, exclam	Nouns, pronouns, sentence formation
#11	2.7			Words in context	Passage details, character analysis, central thought, interpreting events	Beginning words, titles	Verbs

Student no	Grade	ESL	Sp ed.	Vocabulary	Comprehension	Language Mechanics	Language Expression
#12	2.7			None	None	Period, question, exclamation	Nouns, pronouns, sentence formation
#13	2.7			Synonyms, antonyms, words in context	Passage details, character analysis, central thought, interpreting events	None	None
#14	3.7			Homonyms	Central thought, interpreting events, forms of writing	Comma, colon, semi, quote, proofreading	None
#15	3.7			Synonyms, antonyms	Character analysis	None	None
#16	3.7			Homonyms	Passage details, character analysis, central thought, interpreting events	Comma, colon, semi, quote; proofreading	Sentence patterns, sentence sequence
#17	3.7			Homonyms	Character analysis, central thought, interpreting events, forms of writing	Comma, colon, semi, quote	None
#18	3.7			Synonyms, antonyms	None	Pronoun I, noun, adjective; beginning words, titles; period, question, exclamation	Sentence patterns, sentence sequence
#19	3.7			Homonyms	Central thought, interpreting events, forms of writing	Pronoun I, noun, adjective; period, question, exclamation	Sentence sequence
#20	3.7		X	Synonyms, antonyms	Character analysis, central thought, interpreting events	Comma, colon, semi, quote; proofreading	None
#21	3.7	X		None	Forms of writing	Pronoun I, noun, adjective; beginning words, titles; period, question, exclamation	Nouns, pronouns
#22	3.7	X		None	None	None	None
#23	3.7	X		None	None	None	None
#24	3.7			Homonyms	Passage details, character analysis, central thought, interpreting events, forms of writing	Comma, colon, semi, quote	None

Student no.	Grade	ESL	Sp ed.	Vocabulary	Comprehension	Language Mechanics	Language Expression
#25	3.7			Homonyms	Character analysis, central thought, interpreting events	Comma, colon, semi, quote	None
#26	3.7	X		Synonyms	Character analysis, interpreting events	Comma, colon, semi, quote	None
#27	3.7			Synonyms, homonyms	None	Beginning words, titles; comma, colon, semi, quote; proofreading	Sentence sequence
#28	4.7		X	Synonyms, antonyms, words in context	None	Pronoun I, noun, adject	Nouns, pronouns, sentence patterns, sentence combining
#29	4.7		X	None	None	None	Pronouns, adjectives-adverbs
#30	4.7		X	None	None	Pronoun I, noun, adject	Topic sentence
#31	4.7	X		Synonyms	Passage details, character analysis, central thought, interpreting events, forms of writing, writing techniques	Pronoun I, noun, adject; period, question, exclam; proofreading	None
#32	4.7	X		Synonyms	Passage details, character analysis, central thought, interpreting events, forms of writing	Pronoun I, noun, adject; period, question, exclam; proofreading	Sentence recognition-sequence, topic sentence
#33	4.7			Synonyms, antonyms, affixes, words in context	Passage details, forms of writing,	Pronoun I, noun, adject; period, question, exclam; proofreading	Verbs, sentence recognition-sequence-combining
#34	4.7			Synonyms, antonyms, affixes, words in context	Passage details, character analysis, central thought, interpreting events, forms of writing	Pronoun I, noun, adject; period, question, exclam; proofreading	Verbs, sentence recognition-combining-sequence
#35	4.7			Antonyms, homonyms, affixes, words in context	Passage details, character analysis, central thought, interpreting events, forms of writing	Beginning words, titles; comma, colon, semi, quote; proofreading	Topic sentence

Student no.	Grade	ESL	Sp ed.	Vocabulary	Comprehension	Language Mechanics	Language Expression
#36	4.7			Homonyms, affixes	Central thought, interpreting events	Beginning words, titles; comma, colon, semi, quote; proofreading	Verbs, sentence recognition-sequence
#37	4.7			Homonyms, affixes	Passage details, character analysis, central thought, interpreting events, forms of writing, writing techniques	Beginning words, titles	None
#38	4.7			Homonyms, affixes, words in context	Passage details, character analysis, interpreting events	Beginning words, titles; comma, colon, semi, quote; proofreading	Verbs

Appendix C

Table 31

CAT Non-Mastery Indicators for the Reading Subtest Administered in April 1991

Student no	Grade	ESL	Sp ed	Vocabulary	Comprehension	Language Mechanics	Language Expression
*01	1.7	X		Definitions/words	Interpreting events	Not assessed	Verbs, adjectives-adverbs
#02	2.7	X		Synonyms, antonyms	Passage details, character analysis, central thought, interpreting events	Pronoun I, noun, adject, beginning words, titles	Pronouns, adjectives-adverbs, sentence formation
#03	1.7		X	Words in context	Passage details, stated main idea, character analysis, interpreting events	Not assessed	Verbs, adjectives-adverbs
#04	2.7		X	None	None	Not assessed	None
*05	1.7		X	Definitions/words, synonyms, words in context	Passage details, character analysis, stated main idea, interpreting events	Not assessed	Verbs, adjectives-adverbs, sentence formation
*06	1.7		X	Synonyms	Passage details, stated main idea, character analysis, interpreting events	Not assessed	Verbs, adjectives-adverbs
#07	3.7		X	Synonyms, antonyms	Passage details, character analysis, central thought, interpreting events	None	Adjectives-adverbs
#08	3.7		X	Synonyms, antonyms	None	None	Adjectives-adverbs
#09	3.7		X	None	None	None	None
*10	1.7		X	Synonyms	Passage details, stated main idea, character analysis, interpreting events	Not assessed	Verbs, adjectives-adverbs, sentence formation
#11	3.7			Synonyms, antonyms, homonyms	None	None	None

Student no	Grade	ESL	Sp ed	Vocabulary	Comprehension	Language Mechanics	Language Expression
#12	4.7			Synonyms, antonyms, homonyms	None	None	None
*13	3.7		X	Antonyms, homonyms, words in context	Passage details, interpreting events	None	Nouns, pronouns, verbs, adjectives, adverbs, sentence patterns, sentence sequence
*14	4.7	X		Synonyms, antonyms, homonyms, affixes, words in context	Passage details, character analysis, central thought, interpreting events, forms of writing, writing techniques	Pronoun I, noun, adject, beginning words, titles; period, question, exclam; comma, colon, semi, quote;proofreading	Nouns, pronouns, verbs, adjectives, adverbs, sentence pattern-recognition-combining sequence, topic sentence
*15	4.7			Homonyms, affixes, words in context	Writing techniques	Beginning words, titles; comma, colon, semi, quote	Nouns
#18	4.7			None	Passage details	None	Sentence patterns, sentence recognition, topic sentence
#20	4.7		X	Homonyms, affixes, words in context	Writing techniques	Pronoun I, noun, adject; beginning words, titles; period, question, exclam; comma, colon, semi, quote;proofreading	Nouns, pronouns, verbs, adjectives-adverbs, sentence patterns-recognition-combining-sequence, topic sentence
#21	4.7			Homonyms, affixes, words in context	Writing techniques	None	Nouns, topic sentence, sentence sequence
#23	4.7			Synonyms, antonyms, homonyms, affixes, words in context	Passage details, character analysis, central thought, interpreting events, forms of writing, writing techniques	Pronoun I, noun, adject; beginning words, titles; period, question, exclam; comma, colon, semi, quote;proofreading	Nouns, verbs, adjectives-adverbs, sentence patterns-recognition-combining-sequence, topic sentence
#25	4.7			None	None	None	None
#26	4.7			None	None	None	None
#29	5.7		X	Synonyms, antonyms, homonyms, affixes, words in context	Passage details, character analysis, central thought, interpreting events, forms of writing, writing techniques	Pronoun I, noun, adject; beginning words, titles; period, question, exclam; comma, colon, semi, quote;proofreading	Nouns, sentence patterns-recognition-combining-sequence, topic sentence

Student no.	Grade	ESL	Sp. ed.	Vocabulary	Comprehension	Language Mechanics	Language Expression
#30	5.7		X	None	Passage details, character analysis, central thought, interpreting events, forms of writing, writing techniques	Beginning words, titles, comma, colon, semi, quote, proofreading	Nouns, sentence patterns, sentence recognition, topic sentence
#30	5.7		X	None	Passage details, character analysis, central thought, interpreting events, forms of writing, writing techniques	Beginning words, titles, comma, colon, semi, quote, proofreading	Nouns, sentence patterns, sentence recognition, topic sentence
#31	5.7		X	Affixes	Character analysis, central thought, interpreting events, forms of writing, writing techniques	Pronoun I, noun, adjunct; beginning words, titles; period, question, exclamation; comma, colon, semi, quote; proofreading	Sentence patterns, sentence sequence, topic sentence
#32	5.7		X	None	None	None	Nouns, sentence patterns, topic sentence
#33	4.7		X	None	Central thought, forms of writing, writing techniques	Proofreading	Sentence recognition
#35	5.7			Words in context	None	None	None
#36	5.7			None	None	None	None

Note: "#" - Denotes students in the program tested in April 1990 and April 1991

** - Denotes new students who entered the program based on the April 1991 CAT results

Appendix D

Table 32

CAT Partial-Mastery Indicators for the Reading Subtest Administered in April 1991

Student no	Grade	ESL	Sp ed.	Vocabulary	Comprehension	Language Mechanics	Language Expression
*01	1.7	X		Categories/words	Passage details, stated main idea, character analysis	Not assessed	None
#02	2.7	X		None	None	Period, question, exclam	Nouns
#03	1.7		X	Definitions/words	None	Not assessed	Sentence formation
#04	2.7		X	None	Passage details, character analysis, stated main idea, interpreting events	Not assessed	Verbs, adjectives-adverbs
*05	1.7		X	None	Sentence meaning	Not assessed	Nouns
*06	1.7		X	Categories/words, definitions/words	None	Not assessed	Nouns
#07	3.7		X	Words in context	None	Beginning words, titles	Pronouns, verbs, sentence formation
#08	3.7		X	Words in context	None	Period, question, exclam	Verbs
#09	3.7		X	Synonyms, words in context	Passage details, character analysis, central thought, interpreting events	None	Verbs, sentence formation
*10	1.7		X	Definitions/words	None	Not assessed	None
#11	3.7			Synonyms	Passage details, character analysis, central thought, interpreting events	None	Sentence patterns, sentence sequence
#12	4.7			Synonyms	Passage details, character analysis, central thought, interpreting events	Comma, colon, semi, quote; proofreading	Verbs, sentence patterns, sentence sequence
*13	3.7		X	Synonyms	Central thought	Beginning words, titles; proofreading	None
*14	4.7	X		None	None	None	None

Student no.	Grade	ESL	Sp. ed.	Vocabulary	Comprehension	Language Mechanics	Language Expression
*15	4.7			Synonyms, antonyms	Passage details, character analysis, central thought, interpreting events, forms of writing	Pronoun I, noun, adject, period, question, exclam, proofreading	Topic sentence
#18	4.7			Homonyms, affixes	Central thought, interpreting events, forms of writing	None	Verbs
#20	4.7		X	Synonyms, antonyms	Passage details, character analysis, interpreting events, forms of writing	None	None
#21	4.7			Synonyms, antonyms	Passage details, character analysis, central thought, interpreting events, forms of writing	Beginning words, titles	Pronouns
#23	4.7			None	None	None	Pronouns
#25	4.7			Antonyms, homonyms, affixes, words in context	Central thought, writing techniques	Beginning words, titles	Nouns
#26	4.7			Homonyms, affixes, words in context	Central thought, writing techniques	Comma, colon, semi, quote	None
#29	5.7		X	None	None	None	Verbs, adjectives-adverbs
#30	5.7		X	None	None	Pronoun I, noun, adject; period, question, exclam	Adjectives-adverbs, sentence combining
#31	5.7		X	Synonyms, antonyms, homonyms, words in context	Passage details, character analysis	None	None
#32	5.7		X	Synonyms, antonyms, homonyms, affixes, words in context	Character analysis, central thought, interpreting events, forms of writing, writing techniques	Beginning words, titles; comma, colon, semi, quote; proofreading	Topic sentence
#33	4.7		X	Synonyms, antonyms, homonyms, affixes, words in context	Passage details, character analysis, interpreting events	Period, question, exclam	Nouns, adjectives-adverbs, topic sentence
#35	5.7			Antonyms	Passage details	None	Nouns

Student no	Grade	ESL	Sp. ed.	Vocabulary	Comprehension	Language Mechanics	Language Expression
#36	5.7			Affixes	Forms of writing, writing techniques	Beginning words, titles	Nouns, sentence patterns, topic sentence

Note: "*" - Denotes students in the program tested in April 1990 and April 1991
 "**" - Denotes new students who entered the program based on the April 1991 CAT results

Appendix E

Self-Esteem Index

At the start of the school year, which best describes the self-esteem level of this student.

_____ Low self-esteem _____ Moderate self-esteem _____ High self-esteem

Please rate this student as of this date: April, 1992.

_____ Self-esteem has not changed

_____ Self-esteem has improved moderately

_____ Self-esteem has improved greatly

_____ Self-esteem has declined moderately

_____ Self-esteem has declined dramatically

Appendix F

Table 33
Self-Esteem Appraisals of the 28 Students Tested in April 1991

Student no	Low	Moderate	High	From September 1991 to June 1992		
				Not changed	Improved moderately	Improved greatly
*01	X				X	
#02	X			X		
#03	X				X	
#04	X				X	
*05	X				X	
*06	X					X
#07	X			X		
#08		X		X		
#09	X				X	
*10		X				X
#11	X			X		
#12		X		X		
*13	X				X	
*14	X			X		
*15		X			X	
#18		X				X
#20	X					X
#21		X		X		
#23		X		X		
#25		X			X	
#26		X				X
#29	X				X	
#30	X				X	
#31		X				X
#32		X				X
#33		X				X
#35		X			X	
#36		X			X	

Note The categories low, moderate, and high indicate the teacher's initial assessment of student self-esteem

Appendix G

Table 34

CAT Reading Subtest Grade Level Equivalent Gain or Loss from April 1990 to April 1991

Student no	CAT 90	Grade 90	CAT 91	Grade 91	Gain or loss 90-91	Exited	Moved	ESL	Sp ed
#01	0.4	1.7	2.8	2.7	2.4	X		X	
#02	0.9	1.7	1.7	2.7	0.8			X	
#03	1.4	1.7	1.6	1.7	0.2			X	X
#04	1.5	1.7	2.0	3.7	0.5			X	X
#05	2.4	2.7			0.0		X		X
#06	2.5	2.7	5.9	4.7	3.4	X			X
#07	2.2	2.7	2.1	3.7	-0.1				X
#08	2.3	2.7	2.6	3.7	0.3				X
#09	2.2	2.7	2.4	3.7	0.2				X
#10	2.0	2.7	3.3	2.7	1.3	X		X	X
#11	2.4	2.7	2.7	3.7	0.3				
#12	1.8	2.7	2.7	3.7	0.9				
#13	2.5	2.7	4.8	3.7	2.3	X			
#14	3.4	3.7	5.0	4.7	1.6	X			
#15	3.2	3.7			0.0		X		
#16	3.6	3.7	5.2	4.7	1.6	X			
#17	3.6	3.7			0.0		X		
#18	3.3	3.7	4.4	4.7	1.1				
#19	3.6	3.7			0.0		X		
#20	3.0	3.7	3.0	4.7	0.0				X
#21	2.0	3.7	3.1	4.7	1.1		X	X	
#22	1.5	3.7			0.0		X	X	
#23	1.6	3.7	2.2	4.7	0.6			X	
#24	3.6	3.7	5.3	4.7	1.7	X			
#25	3.6	3.7	4.0	4.7	0.4				
#26	3.0	3.7	4.1	4.7	1.1			X	
#27	3.3	3.7	5.3	4.7	2.0	X			
#28	2.8	4.7	2.4	5.7	-0.4		X		X
#29	1.8	4.7	3.3	5.7	1.5				X
#30	2.6	4.7	2.7	5.7	0.1				X
#31	3.0	4.7	3.8	5.7	0.8			X	
#32	3.1	4.7	4.5	5.7	1.4			X	
#33	3.3	4.7	4.2	5.7	0.9				
#34	3.5	4.7	5.9	5.7	2.4	X			
#35	3.5	4.7	5.0	5.7	1.5				

Student no.	CAT 90	Grade 90	CAT 91	Grade 91	Gain or loss 90-91	Exited	Moved	ESL	Sp ed.
#36	3.8	4.7	5.6	5.7	1.8	X			
#37	3.8	4.7			0.0		X		
#38	3.5	4.7			0.0		X		
Total score	101.50		135.20		33.70				
Mean score	2.67		3.56		0.89				

Appendix H

Table 35

CAT Reading Subtest Grade Level Equivalent Gain or Loss from April 1991 to April 1992

Student no	CAT 91	Grade 91	CAT 92	Grade 92	Gain or loss 91-92	Exited	Moved	ESL	Sp ed
*01	16	17	19	27	03			X	
#02	17	27	26	37	09			X	
#03	16	17	26	27	10			X	X
#04	20	37	26	27	06			X	X
*05	11	17	11		00		X		X
*06	15	17	29	27	14	X			X
#07	21	37	26	47	05				X
#08	26	37	36	47	10				X
#09	24	37	26	47	02				X
*10	15	17	22	27	07				X
#11	27	37	35	47	08				
#12	27	37	29	47	02				
*13	25	37	25		00		X		X
*14	21	27	21		00		X	X	
*15	31	47	51	57	20				
#18	44	47	53	57	09				
#20	30	47	41	57	11				X
#21	31	47	31		00		X	X	
#23	22	47	31	57	09			X	
#25	40	47	53	57	13				
#26	41	47	50	57	09			X	
#29	33	57	28	57	-05				X
#30	27	57	43	67	16				X
#31	38	57	61	67	23			X	
#32	45	57	63	67	18			X	
#33	42	57	49	67	07				
#35	50	57	59	67	09				
#36	56	57	72	67	16	X			
Total score	81.10		104.20		23.1				
Mean score	1.87		3.72		0.8				

Appendix I

Table 36

Final Reading Grades for Original 38 Students, June 1991

Student no	Final Grade	Moved	ESL	Sp ed.	Exit ESL
#01	C		X		
#02	C		X		
#03	C		X	X	X
#04	C		X	X	X
#05	S	X		X	
#06	C			X	
#07	C			X	
#08	C			X	
#09	C			X	
#10	B		X	X	
#11	D				
#12	C				
#13	C				
#14	A				
#15	B	X			
#16	B				
#17	B	X			
#18	C				
#19	C	X			
#20	B			X	
#21	A	X	X		X
#22	A	X	X		
#23	B		X		X
#24	B				
#25	D				
#26	C		X		X
#27	C				
#28	I	X		X	
#29	B			X	
#30	C			X	
#31	B		X	X	X
#32	C		X	X	X
#33	C			X	

Student no.	Final Grade	Moved	ESL	Sp. ed.	Exit ESL
#34	B				
#35	D				
#36	F				
#37	B	X			
#38	F	X			

Note. A=90-100, B=80-89, C=70-79, D=60-69, F= 59 and below, I-Incomplete

Appendix J

Table 37

Final Reading Grades for 28 Students, June 1992

Student no	Final Grade 6/92	Moved	ESL	Sp ed.	Exit ESL	New sp ed.
*01	S		X			
#02	S		X			
#03	S		X	X	X	
#04	S		X	X	X	
*05	Moved	X		X		
*06	G			X		
#07	D			X		
#08	C			X		
#09	B			X		
*10	G			X		
#11	D					
#12	D					
*13	C	X		X		
*14	Moved	X	X			
*15	B					
#18	B					
#20	B			X		
#21	Moved	X	X		X	
#23	C		X		X	
#25	C					
#26	C		X		X	
#29	C			X		
#30	C			X		
#31	B		X	X	X	
#32	B		X	X	X	
#33	B			X		
#35	C					
#36	C					

Note. I-Incomplete, O-Outstanding, G-Good, S-Satisfactory, N-Needs improvement
 A=90-100, B=80-89, C=70-79, D=60-69, F=59 and below

Appendix K

Table 38

Comparison of Final Reading Grades from June 1991 to June 1992
for Students Tested in April 1991

Student no.	Final Grade, June 1991	Final Grade, June 1992
*01	N/A	S
#02	C	S
#03	C	S
#04	C	S
*05	N/A	Moved
*06	N/A	G
#07	C	D
#08	C	C
#09	C	B
*10	N/A	G
#11	D	D
#12	C	D
*13	N/A	C
*14	N/A	Moved
*15	N/A	B
#18	C	B
#20	B	B
#21	A	Moved
#23	B	C
#25	D	C
#26	C	C
#29	B	C
#30	C	C
#31	B	B
#32	C	B
#33	C	B
#35	D	C
#36	F	C

Note. I-Incomplete, O-Outstanding, G-Good, S-Satisfactory, N-Needs improvement
A=90-100, B=80-89, C=70-79, D=60-69, F=59 and below

Appendix L

Table 39

CAT Non-Mastery Indicators for the Reading Subtest Administered in April 1992

Student no	Grade	ESL	Sp. ed.	Vocabulary	Comprehension	Language Mechanics	Language Expression
*01	2.7	X		Synonyms, words in context	Passage details, central thought, interpreting events	Pronoun I, noun, adject, beginning words, titles,	Pronouns, verbs, adjectives-adverbs, sentence formation
#02	3.7	X		Synonyms, antonyms, homonyms	None	Beginning words, titles; comma, colon, semi, quote, proofreading	Verbs, sentence patterns, sentence sequence
#03	2.7		X	None	None	Pronoun I, noun, adject; period, quest, exclam	Nouns, adjectives-adverbs, sentence formation
#04	2.7		X	None	None	None	None
*05	2.7		X	Moved	Moved	Moved	Moved
*06	2.7		X	None	None	Period, quest, exclam	None
#07	4.7		X	Synonyms, antonyms, homonyms, affixes, words in context	Passage details, character analysis, central thought, interpreting events, forms of writing, writing techniques	Beginnings, words titles; period, quest, exclam; comma, colon, semi, quote; proofreading	Nouns, verbs, sentence patterns-recognition-sequence-combining; topic sentence
#08	4.7		X	Homonyms, affixes	None	Beginning words, titles; period, quest, exclam; comma, colon, semi, quote; proofreading	None
#09	4.7		X	Homonyms, affixes	Passage details, character analysis, central thought, interpreting events, forms of writing, writing techniques	Beginning words, titles; comma, colon, semi, quote	Nouns, sentence patterns-recognition-sequence-combining; topic sentence
*10	2.7		X	Synonyms, antonyms	None	Pronoun I, noun adject; beginning words, titles	Adjectives-adverbs
#11	4.7			Homonyms, words in context	None	None	None

Student no.	Grade	ESL	Sp. ed.	Vocabulary	Comprehension	Language Mechanics	Language Expression
#12	4.7			Homonyms	Passage details, character analysis, central thought, interpreting events, forms of writing, writing techniques	None	Nouns, sentence patterns, topic sentence
*13	4.7		X	None	Not taken	Not taken	Not taken
*14	5.7	X		Moved	Moved	Moved	Moved
*15	5.7			None	None	None	None
#18	5.7			None	None	None	None
#20	5.7		X	Affixes, words in context	None	Beginning words, titles; period, quest, exelam; comma, colon, semi, quote; proofreading	Nouns, sentence patterns- recognition-combining- sequence; topic sentence
#21	5.7			Moved	Moved	Moved	Moved
#23	5.7			Synonyms, antonyms, homonyms, affixes, words in context	Character analysis, central thought, interpreting events, forms of writing, writing techniques	Proofreading	Nouns, verbs, adjectives-adverbs, sentence patterns- recognition- sequence-combining; topic sentence
#25	5.7			None	Interpreting events	None	Topic sentence, sentence sequence
#26	5.7			None	None	None	None
#29	5.7		X	Synonyms, antonyms, homonyms, affixes, words in context	Passage details, character analysis, central thought, interpreting events, forms of writing, writing techniques	Pronoun I, Noun, adject; beginning words, titles; period quest, exclam; commas, colon, semi, quote; proofreading	Nouns, sentence patterns- recognition- sequence-combining; topic sentence
#30	6.7		X	Synonyms, antonyms, homonyms, words in context	Passage details, central thought, interpreting events, forms of writing, writing techniques	None	Topic sentence
#31	6.7		X	Antonyms	Writing techniques	None	Sentence patterns, topic sentence
#32	6.7		X	Antonyms	None	None	Sentence sequence
#33	6.7		X	Synonyms, antonyms, homonyms	None	None	None
#35	6.7			Synonyms, antonyms	None	None	None
#36	6.7			None	None	None	None

Appendix M

Table 40

CAT Partial-Mastery Indicators for the Reading Subtest Administered in April 1992

Student no.	Grade	ESL	SP ED	Vocabulary	Comprehension	Language Mechanics	Language Expression
*01	2.7	X		Antonyms	Character analysis	Period, quest, exclam	Nouns
#02	3.7	X		Words in context	Passage details, character analysis, central thought	Pronoun I, noun, adject; period, quest, exclam	Adjectives-adverbs
#03	2.7		X	Synonyms, antonyms,	Passage details, character analysis, central thought, interpreting events	Beginning words, titles	Nouns, adjectives-adverbs
#04	2.7		X	Synonyms, antonyms, words in context	Passage details	None	Verbs, adjectives-adverbs
*05	2.7		X	Moved	Moved	Moved	Moved
*06	2.7		X	Antonyms	None	None	Verbs, adjectives-adverbs
#07	4.7		X	None	None	Pronoun I, noun, adject	Adjectives-adverbs
#08	4.7		X	Synonyms, antonyms, words in context	Passage details, character analysis, central thought, writing techniques	Pronoun I, noun, adject	Nouns, sentence patters, topic sentence
#09	4.7		X	Synonyms, antonyms, words in context	None	Period, quest, exclam; proofreading	Verbs, adjectives-adverbs
*10	2.7		X	Words in context	Passage details, character analysis, central thought, interpreting events	Period, quest, exclam	Pronouns, verbs
#11	4.7			Synonyms	Character analysis, central thought, forms of writing, writing techniques	None	Nouns, sentence patterns, topic sentence
#12	4.7			Synonyms, antonyms, affixes, words in context	None	Beginning words, titles; comma, colon, semi, quote; proofreading	Verbs, sentence recognition-sequence
*13	4.7		X	Synonyms, antonyms, affixes, words in context	Not taken	Not taken	Not taken

Student no.	Grade	ESL	SPED	Vocabulary	Comprehension	Language Mechanics	Language Expression
*14	5.7	X		Moved	Moved	Moved	Moved
*15	5.7			Homonyms, synonyms, antonyms, affixes, words in context	Writing techniques	Beginning words, titles; comma, colon, semi, quote; proofreading	None
#18	5.7			Synonyms, antonyms, homonyms, affixes, words in context	None	None	Nouns
#20	5.7		X	Antonyms	Central thought, interpreting events, forms of writing, writing techniques	Pronoun I, noun, adject	Pronouns, verbs, adjectives-adverbs
#21	5.7			Moved	Moved	Moved	Moved
#23	5.7			None	Passage details	Period, quest, exclam	Pronouns
#25	5.7			Antonyms, homonyms, affixes, words in context	Passage details, forms of writing	Beginning words, titles; period, quest, exclam; comma, colon, semi, quote; proofreading	None
#26	5.7			Synonyms, antonyms, homonyms, affixes, words in context	Forms of writing, writing techniques	None	None
#29	5.7		X	None	None	None	Verbs, adjectives-adverbs
#30	6.7		X	Affixes	Character analysis	Beginning words, titles; period, quest, exclam; comma, colon, semi, quote; proofreading	Nouns, adjectives-adverbs, sentence patterns-recognition-sequence-combining
#31	6.7		X	Synonyms, homonyms, words in context	Passage details, character analysis	Beginning words, titles; period, quest, exclam; comma, colon, semi, quote; proofreading	Nouns
#32	6.7		X	Synonyms, homonyms	Passage details, central thought, forms of writing, writing techniques	Beginning words, titles; period, quest, exclam; proofreading	Verbs, adjectives-adverbs, sentence recognition

Student no.	Grade	ESL	SP ED	Vocabulary	Comprehension	Language Mechanics	Language Expression
#33	6.7		X	Affixes, words in context	Passage details, central thought, interpreting events, forms of writing, writing techniques	Period, quest, exclam	None
#35	6.7			Homonyms, words in context	Passage details, central thought, interpreting events, forms of writing, writing techniques	None	Topic sentence
#36	6.7			Synonyms, antonyms	Passage details, central thought, forms of writing, writing techniques	Beginning words, titles; period, quest, exclam; comma, colon, semi, quote; proofreading	Nouns, sentence patterns-sequence, topic sentence

Appendix N

Table 41

Self-Esteem Appraisals Related to CAT Test Gain or Loss from April 1991 to April 1992

Student no.	Low	Moderate	High	Not changed	Improved moderately	Improved greatly	Gain or loss 1991 to 1992
*01	X				X		3
#02	X			X			9
#03	X				X		1
#04	X				X		6
*05	X				X		0
*06	X					X	14
#07	X			X			5
#08		X		X			1
#09	X				X		2
*10		X				X	7
#11	X			X			8
#12		X		X			2
*13	X				X		0
*14	X			X			0
*15		X			X		2
#18		X				X	9
#20	X					X	11
#21		X		X			0
#23		X		X			9
#25		X			X		13
#26		X				X	9
#29	X				X		-5
#30	X				X		1.6
#31		X				X	2.3
#32		X				X	1.8
#33		X				X	7
#35		X			X		9
#36		X			X		1.6

Note. The categories low, moderate, and high indicate the teacher's initial assessment of students' self-esteem from September 1991 to June 1992