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ABSTRACT

The purpose of this practicum was to implement and evaluate a peer tutoring program designed to raise the reading level of a selected group of low-achieving students at Harry Stone Middle School, an all-black, sixth- and seventh-grade school in the Dallas, Texas, Independent School District. Objectives were twofold: to raise the grade-equivalent scores of at least 60% of both tutee and tutor experimental groups, within eight months, and to establish the existence of significant gains in the experimental group, in contrast with a control group. Although comparisons of pre- and posttest scores revealed that the program was not successful according to established criteria, as a result of the project, the tutoring program in the Dallas Independent School District is being revised to meet demonstrated needs. (Author/KS)

PLANNING AND IMPLEMENTING A PEER TUTORING APPROACH TO INDIVIDUALIZED INSTRUCTION TO IMPROVE READING ACHIEVEMENT

by

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Submitted in partial fulfillment of the requirements
for the degree of Doctor of Education, Nova University

Dallas II Cluster
Dr. William Webster, Coordinator

Maxi II Report
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ABSTRACT

The purpose of this practicum was to use a peer tutoring program developed by the Nova participant to raise the reading level of a selected group of low-achieving students at Harry Stone Middle School. The practicum objective was two-fold: (a) raise the grade equivalent scores of at least 60 percent of both tutee and tutor experimental groups by eight months, and (b) find greater gains in the experimental group than in a similar control group with the .05 level of significance as critical. An Instructional Facilitator, volunteer faculty, and the necessary hard-and software were available. The Gates MacGinitie Reading Test (GMRT) and the Iowa Tests of Basic Skills (ITBS) were used for pre-and posttesting. The practicum was not successful as implemented according to the established criteria. However, as a result of the project at Harry Stone School, the tutoring program in the Dallas Independent School District (DISD) is being revised to meet demonstrated needs and four additional professionals have been added to the staff of the DISD Instructional Facilitator-Tutoring Programs.

INTRODUCTION

Harry Stone Middle School is an all-black sixth-and seventh grade school in the Dallas Independent School District (DISD). Testing and observation revealed and provoked concern about the low reading level exhibited by Harry Stone School students. It was, therefore, decided that a peer tutoring program would be inaugurated with selected students at the school to see whether it would have a positive effect, improving the student reading levels.

An experimental tutor section was selected to tutor low ability readers in an experimental section. Two sections of comparable reading ability students were selected to act as control groups for each of the two experimental groups.

The participants were not randomly selected. They were placed in whichever group was meeting at the time of their language arts class. These students were then placed in tutor-tutee sections according to the scores they made on the Informal Reading Inventory Test developed by Houghton Mifflin (see example 2). Half of the highest ability readers in the school were designated as tutor control group: the other half became the tutor experimental group. Half the students reading on the second and third grade level (low ability) were placed in the tutee control group, while the other half became the tutee experimental group.

A t-test was run after the pretest had been administered to determine the equality of groups. There were no significant differences in the groups at the beginning of the practicum. Analysis of Covariance

was chosen as the statistical design to compare the mean gains between the experimental and control sections. This design allowed for any chance differences in groups as well as making adjustments for any section that might have the ability to learn faster than others. It also added strength to the statistical analysis of the practicum.

After receiving instructions from the DISD Instructional Facilitator-Tutoring Programs and from two volunteer project teachers, each tutor was paired with a tutee and worked with him or her on a one-to-one basis. Programmed material was used. The material consisted of taped lessons, phonics drill, word drill, reading kits, comprehension worksheets, and thinking skills.

After the posttest was administered, product evaluation was made in five areas: (a) individual gains of participants in the experimental groups were checked to determine if 60 percent of the students had increased their grade equivalent scores by eight months or more; (b) the Analysis of Covariance was calculated to determine if the mean raw scores of the experimental groups had increased significantly over the scores of the control groups, and the .05 level of significance was chosen as the critical point; (c) the scores of the tutor and tutee experimental groups were compared to determine which group had received the greatest benefit from the practicum; (d) a narrative report was received from each of the project teachers describing his or her reaction to the project; and (e) each of five randomly selected tutors and tutees in the experimental groups submitted a narrative report outlining their individual reactions to the project.

PLANNING AND IMPLEMENTING A PEER TUTORING APPROACH TO INDIVIDUALIZED INSTRUCTION TO IMPROVE READING ACHIEVEMENT

By R. T. Patterson, Jr.[1]

IDENTIFYING THE PROBLEM

District Needs Assessment Data

The Dallas Independent School District (DISD) tests the District's inner city Title I student population biannually through a systemwide testing program and publishes the testing data in an annual series report called Performance Profiles. The District's commitment of accountability (including reading performance) is indicated in the following quote:

> The Performance Profiles are one indicator of the District's commitment to a policy of accountability to parents and the public through a systematic reporting of the educational processes and products of the DISD.[2]

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[1]Principal, Harry Stone Middle School, Dallas, Texas sixth and seventh grades, with an enrollment of three hundred fifty students.

[2]Department of Research, Evaluation and Information Systems, Dallas Independent School District, Performance Profiles, 1974-75, South Oak Cliff Attendance Area, Grades 2, 4, 6, Report No. 75-513.

DISD Research Report No. 75-513 contained testing data for Harry Stone Middle School's sixth grade students for 1974-75. (The data is for grades two, four, and six but Harry Stone School has only sixth and seventh graders.)

Measurement Profiles summarizes the charts shown in the 20 volume Performance Profiles and gives an excellent explanation of how to enterpret the profile charts. To quote from the report:

> The ten groups in the decile distribution are constructed so that 10% of the students from the large-city norm group will fall into each category. The column on the far left gives the percentile range (%R) for each group. Thus, reading across the table, the first column gives the large-city norm group decile distribution and each succeeding column shows the percent of District students, by school, that are in that range.
>
> The quartile distribution is constructed so that the District distribution is divided into quarters by the quartiles. That is, at "Q_3", 75% of the District students scored below Q_3 and 25% scored above it. "M" is the median, or 50th percentile, where half of the District students were above and half were below. "Q_1" is the first quartile, where 75% of the local students scored above it and 25% below it. Entries in the chart yield the percent of the large-city norm group who scored below the particular District school's quartile.
>
> "N" is the number of District students in each school who were tested.[3]

Each bar in Chart 1 shows the range between the first (Q_1) and the third (Q_3) quartiles, and the triangle indicates the median score. These data revealed that the median percentile rank reading level for those sixth-grade students was 8.75, a figure based on the norm of large-city

[3] Measurement Profiles, Fall Testing, 1974, Department of Research, Evaluation and Information Systems, Dallas Independent School District.

CHART 1

DALLAS INDEPENDENT SCHOOL DISTRICT
DEPARTMENT OF RESEARCH, EVALUATION, AND INFORMATION SYSTEMS

Reading ACCORDING TO THE Iowa Tests of Basic Skills GRADE 6 DATE Fall, 1974

South Oak Cliff Attendance Area

SCHOOLS

%R	Bryan	Bushman	Ervin	M. Jackson	Lisbon	Oliver	Russell	Stone	NORM GROUP
90-99	0	0	0	0	1	0	0	0	10
80-89	1	1	0	0	0	0	0	0	10
70-79	1	0	1	0	1	3	0	1	10
60-69	4	2	1	2	3	4	1	3	10
50-59	1	1	3	3	3	5	3	6	10
40-49	1	3	0	4	3	3	4	2	10
30-39	10	5	10	8	9	7	7	8	10
20-29	8	11	15	14	14	15	13	14	10
10-19	17	14	13	14	12	13	15	12	10
1-9	57	63	56	54	54	50	58	54	10
N	169	226	89	207	144	241	198	161	
Q_3	21.46	18.37	23.15	24.59	26.00	27.76	21.30	25.91	75
M	8.30	7.46	8.40	8.82	8.73	9.66	8.18	8.75	50
Q_1	3.90	3.48	3.95	4.16	4.12	4.52	3.84	4.13	25

RELATED FACTORS

DI	55.71	68.06	46.00	71.73	65.00	4.39	1.00	62.65
MINORITY	99.93	99.19	100.00	100.00	99.88	99.74	87.90	100.00
MOBILITY	25.71	33.64	34.95	25.62	49.33	22.45	35.79	23.79
% TTENDANCE	91.02	90.24	91.68	93.72	88.82	92.94	90.80	89.23
%ILE CCOME	34	32	53	35	18	48	41	29
%IL- . L	55	58	71	61	21	64	40	45

LARGE CITY MEDIAN

schools. Fifty percent of the students of Harry Stone School were above the percentile rank of 8.75 and 50 percent were below.

Although only the sixth-grade of Harry Stone School's fall 1974-75 school year was included in the study, these sixth graders became Stone seventh graders. Unfortunately, there was no reason to think the median had changed appreciably during the single school year.

The Performance Profile[4] also showed that on the vocabulary subtest of the Iowa Tests of Basic Skills (ITBS), the following breakdown applied: Percentile Range 1-9, 89 students; Range 10-19, 19 students; Range 20-20, 24 students; Range 30-39, 11 students; and Range 40-49, 11 students. These figures indicated that 55 percent of the total of 161 sixth-grade students were in the percentile range of 1-9. Based on large-city norms, 154 students, or 96 percent, had a reading vocabulary in the percentile range of 1-49.

On the reading (comprehension) subtest of the ITBS, 87 students were in the percentile range of 1-9, 19 in the range of 10-19, 23 in the range of 20-29, 13 in the range of 30-39, and 3 in the range of 40-49. Using large-city norms for reading, 54 percent of the students were in the lowest decile. Ultimately, 145, or 90 percent, of the students were in the percentile range of 1-49.

In summary 55 percent of the students were in the lowest decile and 96 percent were in the two lowest quartile in reading vocabulary. In comprehension 54 percent of the students were in the lowest decile while 96

[4]Op cit.

percent were in the two lowest quartiles. These data are based on large-city norms, which means the students in DISD were compared with large-city student populations that had approximately the same number of students in the grades being compared.

Consolidated Application for Federal Assistance (p. 5A-1) published for the school year 1975-76 indicated sixth graders attending Title I schools had a mean grade equivalent of 3.5 years. The publication specified:

> These data indicate the need for providing supplemental instruction through the utilization of the Targeted Achievement in Reading Program to reduce reading deficiencies of eligible ESEA Title I students.[5]

According to the Elementary-Secondary Education Act (ESEA) guidelines, a student is eligible for federal assistance if he or she is reading one or more years below grade level based on the Iowa Tests of Basic Skills administered in the fall of 1974. The Consolidated Application showed that 144 sixth graders and 171 seventh graders at Harry Stone fell into the category of needing additional reading help.[6] This point was brought home to the Harry Stone School in a communication from the Texas Education Agency in November 1975. A letter from them (see Appendix A) stated that since 93 percent of the Harry Stone students were one or more years below grade level in reading, all of the students were eligible to participate in the ESEA Targeted Achievement in Reading (TARP) program.

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[5] Consolidated Application for Federal Assistance, Elementary and Secondary Education Act, Title I, 1975-76.

[6] Ibid, p-5A-45.

Teacher Observation Data

A necessary component in identifying and evaluating the student reading deficiencies was teacher observation. The teachers of Harry Stone confirmed that, from their observations, approximately 90 percent of the pupils were one or more years below grade level in reading.

Factors Related to the Problem

The teachers observations regarding lack of reading success at Harry Stone School caused valid concern of the school's faculty and principal. A Reading Committee composed of the school's seven reading teachers and the principal met to try to determine the reasons for the lack of reading skills.

Demographic factors: Demographic factors were considered. Harry Stone School is an all-black sixth and seventh grade school where 79.18 percent of the students are from low income families as defined by federal guidelines. Although 273, or 81 percent, of the students were on the free lunch program during the 1975-76 school year, the geographical area is nonetheless not considered to be a hard-core poverty neighborhood. Single family zone classification predominates, with the houses valued from $15,000 to $19,000. Apartments in the community rent from $101 to $150 per month. Lower middle class is the socioeconomic level indicator commonly assigned. Further demographic data concerning the school and community appear in Appendix B; however, it was generally concluded upon consideration of demographic factors that poverty alone was insufficient to explain the reading problems.

Environmental and common-behavioral factors: A variety of other environmental and behavioral factors were then considered. Several such behavioral and environmental factors were recognized as being common to much of the student population of Harry Stone School, and as being potential contributors to the low reading level of the students: (a) lack of reading material at home; (b) probable low importance placed on reading ability by the parents; (c) lack of contact with any environment other than their own; (d) frequent absences from school for various reasons, such as lack of shoes or clothes (the attendance ratio for the past three years averaged .90); (e) lack of parental involvement in school activities; (f) both overt and covert rebellion against any authority figure; and (g) frequent involvement in discipline problems of various kinds. It was believed that each and all of these factors might be contributive to "lack of motivation" with its concomitant negative effects upon reading achievement.

Definition of the Problem

With the foregoing considerations in mind, then, the ultimate problem or question to be investigated in this practicum appeared to be how to improve the reading level of selected students.

CONCEPTUALIZING A SOLUTION

Selection of a Reading Approach

The Right to Reading, Hoffman Behavioral Research Laboratories/ Sullivan Reading Program (BRL), and Southwest Reading Laboratory Program (SWRL) were some of the special reading programs used in the Dallas

Independent School District (DISD). These programs were initiated in the primary grades in 1971. Therefore, the Harry Stone School sixth-grade students were in the second year and the seventh-grade students were in their first year of the B. R. I. Sullivan supplemental reading program. As a result, the faculty could not build on these particular approaches and skills. After considering various factors, the Reading Committee decided that an individualized instructional approach through the use of peer tutors might offer the best solution to the problem of how to improve the reading level of students.

In a recent paper, Bloom stated this hypothesis:

> Most students (perhaps over 90 percent) can master what we have to teach them, and it is the task of instruction to find the means which will enable our students to master the subject under consideration.[7]

Such an hypothesis underlay the committee's basic assumption that each student could benefit from and deserved instruction tailored to individual needs.

Carl R. Rogers made the following assumptions about learners:

1. Human beings have a natural potentiality for learning;
2. Significant learning takes place when the subject takes place when the subject matter is perceived by the student as having relevance to his own purposes.
3. Much significant learning is acquired through doi[illegible].
4. Learning is facilitated when the student participates responsibly in the learning process.[8]

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[7]Bloom, "Learning for Mastery," Evaluation Comment, Vol. 1, No. 2, May, 1968.

[8]Rogers, "The Facilitation of Significant Learning," Instruction--Some Contemporary Viewpoints, ed. Lawrence Siegel, Chandler Publishing Co., 1967, p. 42.

The first two assumptions buttressed the committee's own. The last two lent support to their consideration of a peer tutoring program.

Allen and Feldman had this to say about tutoring:

> Tutoring has long been acknowledged as a...method for providing individualized instruction for enhancing the performance of students needing personal help with their school work.[9]

This and similar published opinions regarding tutoring led the committee to believe that peer tutoring would be a good choice in selecting a method of individualized instruction in reading. Consequently a tutoring program was developed which provided for the individual needs of selected students and catered to their strengths as demonstrated by a battery of tests. The groups were composed of approximately 100 selected students--50 in each of the control and experimental groups. The students not chosen for the experimental group continued in the non-graded Houghton Mifflin Reading Series with supplemental help from the B. R. L. Sullivan program as a supplement.

An evaluation process must be conceptualized when thinking of a solution to a problem. The evaluation is explained in detail later in the paper. To summarize it: (a) the purpose of the practicum was to raise the reading level of 60 percent of the students in the experimental group by eight months as determined by pre-and posttest grade equivalent scores; (b) there will be no difference in the gains of the experimental

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[9]Vernon L. Allen, and Robert S. Feldman, "Learning Through Tutoring: Low-Achieving Children as Tutors," Journal of Experimental Education, Vol. 42, No. 1, Fall, 1973.

and control groups at the .05 level of significance based on pre-and posttest raw scores; (c) a comparison of achievement will be made to determine if the experimental or the control groups will make the larger gain; (d) a narrative reaction of the teachers to the project will be given; and (e) narrative reactions from five randomly selected students from the experimental groups will be used.

All the students who participated in the program, both the experimental and control groups, were from Harry Stone School, so the permission of The Development Council was not necessary. The DISD Instructional Facilitator-Tutoring Program was contacted for his help and guidance in planning and implementing the project. The DISD budget for tutoring was used to purchase materials and equipment needed for the program. Since the DISD is committed to the improvement of reading, there was no difficulty in receiving the endorsement and assistance of the Instructional Facilitator-Tutoring Program.

DEVELOPING A PRACTICUM DESIGN

Selection of Participants and Groups

Teachers: Teachers who were interested in a peer tutoring program and who volunteered to participate in the program were available at Harry Stone School. Two teachers with no specialized courses in reading but who had taught reading in the regular language arts classes were chosen to conduct the program.

Students: Random sampling was not feasible because of the manner in which students were placed in sections and the organization of class schedules. Before school began in the fall, the principal made a decision determining the number of sections needed for each grade. When the number of sections had been determined, all enrollment cards for each grade were arranged in descending order of achievement as indicated by the latest score on the Iowa Tests of Basic Skills (ITBS). The first card went to 6A, for example, the second went to 6B, and so on through 6G. The process was repeated until all cards had been placed in a section. This method assured a heterogenous grouping within sections.

Regarding the similarity of the groups, a question was raised by the writer, the DISD Department of Research, Evaluation, and Information Systems (R & E), and Nova University. The groups in the practicum were as similar as availability permitted. The assignment of treatment to one group or the other was random and under the control of the principal and the teacher committee. However, the individuals in the groups had not been randomly selected; they had been assigned according to reading achievement by the process described immediately above.

Since the lack of random selection did provoke a question as to the validity of comparing the groups, it was necessary to explore further the extent of their similarity. To this end the pretests were employed as sources of information. By running a t-test of the data provided by the pretest, it could be determined if there were any significant differences in the groups at the beginning of the practicum. The t-test was

calculated based on the pretest raw scores on the Gates-MacGinitie Reading Tests (GMRT) as well as the Iowa Tests of Basic Skills (ITBS) in the area of vocabulary and comprehension. Appendices C through N show the raw scores as well as the calculations to determine the absolute t when comparing the experimental and control groups in each category.

The t-tests showed that there were no significant differences between the control and experimental groups. Though there had been no random assignment of students to groups, there were no significant differences in pretest scores.

This analysis of raw scores satisfied the writer, the DISD R & E Department, and Nova University that there were no significant differences in pretest scores and that the groups were indeed similar.

Having thus determined the experimental and control groups, the next step was to schedule their instruction time.

Instructional units were taught in blocks of time. The schedule of specified time blocks appears on the next page. (Example 1) Language Arts classes were two-hour periods: the first hour was spent on reading, the second hour on other aspects of language arts. Each Language Arts teacher taught more than one section. For instance, Teacher A had section 6A from 8:30 to 10:30 and section 6B from 10:30 to 12:30. During the first hour of the Language Arts periods, however, Harry Stone became non-graded, and students were assigned to reading teachers according to reading achievement level. Thus Teacher A had only those students in 6A who fell within the reading level she was assigned during that reading hour; the remainder of her reading students were from other sections.

EXAMPLE 1

DAILY PROGRAM OF Teachers (Teachers — Classes) FOR All (Broadfields — Departmental) WORK

August 18, 1975 Date

DALLAS INDEPENDENT SCHOOL DISTRICT
DALLAS, TEXAS

R. T. Patterson, Jr. Principal

Harry Stone School

The principal must make for the departmental organization and for the broadfields organization a class program and a teacher program. A revised copy of each must be kept posted in his office, and a duplicate copy of each filed with the Assistant Superintendent – Organization. The principal will supply the time of the opening of a period at the head of each column.

TEACHER	ROOM NUMBER AND ASSIGNMENT	1 8:25 9:00	2 9:00 9:30	3 9:30 10:00	4 10:00 10:30	5 10:30 11:00	6 11:00 11:30	7 11:30 12:00	8 12:00 12:30	9 12:30 1:00	10 1:00 1:30	11 1:30 2:00	12 2:00 2:30	13 2:30 3:00	14 3:00 3:45
Peppers	6A 6B 107	6A L.A.				6B L.A.		Lunch	6B L.A.		6A S.S.		6B S.S.		Plan
Spencer	6C 6D 111	6C L.A.				6D L.A.		Lunch	6D L.A.		6C S.S.		6D S.S.		Plan
Koger	6E 6F 105	6E L.A.				6F L.A.				Lunch	6F S.S.		6E S.S.		Plan
Welch	6G 7A 207	6G L.A.				7A L.A.				Lunch	6G S.S.		7A S.S.		Plan
Wells	7B 7C 202	7B L.A.				7C L.A.			Lunch	7C L.A.	7C S.S.		7B S.S.		Plan
Pritchett	7D 7E 208	7D L.A.				7E L.A.		Lunch	7E L.A.		7D S.S.		7E S.S.		Plan
Cates	7F 7G 205	7F L.A.				7G L.A.				Lunch	7F S.S.		7G S.S.		Plan
West	Math 106	7E Math		7C Math		7D Math		7B Math		Lunch	7A Math		6G Math		Plan
Adams	Math 110	6B Math		6F Math		6A Math		6E Math		Lunch	6D Math		6C Math		Plan
Blevins	Art 201	7A	7C	6B	6D	6C	6E	Lunch	6G	7D	7B	7E	6A	6F	Plan
Perry	Mus 203	6F	6D	7A	7E	7B	6G	6C	Lunch	6A	6B	6E	7D	7C	Plan
Stewart	P.E. Gym	6D	6F	7E	7A	6G - 7F	7B	6A	Lunch	6C	6E - 7G	6B	7C	7D	Plan
Lewis	Sci P.E. Math 118	7G Math		6D Sci	6B Sci	6E-7F P.E.	7F Math		Lunch	7F Sci	7E Sci	7B Sci	6F Sci	6A Sci	Plan
Arbuckle	Sci 114 Art Mus P.E.	7C Sci	7A Sci	7G Art	7G Sci	6E Sci	6G Sci	Lunch	7D Sci	6G Sci	P.E. 6E-7G	7G Mus	7F Mus	7F Art	Plan
Shook	Lib-Lib	R E S O U R C E		T E A C H E R				A.V.	Lunch	R E S O U R C E		T E A C H E R			Plan
Towny	BRL 104	Plan		BRL READING		Plan	Lunch	B.R.L. Sullivan Reading							Plan
Clay	117 Plan A-1	Plan A	Self - Contained					Lunch	Plan A	Self - Contained				Plan	Plan
Parks	116 Plan A-2	Plan A Resource Teacher						Lunch	Plan A Resource Teacher					Plan	Plan

ALTERNATING CLASS: Top of line meets on even days
Bottom of line meets on odd days

The reading levels for all students were determined early in September by use of the Informal Reading Inventory Test, a placement test put out by Houghton Mifflin Company for the purpose of determining at which level in the Houghton Mifflin readers a student should start. A copy of an Individual Pupil Summary Sheet and of an Informal Reading Inventory sheet appear on pages 15 and 16.

The principal and the two project teachers decided to use Level-6, Level-7, and Level-12 (and above) readers as the participants in the practicum. They further decided to designate the Level-6 and-7 readers at 10:30 as the tutee experimental group. The Level-12 (and above) readers at 8:30 thus became the tutor control group for the advanced readers, while the Level-12 (and above) group from the 10:30 period became the experimental tutor group. In short, the experimental groups met at 10:30 each day, the control group at 8:30, as the following chart shows

	Experimental	Control
Tutee	10:30 Level-6, Level-7	8:30 Level-6, Level-7
Tutor	10:30 Level-12 (and above)	10:30 Level-12 (and above)

Records and data were kept on approximately 25 students from each of two experimental groups and from each of the two control groups. This made a total of approximately 100 students participating in the project; more precisely, 102 students began the program, and 93 students completed the program.

Example 2 - Individual Pupil Summary Sheet - Houghton Mifflin Co. removed due to copyright restrictions.

INFORMAL READING INVENTORY

Name_____ Date_____

Basal Reader_____ No. of Words in Selection_____

*Words asked for in silent reading *Words missed in oral reading

*Total words missed_____ *Total words missed_____

*Total oral and silent_____

SILENT READING CHECK LIST:

_____Moves lips without sounding
_____Whispers
_____Points with fingers
_____Bobs head (pointing!)
_____Holds book too close
_____Holds book too far away
_____Appears tense
_____Moves head from side to side
_____Reads slowly
_____Is restless
_____

WORD ANALYSIS CHECK LIST:

Gr 3 and Up / Gr 2 / Gr 1:

_____Weak in knowledge of letter names
_____Inadequate in association of letter name with the sound the letter represents
_____Unable to do initial consonant substitution
_____Unable to do final consonant substitution
_____Unable to do vowel substitution
_____Unable to recognize the root word
_____Unable to recognize prefixes
_____Unable to recognize suffixes

ORAL READING CHECK LIST:

_____Reads word-by-word
_____Phrases inappropriately
_____Mispronounces excessively
_____Enunciates poorly
_____Has monotonous voice
_____Pitches voice too high
_____Is tense or nervous
_____Repeats excessively
_____Fails to keep the place
_____Has inadequate sight vocabulary
_____Guesses incorrectly from context
_____Reads slowly=
_____Reads too fast=
_____Skips words
_____Adds words
_____Does not try unknown words
_____Controls breath poorly
_____Points with fingers (Watch Thumb!)
_____Bobs head (pointing!)
_____Ignores word endings
_____Ignores word errors and reads on
_____Does not demand meaning
_____Makes reversals
_____
_____

COMPREHENSION:

_____Weak in noting details
_____Weak in getting main ideas
_____Unable to make inferences
_____Unable to draw conclusions

*List proper names and repeats if they occur, but do not count in totals.
=Be governed by the child's natural flow of speech to determine this.

Table 1 shows the actual numbers and allocations of students participating in the project at the beginning and end of the school year.

TABLE 1

Number of Students Participating in Practicum

Groups	Beginning of Practicum	End of Practicum
Tutor Experimental	26	24
Tutor Control	28	26
Tutee Experimental	24	21
Tutee Control	24	22
Total Number of Students Participating	102	93

The number of the Tutor Experimental Group decreased by two, the Tutor Control Group by two, the Tutee Experimental Group by three, and the Tutee Control Group by two. The total participants decreased from 102 to 93, a decrease of nine students. The nine students who did not complete the practicum transferred from Harry Stone School during the period covered by the practicum.

Tests Administered for More Precise Scores

Although the Informal Reading Inventory Test gave a general breakdown in reading levels, a more precise grade score was needed for the purpose of this practicum. Therefore, during the second week in September, 1975,

the Iowa Tests of Basic Skills (ITBS) was given to all students at Harry Stone School. The ITBS is a part of the DISD system-wide testing program and is mandatory. The ITBS posttest was given the last week in April and the first week in May, 1976.

During the first week of October, 1975, the teacher in charge of the control and experimental groups on reading Level-6 and 7 administered the Gates-MacGinitie Reading Test (GMRT), Primary C, Form 1. The experimental and control groups reading on Level-12 (and above) used the GMRT, Survey D, Form 1, as a pretest for vocabulary and comprehension skills. These tests gave a more accurate assessment of the reading level of both the control and the experimental groups at that time. The same tests were given the second week in April, 1976, as a posttest.

The DISD designed Survey of Reading Skills (SRS), a criterion referenced reading test, was also administered. The SRS is a group test that can be hand scored and is designed to reveal the reading strengths and weaknesses of each student. The teacher working with the control and experimental groups on reading Levels 6 and 7 administered the SRS, Level 2 during the second week in October, 1975. The teacher working with the experimental and control groups on Level 12 (and above) administered the SRS, Level 6 during the second week of October, 1975. The same tests were administered the second week in April, 1976, as a posttest.

The ITBS and GMRT gave more precise scores than were obtained previously from the Informal Reading Inventory Test. These more precise raw and grade-equivalent scores were necessary to statistically compare the

gains made by the control and experimental groups during the course of the practicum.

Selection of Materials

Guided by the results of the tests, conferences with other teachers, and recommendations made by the DISD Instructional Facilitator, the two teachers chose the programmed reading material and decided on the methods and techniques to be used by the tutors. With regard to the latter, it was hypothesized that each tutee would improve his/her reading skills if the individual tutor (a) allowed each tutee to advance at his/her own rate, (b) concentrated on tutee strengths, (c) minimized the tutee's feelings of failure, and (d) used a combination of methods to hold the interest and motivate the tutee.

The tutors would be helped by these methods and materials by (a) concentrating on specific assignments for the benefit of the tutee, (b) learning patience in dealing with peers less advanced than the tutor, (c) being responsible for the gains made by his/her tutee, and (d) preparing in advance for the lesson to be presented on that particular day.

Specifications of the methods and techniques used by the tutors are discussed more fully on pages 28-34; "Training of the Tutors." This section focuses upon the selection of materials used by the tutors.

The tutors used listening centers, tapes, workbooks, duplicated worksheets and personal interest stories written by the tutees themselves to aid in the development of tutee reading skills. More specifically, the programmed material chosen consisted of the following: Webster Tape

Lessons (WTL), Continental Press, Language Skills, Kit A (CPL), Continental Press, Reading Skills, Kit A (CPR), Continental Press, Readings for Comprehension (CPC), and Continental Press, Reading--Thinking Skills (CPRT).

Webster Tape Lessons (WTL): These lessons are published by Webster's International Tutoring Systems, Inc., and involve reading in the content areas. The material consists of 96 cassette tapes along with 48 separate lessons in the subject areas of history (geography is combined with history), math, and science. The tapes proceed chronologically from grade level two through grade level six. For this practicum, grade levels two and three were used. Every subject had six accompanying lessons for each level.

The mathematics lessons used at Harry Stone School attempted to develop specific reading skills by addressing themselves to the following:

Comparisons	Perceiving relationships
Sequential order	Visualization
Translating words into symbols	Drawing conclusions
Translating symbols into words	Time relationships
Obtaining information from tables, charts, and multiple word meaning graphs	Relationships in Formulas and Equations

Word meaning: Technical mathematical terms, abbreviations, literal numbers, alphabetical symbols, relationship symbols, and grouping symbols.

The tapes used in developing reading skills by the use of mathematics lessons were:

Grade 2

1. How Little is Big? How Big is Little?
2. Man's Way to Tell Time
3. Place Value
4. What is a Set?
5. =, ≠, ,
6. Adding Like Things is a Short Cut to Counting

Grade 3

1. How We Use Numbers
2. Numbers Tell Time
3. What is a Group in Mathematics?
4. Whole-Number Relations
5. How Subtraction Works
6. Multiplication: A Fast Way to Add

The science lessons attempted to develop specific reading skills by addressing themselves to the following:

Making Comparisons
Classification
Inductive Thinking
Deductive Thinking
Identifying Relationships
Sequential Order
Word Meaning: Technical Symbols, Diagrams, Formulas, Equations, Maps, and Pictures, Non-Technical Words and Phrases

The tapes used in developing reading skills by the use of science lessons were:

Grade 2

1. Water
2. Living Things
3. Trees
4. Science is Big
5. Scientists
6. Right

Grade 3

1. Simple Machines
2. The Airplane
3. Animals with One Call
4. Fishes, Amphibians, and Reptiles
5. Mammals
6. Plants and Animals Need One Another

The worksheets used to develop reading skills by the use of science lessons includes the following:

Grade 2

1. Are crows scared of scarecrows?
2. Is there a dog that doesn't bark?
3. How does the Emperor penguin keep an egg warm?

4. Were chickens ever wild?
5. Are there bees that don't sting?
6. How does a starfish see?
7. What is an ant lion?
8. What does a sea horse eat?
9. Can a snake back out of a hole?
10. What do dogs hide?
11. Is there a fish with four eyes?
12. Why did the Indians paint their bodies?
13. What is a panda?
14. What is a jelly fish?
15. What is walking catfish?
16. How many eyes does a grasshopper have?

Grade 3

1. Does a giant redwood tree have giant roots?
2. How can a bat fly in the dark?
3. Do fish blink?
4. What happens to a honeybee after it stings?
5. Does it ever snow in the desert?
6. Does a firefly's light ever go out?
7. How did the bullfrog get its name?
8. Is there really a bread tree?
9. What is a bandicoot?
10. What is an archer fish?
11. What is a snow-eater?
12. Can a butterfly taste and smell?
13. How did stories about mermaids start?
14. How do they get ships into bottles?
15. Why do ground hogs dig up fields?
16. Do alligators have a voice?
17. Are there man-eating plants?
18. Where can the crossbill be found?
19. Can an owl move its eyes?
20. Why does a mole dig?
21. Do seals sleep in the water or on land?
22. What is a dogfish?
23. Do some rabbits turn white in winter?
24. How do flying fish fly?
25. Why don't polar bears slip on the ice?
26. Has the U. S. flag always been red, white, and blue?
27. What are ant cows?
28. Are painted turtles really painted?
29. What was the elephant bird?
30. Do prairie dogs belong to the dog family?
31. Are goldfish always gold?
32. How did people get ice in the old days?

Specific reading skills developed by the taped history lessons included the following:

Recognition of Rhyming Words
Visualization
Comparisons
Place and Space Relationships
Making Inferences
Reading Between The Lines

Reading Maps, Pictures and Charts
Sequence of Events
Time Relationships
Using Maps, Tables, and Charts
Cause and Effect
Making Associations
Chronological Order
Relationships Between Past and Present
Drawing Conclusions
Answering Specific Questions

Grade 2

1. A home Gives Shelter
2. Families Today and Long Ago
3. The Community
4. Schools in Early America
5. Our Country's Flag
6. Travel by Land, Sea, and Air
7. Our World, the Earth
8. The Earth, the Sun, and Air
9. The Earth's Water
10. The Globe and the Earth
11. The North Pole, the South Pole and the Equator
12. Maps

Grade 3

1. From Logs to Nuclear Power
2. World Trade Makes Life Better
3. Invention of Wheel Makes Life Easier
4. "Mr. Inventor"
5. Displaying the Flag
6. America the Beautiful
7. Directions on the Earth
8. How Maps and Globes Are Different
9. Land and Water on the Earth
10. Lakes
11. Rivers
12. Wind

Continental Press Language Skills (CPL), Kit A: This material consists of ten units of duplicating masters with each unit containing 30 separate masters. The units are arranged to help pupils gain, step by step, the skills they need for effective communication. The lessons are programmed into small steps, and the sequence for introducing new material is very carefully controlled. Sufficient practice is provided for reinforcing every learning experience. At Harry Stone School, well-planned reviews were an important part of the program.

The following are the unit names and the skills they teach which were used at Harry Stone School:

Unit 1 Alphabet Skills
Unit 2 Naming Words and their Plurals

Unit 3 Is, Are, and Doing Words
Unit 4 Describing Words
Unit 5 Capitalization
Unit 6 Telling about the Past
Unit 7 Kinds of Sentences
Unit 8 Using Signals (Punctuation)
Unit 9 Writing Good Sentences
Unit 10 Writing Stories and Letters

Continental Press Reading Skills (CPR), Kit A: This material consists of ten units of duplicating masters with each unit containing 30 separate masters. The units are arranged to help pupils gain, step by step, the skills necessary to read words and sentences. A five-step pattern is used to introduce and reinforce each letter-sound relationship: auditory discrimination of the sound, writing the symbol, symbol-sound association, visual discrimination, and writing the letter context of a word. There is also a systematic plan for review as additional letters and their sounds are presented. Students are given opportunities to apply letter-sound associations in isolated words that name pictures of familiar objects and in words that are used in short, meaningful sentences.

The unit names and the skills they teach that were used at Harry Stone School include the following:

Unit 1 Initial Consonants: s, m, t, f
Unit 2 Initial Consonants: c, n, h, b
Unit 3 Initial Consonants: d, w, g, l
Unit 4 Initial Consonants: p, r, j, k
Unit 5 Final Consonants: t, n, p, k. l, f
Unit 6 Final Consonants: g, m, b, d, s, f
Unit 7 Short Vowels: a, e, i
Unit 8 Short Vowels: o, u
Unit 9 Long Vowels: a, i, o
Unit 10 Long Vowels: u, e

The CPR kit also includes as its last step, materials labelled The Sound Way to Easy Reading: This material consists of four taped records and seven accompanying sound cards. It is designed to teach (a) the alphabet, (b) long vowels, (c) short vowels, (d) consonants, and (e) blends.

Continental Press, Reading for Comprehension (CPC): The material selected for use at Harry Stone School consisted of four units of duplicating masters, two units for grade level two and two units for grade level three. Each unit contained 16 separate masters. The purpose was to provide stimulating materials for practice reading and to develop comprehension skills. To accomplish the first part of the goal, the units contained science-oriented topics. Each topic was presented in an article (300-330 words) written at the appropriate grade level. To accomplish the second part of the goal, there were carefully planned questions following each article to recall factual information, identify topics of paragraphs, distinguish fact and opinion, complete an analogy, make inferences, and discover the main idea. Vocabulary enrichment included questions on shift of meaning as well as the use of context clues.

Continental Press, Reading-Thinking Skills (CPRT): The material used at Harry Stone School consisted of four units of duplicating masters, two units for grade level two and two units for grade level three. Each unit contained 24 separate masters. The purpose was to develop critical thinking skills in reading. The major skill areas emphasized were

inference, organization, judgment, and imagery. Numerous subskills were also taught:

1. Generalizing
2. Using Multiple Meanings
3. Substituting Synonyms
4. Interpreting Compounds
5. Determining Analogous Relationships
6. Judging--Fact or Opinion
7. Judging--Character
8. Judging--Emotions
9. Developing Sensory Imagery
10. Noting Inconsistencies
11. Appraising Relevancy of Ideas
12. Organizing--Main Ideas, Time Order
13. Organizing--Time Order
14. Predicting and Organizing
15. Inferring from Context
16. Verifying Inferences

IMPLEMENTING THE PRACTICUM

Training of Project Teachers

Once the selection of materials had been made, attention was focused upon the training of the two project teachers.

The DISD Instructional Facilitator spent two one-hour instructional sessions with the project teachers, Mr. John Pritchett (tutors) and Mrs. Gay Spencer (tutees). In his initial instructions to them, he gave an overview of the process and philosophy of tutoring. He pointed out that tutoring is designed to take advantage of instruction in a one-to-one situation. As for peer tutoring, he indicated research had shown (Coleman, 1961; Freidenberg, 1965) that peer pressure is one of the most important factors of learning in today's schools. "What better way to take advantage of peer pressure than to have one student tutor another?" he asked.

All ways of teaching reading are effective but no one way is effective with all students. Students learn in different ways, and the

tutoring approach to reading is a method which allows a student to learn in a way that best suits him. For example, the Instructional Facilitator pointed out, the learning of basic concepts is largely a matter of action rather than examples and definitions. The tutoring program allows such action. In the peer tutoring approach to reading, the teacher takes a passive role. The tutors take an active role. Doing so, they motivate the tutees to participate in the activity. Both tutors and tutees thus benefit. It is the students and materials used that teach rather than the project teacher. Simultaneously, the peer tutoring process provides for the repetition and use of the multisensory approach in learning to read which has proved to be effective in learning reading skills.

Another point that the Instructional Facilitator emphasized was that the students be allowed "to visit" during tutoring sessions. Of course, the visiting had to be controlled and not allowed to interfere with the work of an adjoining group. Under the program, however, the students should be allowed to determine when the visiting should take place.

The Instructional Facilitator then opened the session to question and answers. Actually there were few questions because the project teachers were not familiar enough with the program to ask intelligent questions. The questions came after the program was underway and the teachers were faced with the problems encountered in a tutoring situation. Fortunately the Instructional Facilitator was always willing to answer questions and took the time to come to the school to help the program run more smoothly.

At the second session, the Instructional Facilitator explained the mechanics of the program, how it would operate once the tutor and tutee

came face to face. The project teachers were given printouts showing the steps to be taken during the class period. In addition, the Instructional Facilitator suggested programmed material to be used for the practicum. As previously noted the project teachers accepted his suggestions. At a later date he came back and explained to the teachers exactly how the materials could best be used in the classroom in an actual tutoring situation.

The Instructional Facilitator ended the second session by saying that motivation was the main factor in teaching a child to read. His philosophy was the humanistic approach patterned after Carl Rogers[10] self-actualization. He quoted Rogers as saying that to motivate a student we must "turn his self-actualizer on." He adapted Roger's five steps to good counseling to the tutor-tutee relationship:

1. The tutor and coordinator must be congruent persons.
2. They must provide an unconditional atmosphere of acceptance to the tutee.
3. They must provide empathy but not sympathy.
4. The tutee must be aware of his problem.
5. The tutee must be aware that the previous four conditions exist.

Training of the Tutors

DISD Instructional Facilitator: The Facilitator spent one hour instructing the students. Both the DISD Instructional Facilitator and Harry Stone School project teachers contributed to their training. His first instructions were in general terms. He told the tutors that their role

[10]Carl R. Rogers, On Becoming a Person: A Therapist's View of Psychotherapy, Boston: Houghton Mifflin Company, 1961.

was to provide encouragement and support to the work done by the tutees. He explained that they could help tutees develop a positive self-concept by complimenting them on their appearance, thinking, and school work. The tutor would show his acceptance of the tutee by listening to what the tutee had to say. The tutor could also help the tutee develop a positive attitude by giving him or her tasks that could be performed successfully and by saying that he or she had performed the task well. No tutor should criticize a tutee for mistakes but should be receptive to a tutee's efforts even when mistakes were made.

The facilitator cautioned the tutors about some particular points and offered them some specific directives:

1. Avoid a patronizing tone and relate to your tutee as an equal.
2. Avoid thinking of yourself as the one who has all the answers.
3. Don't expect your tutee to show appreciation for your efforts before you have become a friend.
4. Be willing to start at your tutee's level and move at the tutee's pace if progress is to be made.
5. Be a good listener and be able to communicate with your tutee.
6. Don't be quick to judge. Many tutees have gone through life with very little success.
7. Look at your tutee as an individual. His or her differences from you make him or her an individual. Viewed in this light, the differences may appear as strengths.
8. Don't take advantage of the tutor-tutee relationship to play "boy-girl" games. The tutee needs your help.

Project teacher: The project teacher for the tutors spent one hour each day for four days on further instructions. He told the tutors that the reason for peer tutoring was that students often learn best from other students, pointing out the system's many advantages: (a) it provides the one-to-one relationship many students need in order to learn; (b) it allows for concentration and repetition in certain areas where the individual

student needs more attention than could be allotted any individual student in a group class situation; and (c) it improves the tutee's picture of himself.

The teacher emphasized some of the things one has to be able to do in order to be a successful tutor: get to know and like the tutee; try to find out what interests him or her; be sure the tutee succeeds--that makes a tutee feel good about himself or herself, and success breeds success.

The project teacher also gave the tutors some suggestions for getting along with their tutees. For example, since what a person is called is very important to him or her, be sure to pronounce any tutee's name the way he or she wants it said. Each tutor should show the tutee that he or she is interesting as a person. Each tutor should try not to be absent or late for tutoring sessions. The tutee would be watching each tutor as an example, so the tutor should talk to the student in an easy comfortable way and should listen to what the tutee has to say.

Making the suggestions more specific, the project teacher said:

> I have given you some of the general things that will make the tutoring program a success. Now let's see what we do when we meet the tutee for the first time. Greet the tutee as a friend. Spend the first part of a session, a whole session, or several sessions as needed just talking to the tutee to determine what he likes and dislikes. This will help to get the sessions off on a friendly basis. (Pritchett, 1975)

At this point the tutors were broken down into groups of three for role playing. One assumed the role of the tutor, another the role of the tutee, while the third was an observer. The tutor started asking questions of the tutee about what he liked, disliked, etc. The tutee responded

and a discussion started. After five minutes the role playing stopped and the observer gave his impression of how the talks went in light of what they had been told about making friends with the tutee. The roles then were shifted. This role playing continued until all had had the chance to be a tutor, tutee, and an observer.

At the beginning of the role-playing session, the students were very self-conscious; but with practice, they soon became more comfortable.

The project teacher then introduced an interest inventory sheet and explained its use and need. (Description and example appear on pages 40-41). He told the tutors that after they had greeted their tutees and had talked about their likes and dislikes, they still would need to know more about the tutee's interests. He said that conversation would give some clues, but that in order to get details an interest inventory sheet should be completed. Then the tutors could discuss those interests as another means of getting to know the tutees better. Filling out the interest inventory sheet would also be a good opportunity to start checking for spelling, mispronunciation, and so on.

Another role-playing session followed. Gathered in groups of three, and again playing the roles of tutor, tutee, and observer, each tutor completed an interest inventory. In addition, the role-playing tutee read his interest inventory, the tutor commented and corrected any mispronounced words or spelling. Students playing the role of the tutees sometimes made mistakes just to see how the tutors would make corrections without appearing as a "know it all." After five minutes of such role-playing, the observer

gave his or her impression of what has gone right, what had gone wrong, and possible ways of correcting any errors. The role-playing continued until each of the three students had again had a chance to perform in each of the three roles.

At this point the project teacher started explaining the material, the abbreviations used on the assignment sheet (description and example appear on pages 39-41), where the material would be located in the room, how to use the assignment sheet, and how to use and mark word cards. Ten tape players had been modified so there were two outlets for headphones. The students were shown the players and told how to attach and use the headphones.

Again the tutors went through a simulation exercise. The "tutor" went to the filing cabinet for an assignment sheet. The sheet would show, for example, that the tutee should be working on word list and WTL-H21 assignment; H21 means taped history level 2 lesson 1. The role-playing tutee called the words from the word list until five had been missed; then word cards were made. After this part of the assignment was completed, the tutor found the tape marked WTL-H21, together with the worksheets that accompanied it, and a lesson was simulated. When this was done, the observer again commented on what had been done, trying to improve the approach to the lesson as well as offer constructive criticism about the "tutor's" way of helping the "tutee." This continued until each of three students in the group had had the chance to play each role.

The project teacher told the tutors that he realized they would make mistakes, and not to worry about them. Friday of each week had been set aside so those problems could be discussed. Other ideas tutors might have for particular tutees or lessons could be shared at that time, too.

During the four-hour training period of the tutors by the project teacher, the importance of taking a positive approach was stressed purposely. The principal and project teachers wanted the tutees to experience some success. They had experienced failure often in the past; their low reading scores were one evidence of this. Cohen added weight to the positive approach when he said: "Tolerance for failure is best taught through providing a background of success that compensates for experienced failure...."[11] They should not be expected to "get everything right." On the other hand, it was pointed out that the tutors should let the tutees know that they were expected to show increasing success. To that end, the tutor was advised to praise his tutee for any honest success by saying, "See, I knew you could do it," or some similar statement. For example, if the tutee were wrong, the tutor should simply correct him without saying he was wrong. Thus, a tutee shown the word "there," might read it as "that." The tutor should say "there" and ask the tutee to repeat it. When the tutee says "there," he or she is praised and the tutor moves on with the lesson. As Bowers and Soar said: "the more supportive the

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[11]S. Alan Cohen, Teach Them All To Read, New York, Random House, 1969, p. 231.

climate, the more the student is willing to share, the more learning will take place...."[12]

Preparation of Tutees

During the same week the project teacher for the tutees explained to them what was planned. The project was described as a different way to learn reading, and the tutees were told that the tutors were to be considered as friends and helpers not as a "boss." The teacher emphasized that tutees and tutors were to work together in a cooperative effort. She approached the prospect in a positive and encouraging manner to prepare the tutees emotionally, mentally, and psychologically for the project. The prospective tutees had many questions, and Ms. Spenser attempted to answer in a frank, but reassuring manner. No formal preparation was given the tutees.

Pairing Tutor and Tutees

The last Friday in October, the school personnel involved in the project -- the two project teachers and the principal -- met to pair each tutor with a tutee. Personality conflicts as observed by the teachers were avoided as much as possible. If a tutor had asked for a particular tutee or if a tutee had asked for a particular tutor, the request was granted if possible. In three cases the same tutor was requested by two different tutors. In these cases decisions were made by the principal as

[12]Norman D. Bowers and Robert S. Soar, "Studies in Human Relations in the Teaching/learning process," Evaluation of Laboratory Human Relations Training Course for Classroom Teachers, Chapel Hill, N. C., 1961, p. 111.

to which pairing would be best for the student involved. In most cases, the pairings worked adequately, but some changes had to be made during the course of the practicum. One tutor had to be assigned four different tutees before a satisfactory pairing was found. The fourth pairing proved to be very productive. However, the writer was satisfied that most original pairings were successful.

Introduction of Tutors and Tutees

Getting started: The peer tutoring program was actually inaugurated when the tutors met their tutees for the first time, the first week in November. Each paired tutor and tutee chose a place relatively free from possible interruptions and started talking. The purpose was to build rapport between the two. The tutor started the conversation by asking questions similar to the examples that follow: (a) What section are you in? (b) Who is your homeroom teacher? (c) How many brothers and sisters do you have? (d) Does your mother work? Is she at home when you return home from school each day? (e) Do you walk to school or does your mother bring you? (f) Do you have any pets? What are their names? (g) Do you like sports? What one do you like best? (h) Are you going to play any sports at Harry Stone School this year? These questions encouraged the tutee to start talking about himself or herself. They also gave the tutor some insight into what the tutee liked and did not like.

In addition, each tutor started a story and then asked the tutee to complete it. For example, the tutor said:

On my way to school this morning I saw a dog running after a little boy. It was a very small dog and was having trouble catching the boy. Now pretend that is the beginning of a story. I want you to complete the story for me.

The tutee's finishing the story aloud would again give the tutor some idea of the tutee's interest and ability to think and verbalize.

This type of intercourse continued until the tutor and tutee became comfortable with each other. It took one day with some; with others two days were spent in this type of activity before they could move to the next step in the program.

Assignment sheet: Assignment sheets in sequential order of difficulty were prepared for the entire project by the Instructional Facilitator and approved by the writer and the two project teachers. They were flexibly individualized so that the tutor could start at any point depending on the ability of the tutee. The reading levels of the tutees indicated that the work prescribed by the assignment sheets be on second and third grade level. Thus, each assignment had a prefix of C. The first eight lessons dealt with Interest Inventory, experience stories, talking with tutee, phonics drill from words used in experience story and interest inventory, and the beginning of a word list made from words used in the experience story and interest inventory.

The programmed material actually started with lesson C-9 when the Webster Tapes were mentioned as a part of the assignment. On a typical day, when the tutor and tutee entered the room, the tutor went to the filing cabinet, pulled the file of the tutee, and saw they were ready to start on lesson C-9. The first activity listed in C-9 was a Phonics Drill

on tape. This tape required approximately five minutes for listening and performing the activities. The next activity listed WTL (H-23). This meant that the tutor and tutee would locate the taped lesson, "history, second level, third lesson" and pursue the activities connected with this lesson. Approximately thirty minutes would be used in this activity. The next activity listed was the word list. At that time the words in the tutee's word bank would be reviewed. As the tutee progressed, the team would go to prepared word lists. The tutee would call words until five were missed (misspelled, mispronounced, grammatically incorrect). These words would be added to his or her word bank, and the place on the word list would be marked so that the team would know where to start the next time the Word List was mentioned on the assignment sheet. Approximately ten minutes could be used in this activity. The fourth activity listed in C-9 was CPC-21-p.9. This meant that the tutee would go to the Continental Press material on Comprehension, Unit two, level one, page 9, and perform the activities shown on the duplicated copy.

The assigned activities did not have to be followed in order. For example, the tutor-tutee team could start the day's activity with the word list rather than the phonic drill. An assignment sheet is shown as Example 4 on page 39.

Interest inventory: An example of the Interest Inventory is shown as Example 5 pages 40-41. That sample Inventory was actually completed by a tutee. The tutee's answers are underlined and copied just as they were written, errors and all.

As soon as a tutor-tutee pair had established a comfortable rapport, the tutee filled out an inventory. When any inventory was completed, the tutee-author read it aloud to the tutor. They stopped when a word was missed, and the tutor told the tutee what the missed word was. Then the tutee wrote the word on a 3 x 5 card which became the start of that tutee's word bank. Other words taken from newspapers, magazines, and so on were added to the bank during the program. The idea behind the Inventory was to learn words that the tutee did not know as well as to determine the tutee's interest.

Experience story: After The Interest Inventory, the tutee was asked to write an experience story. It could consist of as few as two or three sentences. Some of the stories were real experience stories. Some tutees wrote down anything that came to mind, "just to get it done." In either case, the tutee read back to the tutor what he had written, and the missed words would be placed in the tutee's word bank for future reference. Periodically these words would be reviewed to be sure that the tutee had actually learned them.

Word Lists and Word Bank for Sight Vocabulary

As a goal of the program, tutor-tutee teams were to increase their sight vocabulary. One method was through the maintenance of a word bank. The programmed material had two different kinds of word lists. The first kind of list consisted of words considered necessary for reading on any level. There were 85 word lists of this type, and each list consisted of

EXAMPLE 4

ASSIGNMENT SHEET - READING (HS)

STUDENT'S NAME _____

LESSON NUMBER	LESSON ITEM	DATE STARTED	DATE COMPLETED
C - 9	1. Phonic Drill		
	2. WTL (H-23)		
	3. Word List		
	4. CPC - 21 - p. 9		
C - 10	1. Phonics Drill		
	2. WTL (G-23)		
	3. Word List		
	4. CPC - 21 - p. 10		
C - 11	1. Phonics Drill		
	2. WTL (M-23)		
	3. Word List		
	4. CPC - 21 - p. 11		
C - 12	1. Phonics Drill		
	2. WTL (S-23)		
	3. Word List		
	4. CPC - 21 - p. 12		

EXAMPLE 5

INTEREST INVENTORY #1

Sentence Completion

1. I want to know your name.
2. I feel like going to the gym.
3. At bedtime I feel like going to bed.
4. Food I like food.
5. What makes me mad is she was mad.
6. At home I like to play football.
7. I am sorry I did it.
8. The best is and A.
9. Other children usually play baseball.
10. If my mother let me go to the park.
11. What I want to know is your last name.
12. If I had my way to the big school.
13. Most teachers make you do something.
14. Some day I will go to Washington.
15. When I was a little child I will suck bottle.
16. I am afraid of that big boy.
17. My best friend is Tracy Henry.
18. The most scary thing is a rat.
19. My father used to go look for a job.

EXAMPLE 5 (continued)

20. I miss the three words on the paper.

21. The children around here is bad.

22. The happiest time I like is to go somewhere.

23. I am best when I like to miss that words.

24. The only trouble is she is mean.

(The underlined words are those furnished by the tutee)

about 50 words to a page. (Word List No. 2 is shown as Example 6 on page 43). In using the lists, the tutor pointed to a word as the tutee pronounced it. Each word that was missed was circled. There were two ways to miss a word. First, the tutee might be unable to pronounce the word at all. Second, the tutee might say the wrong word and come back quickly and say the right word. Whatever the mistake, that word was counted as missed. The tutee continued pronouncing the words until he had missed five. Then they would stop, and the tutee would add the five words to his word bank. The tutee wrote the word on one side of his word card; on the other side of the card he wrote a sentence using the word.

There are three methods of teaching sight words: the visual, the visual motor, and the kinesthetic all were used in the program.

The visual method: The visual method consists of exposing a word again and again until the pupil learns to identify it by its general configuration. A tutee was shown a word on a flash card; then he either gave his response (saying the word aloud immediately) or else looked at the word, closed his eyes, and then said the word.

The visual motor method: If a tutee had special difficulty with a word, the tutor and tutee went to the chalk board where the tutee wrote the word on the chalk board in big bold letters. As he did so, he or she said each letter aloud as it was written. Then the tutee pronounced the entire word. In such a case, the hand worked with the eyes as the tutee tried to learn the configuration of the word.

EXAMPLE 6

WORD LIST
(2)

61. or	81. said	101. saw
62. two	82. did	102. home
63. man	83. boy	103. soon
64. little	84. three	104. stand
65. has	85. down	105. box
66. how	86. work	106. upon
67. them	87. put	107. first
68. like	88. were	108. came
69. our	89. before	109. girl
70. what	90. just	110. house
71. know	91. here	111. find
72. make	92. long	112. because
73. which	93. other	113. made
74. much	94. old	114. could
75. his	95. take	115. book
76. who	96. cat	116. look
77. an	97. again	117. mother
78. their	98. give	118. run
79. she	99. after	119. school
80. new	100. many	120. people

The kinesthetic method: The kinesthetic tracing method using the Fernald Tracing Method as explained by Wilma H. Miller[13] uses the visual motor mode as well as the sense of touch. The tutor wrote the word on the chalk board. Then, using a finger as he or she pronounced the word, the tutor traced over the written letters. After demonstrating three or four times, the tutor asked the tutee to trace the word with a finger, saying each letter aloud as the word was traced. The tutor was careful to see that the tracing and the calling of the letters was synchronized. The tutee then attempted to write the word. If a mistake were again made, the tutee retraced the word, saying it aloud, and then wrote it on an index card to place in his or her word bank.

The second kind of word list starts with #1 and goes through #150. There are approximately ten words to each page. A sample of this word list is shown as Example 7 on pages 45 and 46. The list includes words that should be known by students in the second and third grades. The purpose of these words is to develop initial sounds of words. Any tutee pronouncing the words on one list correctly went on to a new word list. If a tutee missed a word, there is a space on the paper to use the word in a sentence. The word is also added to the word bank.

At various times the teams reviewed their word banks. This was done each time words were added, as part of the word list or reading activity, or as a beginning or fill-in during the tutoring period. Many flash games resulted. Teams held spelling bees, races, and chalk board sentence drills.

[13] Wilma H. Miller, Identifying and Correcting Reading Difficulties in Children, The Center for Applied Research in Evaluation, Inc., 1971.

EXAMPLE 7

WORD LIST #88

NAME OF TUTEE _____ DATE _____

1. IDEA _____
2. INSTRUMENT _____
3. IMAGINARY _____
4. IDENTIFY _____
5. INCREDIBLE _____
6. INFLATION _____
7. INSULT _____
8. INQUIRY _____
9. ILLEGAL _____
10. INSANITY _____

EXAMPLE 7 (continued)

1. IDEA

2. INSTRUMENT

3. IMAGINARY

4. IDENTIFY

5. INCREDIBLE

6. INFLATION

7. INSULT

8. INQUIRY

9. ILLEGAL

10. INSANITY

Webster Taped Lessons (WTL)

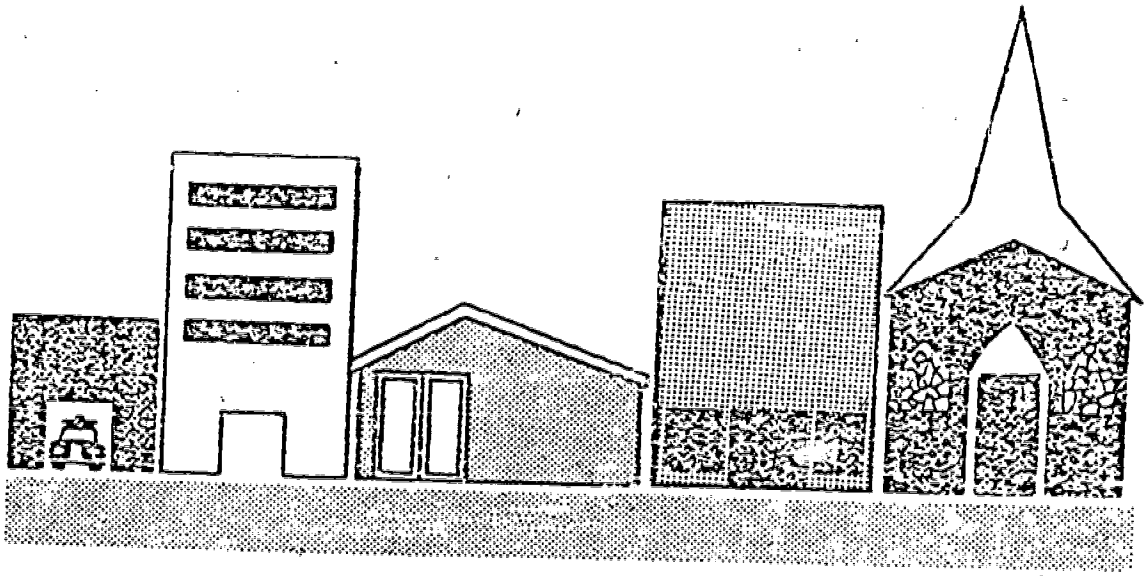
A Webster Taped Lesson (WTL) was a part of each assignment in the first phase of the tutoring program. Lessons were recorded on cassettes and used with mimeographed lesson pages. The Webster series included content in history, science and mathematics. Each subject had six accompanying lessons for each grade level. Levels two and three were used in this practicum.

The assignment sheet directed each team to use a particular WTL activity. For example, a sample lesson might be labelled WTL-H23. The team would interpret the code to mean Webster Taped Lesson-History level two, lesson three. After completing the six lessons in level two of history, the team was directed to use lessons on level three.

Mimeographed sheets: Each WTL lesson had accompanying mimeographed sheets for the team to follow. (See Example 8, pages 48-51) The mimeographed sheets contained exercises in listening, vowel sounds, and comprehension content.

The team first had to listen as the recorded narrator dictated the lesson's story. The team followed as best they could, using mimeographed pages where the story was printed without vowels. (See Example 9, page 54) After the narrator finished his recitation, the tutee was directed to write in the missing letters. With the tutor acting as supervisor, the tutee read each word and added the necessary vowels. Positive remarks were made by the tutor as the tutee accomplished the task. If incorrect substitutes were made, the tutor had been trained to merely state the

EXAMPLE 8



(The letters A, E, I, O, and U are missing from many of the words in the following story. To help you fill in the missing letters, study each word and each sentence. The picture and title of the story may help also.)

THE COMMUNITY: A PLACE TO LIVE AND WORK

Th__ c__mm__n__ty is a pl__ce wh re peopl__ l__ve and w__rk. You m__y th__nk __f a c__mm__n__ty __s a pl__c__ wh__r__ p__opl__ l__v__ t__g__th__r.

P____ple d__ m__ny th__ngs t__g__th__r in a c__mm__n__ty. S__m__ p____pl__ m__y g__ t__ th__ same st__res. S__me pe__ple m__y g__ to th__ same ch__rch.

You m__y see m__ny oth__r pl__c__s in a c__mm__n__ty. C__n y__ __ name s__m__ plac__s in yo__r c__mm__n__ty?

Th__r__ m__y b__ a b__ll p__rk. Th__r__ m__y b__ a pl__c__ f__r yo__r f__ther to pl__y g__lf. Th__r__ m__y b__ a pl__c__ f__r you to go f__sh__ng. Th__r__ m__y b__ a sch__ __l. Th__r__ m__y b__ a h__spit__l. Th__r__ m__y b__ a fire st__t__ __n. Th__r__ m__y b__ a f__ctory.

Som__tim__s we th__nk of a part of a c__ty as a c__mm__n__ty. S__m__t__m__s w__ th__nk of a c__ty or town as a c__mm__n__ty. S__m__t__m__s w__ th__nk of a big c__ty as a c__mmun__ty.

What are some sm__ll c__mm__n__t__ __s? Wh__t __r__ s__m__ b__g c__mm__n__t__ __s?

L__ __ok at a map. C__n you f__nd som__ b__g comm__n__t__ __s?

(Now read the story to make sure it looks and sounds correct. Compare it with the completed story on the next page.)

History 2

Lesson 3

THE COMMUNITY: A PLACE TO LIVE AND WORK

1. The community is a place where people live and work. You may think of a community as a place where people live together.

2. People do many things together in a community. Some people may go to the same stores. Some people may go to the same church.

3. You may see many other places in a community. Can you name some places in your community?

4. There may be a ball park. There may be a place for your father to play golf. There may be a place for you to go fishing. There may be a school. There may be a hospital. There may be a fire station. There may be a factory.

5. Sometimes we think of a part of a city as a community. Sometimes we think of a city or town as a community. Sometimes we think of a big city as a community.

6. What are some small communities? What are some big communities?

7. Look at a map. Can you find some big communities?

History 2, Lesson 3 Vocabulary Study Page

MATCHING WORDS

Match words from the story in the left column with the best definitions in the right column.

____ 1. think (1)	A. chart
____ 2. do (2)	B. places which sell things
____ 3. go (2)	C. move about
____ 4. stores (2)	D. perform
____ 5. map (7)	E. have in mind

WRITING THE MEANING

Find the words in the story which mean:

1. place of worship (2) _____
2. parent (4) _____
3. place of learning (4) _____
4. for sick persons (4) _____
5. where things are made (4) _____

FINDING DETAILS OR FACTS

(Circle letter of best answer)

1. The word "community"
   - A) always means a small place
   - B) always means a large place
   - C) can have many meanings

SELECTING THE MAIN IDEA

(Circle letter of best answer)

1. The story told you that
   - A) some communities are better than other communities
   - B) a community is a place where people live and work together
   - C) a community is a place for stores

correct vowel; then the work continued. Having added the vowels to the story, the tutee was asked to read it aloud. Words unfamiliar to the tutee were pronounced by the tutor, then repeated by the tutee and added to his or her word bank file. A correctly printed version of the story appeared with each lesson to help the tutor check spelling and reading (see Example 8, page 48).

A mimeographed vocabulary study page also accompanied each lesson (see Example 8, page 48). This page contained short matching tests and exercises for tutees to the meanings of key words, find details or facts, and select the main idea in the lesson's story.

Phonics Drill

A phonics drill was part of every daily assignment in the first phase of tutoring. Repetition was used to drill the basic vowel, consonant, and blended letter sounds. Each drill required the tutor-tutee team first to listen to the correct pronunciation and then to compete with the narrator in a quiz-repetition of the exercise.

Seven phonics drills were used. Each drill was recorded on a cassette tape. Each taped lesson had a numbered phonics chart. (Example 9 on page 54 illustrates phonics chart.) After completing the seven tapes in numerical order, the team began with tape one again. The task was easy to accomplish, and some teams enjoyed a game of participation with the narrator on the tape. Other teams reacted to the activity with a lack of motivation or interest.

An average lesson began with one member of the team setting up the cassette player and earphones while the other member selected the necessary tape and printed card. The lesson was played first for listening. No response was asked for by the narrator. After pronouncing the drill for the team, the narrator then called for their participation in repeating the exercise. The quiz was given at a rapid pace but served to encourage the team to beat the taped response.

After listening to one taped phonics lesson, the assignment sheet was dated to show the completed activity. A note was added as to which drill had been used. In the next day's activity, another in the series of drills was attempted.

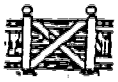
Use of Continental Press Materials

Worksheets: There were worksheets to accompany the material put out by Continental Press (CPL, CPR, CPC, CPRT); these worksheets were for Language Skills (Kit A), Reading Skills (Kit A), Comprehension, and Reading-Thinking Skills.

Worksheets began on first-grade level and went up to third-grade level. Each worksheet was numbered for each lesson. The tutor-tutee team looked on their assignment sheet to find out which worksheet to use. The tutee completed the worksheet; then both tutor and tutee checked the work and made any corrections. (An example of a worksheet from Language Skills (Kit A) appears as Example 10, on page 55).

YELLOW CARD No. 1

SOUND DICTIONARY

1	a		apple
2	b		boat
3	c		cake
4	d		doll
5	e		elephant
6	f		fox
7	g		gate
8	h		hand
9	il		Indian
10	j		jam
11	k		kite
12	l		ladder
13	m		milk
14	n		nut
15	o		octopus
16	p		pail

ample 10 - Yellow, Blue (A-DE1), Language Skills - Step by Step A - removed due to
right restrictions

Reading

After lesson number C-13 the assignment sheet began listing reading as an activity. The team worked on several assignments, however, before attempting to read from a basal book. The basal reader is the textbook forming the base from which reading skills are taught. To introduce the team to the steps in reading, a series of filmstrips was shown. The series was from Programmed Tutoring in Reading (Ebersen Enterprises, Pasadena, California). At this time, the tutors were given a kit of material which contained (a) My Word Study Kit; (b) My Cumulative Word List, a book for a word bank; (c) Tutor's Guide-Name Card an outline of steps to follow; (d) My Reading Progress, a chart for date and page numbers; and (e) five 3 x 5 cards.

The tutor-tutee team selected a basal reader. Most of them chose the low second-grade reader, Rewards (Houghton-Mifflin). Each team was directed to sit beside each other and share one book for reading: As the tutee read, the tutor listened and offered positive, esteem-building comments. When a word was misread, reading stopped for a moment. The tutee's mispronunciation was corrected. Then that word was recorded for future study, in the booklet titled, "My Cumulative Word List." As the tutee was writing, he or she spelled the word. When the miscalled word was recorded, oral reading continued until five words had been missed and recorded in the booklet. Upon recording word number five, the team stopped reading aloud and made a word card for each of the five miscalled words. A short drill was held on each word. Then the cards were filed in the tutee's word bank for study at

a later time. The drills were not necessarily held on the day the words were missed. However, each day the words were reviewed; and, if the tutee knew the word, a "1" was marked in the corner of the card. Each day the word was missed, a zero was marked in the corner. When a word received five marks of "1," the card was removed from the folder. If a word received five marks of "0," the tutor asked the teacher for help and direction. Some teams read an entire story without missing a single word. However, in such instances, or when a tutee missed fewer than five words in each story and had finished the stories in a basal reader, a comprehension check was first made to determine if the tutee had a knowledge of what had been read. If a basic knowledge of the story and the basal reader was exhibited, the team went to a higher level book.

Student Rap Sessions

On Friday of each week the tutors and tutees met with their respective project teachers to talk about what had happened in class during the week. They also discussed some of their likes and dislikes about the program and shared suggestions for improving the program. For example, at one of the sessions, a tutor explained how she had enlisted suggestions from a teacher outside the program about some games that could be played with the tutee. The games stressed the points in reading to be covered by the tutors but made the learning experience more fun. One of the games involved several tutor-tutee teams. Word cards were mixed up, and, as a tutor called words, two or more tutees would see who could find the word card first.

From the sessions it was discovered that both tutors and tutees enjoyed the tapes and following the directions of the narrator. They also made a game of this. After listening to the narrator the first time, they would try to stay ahead of him on the next listening. The students enjoyed competing and would arrange matches between tutor and tutee groups. The teams also liked the Webster Taped Lessons and listening with the headphones.

In general, the rap sessions revealed that the tutors liked the idea of being able to help a student who could not read as well as they. Simultaneously the tutees were gratified by the individual attention and being able to achieve success on their level of reading.

Complaints were also aired at the rap sessions. Both groups complained because there was not always a tape player available when an assignment sheet called for one. Most complaints, however, involved personality conflicts and adjustments. Some of the tutees thought that the tutors were working them too hard and were "too bossy." The tutors complained that the tutees did not want to do anything except listen to tapes and not do any work. In some instances a tutor and tutee did not get along and complained about each other. One particular tutor grumbled about every tutee assigned to her and had problems adjusting to the situation. One student said that he thought the whole idea was silly and he did not want to participate. He was removed from the group and placed in basal reading. Within three days, however, he requested to be allowed to rejoin the group and became an excellent tutor.

The mechanics of handling the material and returning it to the correct place when class was over became a problem. At the suggestion of the

students, various ways were tried in order to keep the material organized and returned to the proper place by the students. Nothing satisfactory was ever worked out, but the students were aware of the problem and were willing to discuss it.

One of the tutees complained that the lessons were so easy he was not learning anything. The tutors discussed this and solved the problem by placing this particular tutee in lessons about midway through the assignment sheet. He was happy and worked diligently the remainder of the project.

Eventually, from their observation and participation in the rap sessions, the project teachers thought both the tutors and tutees were gradually losing interest in the project. This became a point for discussion during the weekly meeting between the involved teachers and the principal. The project teachers expressed the belief that although there was much good accomplished during the rap sessions, many of them turned into "gripe" sessions. They acknowledged, however, that teachers with more experience in leading group discussions might have increased the productivity of the rap sessions.

The rap sessions were worthwhile to the writer. They gave him more of a feel for the activities in the classroom. The information gained from the sessions allowed the principal and the two project teachers to make some important decisions when they conferenced each week.

Conferences between Principal and Project Teachers

The principal and the project teachers conferred each week to review the program and make any changes deemed necessary for the betterment of the project. There was no pre-determined amount of time such conferences would last. The length depended upon what had happened during the week. Some lasted as little as five minutes; others ran as long as an hour.

The teachers were concerned about the lack of control in the classroom. In the past they had complete control of their classes, and it bothered them that there was so much moving around and noise during the tutoring period. They were counseled and reminded that their role was a passive one--the students and the material were to do the actual teaching.

At each conference the project teachers were reminded of their own differences in teaching and that they were to make a conscious effort to make the learning climate in each classroom as nearly equal as possible. Each of them made a conscientious effort to follow through on this.

These conferences also made final decisions upon issues raised in the student rap sessions. At one of the conferences, for example, the decision was made to allow the tutor who wanted to quit to do so; a later conference decision allowed him to return when he so requested. Another decision made was to approve the tutors' suggestion of placing the bored tutee in more advanced work. A more difficult problem to work out was the tutor who could not get along personally with any tutee assigned to her. After much trial and error, she was placed with another tutor to work with a single tutee. This worked. As long as she worked in a group of three, she did an excellent tutoring job.

Problems with material and equipment were also discussed. When a recorder broke, the DISD Instructional Facilitator was notified. If there was a shortage of tapes or duplicated material, he was also informed. In every instance he rushed the needed material to the project teachers so that very little tutoring time was lost.

At the conference during the second week in January, 1976, the teachers reported that the interest and enthusiasm of the tutors was lagging. It was decided that rather than have rap sessions the next two Fridays, films depicting the feelings of a rejected child would be shown. The purpose was to reinforce in the tutors the idea of their importance to the tutee. On Janary 9, 1976, the film, Cipher in the Snow, was shown to the tutors and the following Friday they saw Johnny Lingo. A discussion followed the showing of each film. The tutors grasped the meaning and made intelligent comments about how the rejected person in the film could have been helped by receiving more positive attention from those around him. According to the observations of the project teachers, the tutors assumed a renewed interest in their tutees after viewing the film. The films were not shown to the tutees.

A decision had to be made about when to administer the CIRT posttest. The proposal had indicated that the tests would be given the first week in May, 1976. However, the District had scheduled the last week in April and the first week in May for system-wide administration of the ITBS. Other complications arose. Easter vacation was scheduled for the week of April 12 through April 16, and on April 19 and 20 the students did not come

to school as those days had been scheduled for Staff Development. That left the students with only three days of tutoring instruction between April 9 and the second week in May, when the tests could be administered. The principal and project teachers thought it better to administer the posttest the week of April 5 before the students went on vacation rather than waiting until the second week in May. This was done.

The conferences with the project teachers were very helpful to the principal. Through the information received in the conferences he was able to keep abreast of the tutoring project and to determine its direction.

LIMITATIONS AND SOLUTIONS

Lack of Random Sampling for Selection to Groups

In the proposal for this practicum, the writer listed five possible limitations that might affect the validity of the data obtained. The first of these limitations was that the experimental and control groups were more or less "captive" groups. They were students assigned to sections according to reading skills as determined by the Houghton Mifflin Informal Reading Inventory Test. There was no random sampling of students within the groups. Two means were followed to overcome this limitation.

First, the author referred to Campbell and Stanley[14] (Table 2, page 210). They showed a quasi-experimental design that would work well with the type of situation used in this practicum. It was a blocked design called "Non-equivalent Control Group Design." According to Campbell and

[14] D. Campbell and J. Stanley, Experimental and Quasi-Experimental Designs for Research, Skokie, Illinois, Rand McNally, 1963.

Stanley, the design is strong when individuals are not selected into a group at random. This design was used.

Second, to further substantiate the validity of the control and experimental groups, a ratio t-test was run on the groups. The results revealed that there were no significant differences in the groups, based on pretest raw scores in the area of vocabulary or comprehension, on either the GMRT or the ITBS. The assignment of treatment to one intact group or the other was random.

Contamination and the Hawthorne Effect

Because all the groups were from the same school, there was the risk of contamination between groups. In addition, the Hawthorne effect had always to be considered.

The principal/author discussed with all teachers of the involved students the possibility of contamination. Their combined, close observation did not show any incidence of contamination. One reason for the lack of it might have been that most students of Harry Stone School have been enrolled in inner-city schools since kindergarten and are used to participating in various projects. They are also used to being tested twice per year. Experience in observing these students led one to believe that one more time did not seem to make much difference to them. As a result, the initial excitement and intensity of interest was usually short-lived. From observation, that was what happened in this case.

The same factors mentioned in the previous paragraph would apply to the Hawthorne Effect. In a short-term project, a Hawthorne Effect could

be a real limitation. With a project extending over a full school year, there was less chance of its materially changing the final outcome of the practicum.

Use of Two Teachers

The fact that there would be differences in the teachers chosen to conduct the project was suggested as a possible limitation. Effects were controlled as much as possible by open discussion during the weekly meetings between the principal and the two teachers.

Limited Number of Students in Project

The principal/writer feared that the limited number of students involved in the practicum might be a possible limitation. The DISD R & E Department was consulted about the possibility. Their response was that if the project were controlled properly and the correct design for evaluation were chosen, the number of students used in the project would be adequate.

ADDITIONAL DATA

The DISD criterion-referenced test, Survey of Reading Skills (SRS; defined on page 66) was administered to each of the four groups as a pretest during the second week of October, 1975 and as a posttest during the second week in April, 1976.

Level VI of that test was administered to the tutor experimental and control groups while Level II was administered to the tutee experimental and control groups.

The information revealed on the SRS was not used in choosing the method of instruction to be used in the practicum. In other words, the project teachers and the tutors did not teach to the student's weaknesses as revealed by the SRS.

Tutor Experimental Group

The writer was curious as to whether or not the pre-and posttest would show an improvement in using nothing but the programmed material for the experimental groups and the regular basal reading program for the control groups.

The tutor experimental group showed strength in Base Words, Compound Words, and Common Syllables on both the pre-and posttest. In the posttest the graph lines shown in Graph I (page 66) are about the same. Questions seven through 15 reveal a slight improvement with the exception of number 13 (Author's Purpose), where the posttest score fell below the pretest score. The author would have to say that the programmed material did not increase the scores an appreciable amount for the tutor experimental group.

Tutor Control Group

In both the pre-and posttest the tutor control group showed strength in Base Words, Compound Words, and Common Syllables. Weaknesses was revealed in all other areas. The dotted line representing the posttest scores in Graph II (page 68) shows that the control group made progress in all categories with the exception of question number seven (Meaning from Context) where the score remained the same for both the pre-and posttest.

GRAPH I

Survey of Reading Skills Level VI
Tutor Experimental (High Readers)
Mean Scores
Pretest _____
Posttest -----

Skills	Item Numbers	Number Correct: Criterion Not Met	Number Correct: Criterion Met
1. Words Strange in Print	1 - 8	1 2 3 4 5	6 7 8
2. Phonology	9 - 18	1 2 3 4 5 6 7	8 9 10
3. Base Words	19 - 30	1 2 3 4 5 6 7 8	9 10 11 12
4. Compound Words	31 - 34	1 2	3 4
5. Common Syllables	35 - 42	1 2 3 4 5	6 7 8
6. Syllables	43 - 46	1 2	3 4
7. Meaning from Context	47 - 50	1 2	3 4
8. Word Meaning	51 - 58	1 2 3 4 5	6 7 8
9. Paragraph Meaning	59 65 77 83 89 95	1 2 3 4	5 6
10. Punctuation	60 66 71 84 90 96	1 2 3 4	5 6
11. Type of Material	61 67 72 78 85 91	1 2 3 4	5 6
12. Reading for Detail	62 68 73 79 92 97	1 2 3 4	5 6
13. Author's Purpose	63 74 80 86 93 98	1 2 3 4	5 6
14. Characterization	64 69 75 81 87 99	1 2 3 4	5 6
15. Drawing Conclusions	70 76 82 88 94 100	1 2 3 4	5 6

The gain was slight in all the other areas but showed more gain than did the tutor experimental group.

The author concluded that the programmed reading material used by the tutors did very little in raising the scores of the participants on the SRS.

Tutee Experimental Group

Using Level II of the SRS, the tutee experimental group met the criterion for Level II students in 13 of the 18 questions on the pretest. The questions on which the criterion was not met were number three, (Vowel Sounds), number four (Vowel Elements), number five (Special Vowel Rules), number ten (Plural Forms), and number 17 (Sequence of Events).

The posttest graph line shown in Graph III (see page 69) shows that the mean scores of the students met the criterion in each of the questions with the exception of number 17; on that question some gain was made. The posttest scores by the tutee experimental group dropped below the pretest scores on only three of the questions. The posttest score was lower on question number 11 (Homonyms, Antonyms, Synonyms), on question number 12 (Word Meaning), and on number 13 (Sentence Meaning).

The writer concluded that a very definite gain was made in the mean scores of the tutee experimental group when the pre-and posttest scores were compared. Of course, he realized that the test was on Level II and that there was more room for gain for the tutees than for the higher reading group. However, the writer concluded the gains were valid.

GRAPH II

Survey of Reading Skills Level VI
Tutor Control (High Readers)
Mean Scores

Pretest _____

Posttest -------

Skills	Item Numbers	Number Correct: Criterion Not Met	Number Correct: Criterion Met
1. Words Strange in Print	1 - 8	1 2 3 4 5	6 7 8
2. Phonology	9 - 18	1 2 3 4 5 6 7	8 9 10
3. Base Words	19 - 30	1 2 3 4 5 6 7 8	9 10 11 12
4. Compound Words	31 - 34	1 2	3 4
5. Common Syllables	35 - 42	1 2 3 4 5	6 7 8
6. Syllables	43 - 46	1 2	3 4
7. Meaning from Context	47 - 50	1 2	3 4
8. Word Meaning	51 - 58	1 2 3 4 5	6 7 8
9. Paragraph Meaning	59 65 77 83 89 95	1 2 3 4	5 6
10. Punctuation	60 66 71 84 90 96	1 2 3 4	5 6
11. Type of Material	61 67 72 78 85 91	1 2 3 4	5 6
12. Reading for Detail	62 68 73 79 92 97	1 2 3 4	5 6
13. Author's Purpose	63 74 80 86 93 98	1 2 3 4	5 6
14. Characterization	64 69 75 81 87 99	1 2 3 4	5 6
15. Drawing Conclusions	70 76 82 88 94 100	1 2 3 4	5 6

GRAPH III

Survey of Reading Skills Level II
Tutee Experimental (Low Readers)
Mean Scores

Pretest _____

Posttest - - - - - -

Skills	Item Numbers	Number Correct: Criterion Not Met	Number Correct: Criterion Met
1. Consonant Sounds	p.1 - first 6 items	1 2 3 4	5 6
2. Consonant Elements	p.1 - last 4 items & p.2 - first 4 items	1 2 3 4 5	6 7 8
3. Vowel Sounds	p.2 - last 4 items	1 2	3 4
4. Vowel Elements	p.3 - all 8 items	1 2 3 4 5	6 7 8
5. Special Vowel Rules	p.4 - all 8 items	1 2 3 4 5	6 7 8
6. Syllables	p.5 - first 4 items	1 2	3 4
7. Compound Words	p.5 - last 4 items	1 2	3 4
8. Vocabulary	p.6 - all 8 items	1 2 3 4 5	6 7 8
9. Common Syllables	p.7 - all 8 items	1 2 3 4 5	6 7 8
10. Plural Forms	p.8 - first 4 items	1 2	3 4
11. Homonyms, Antonyms, Synonyms	p.8 - last 6 items	1 2 3 4	5 6
12. Word Meaning	p.9 - all 8 items	1 2 3 4 5	6 7 8
13. Sentence Meaning	p.10 - all 4 items	1 2	3 4
14. Meaning from Context	p.11 - first 4 items	1 2	3 4
15. Paragraph Meaning	pp 12-15 - first item	1 2	3 4
16. Drawing Conclusions	pp 12-15 - second item	1 2	3 4
17. Sequence of Events	pp 12-15 - last item	1 2	3 4
18. Following Directions	p.11 - last 4 items	1 2	3 4

Tutee Control Group

Graph IV (see page 71) depicts the mean scores as shown by the pre- and posttest of the tutee control group. In the pretest the criterion was met on 14 of the 18 questions. The criterion was not met on question number three (Vowel Sounds), question number ten (Plural Forms), question number 11 (Homonyms, Antonyms, Synonyms), and question number 17, (Sequence of Events). The mean posttest scores showed definite improvement in all questions except number seven (Compound Words), number 12 (Word Meaning), and number 13 (Sentence Meaning). On these questions the posttest scores remained the same as those of the pretest. On no question did the posttest mean drop below that of the pretest mean.

The author concluded that definite improvement had been made by the tutee control group based on the mean pretest and posttest scores. Again it was recognized that the test was on Level II, but the original reading level was second grade so the improvement was valid.

Summary: To summarize the author's opinion of the graphs, neither the tutor experimental group nor the tutor control group made a significant gain as based on the mean scores of SRS.

Graphs III and IV showing the mean pre-and posttest scores for the tutee experimental and control groups showed a definite improvement. It is emphasized that the data from the SRS are not a part of the evaluation. They were shown to determine if an increase in reading skills would result from either the programmed material used by the experimental groups or the regular basal reading program as used by the control groups without teaching

GRAPH IV

Survey of Reading Skills Level II

Tutee Control (Low Readers)

Mean Scores

Pretest _____

Posttest------

Skills	Item Numbers	Number Correct: Criterion Not Met	Number Correct: Criterion Met
1. Consonant Sounds	p.1 - first 6 items	1 2 3 4	5 6
2. Consonant Elements	p.1 - last 4 items & p.2 - first 4 items	1 2 3 4 5	6 7 8
3. Vowel Sounds	p.2 - last 4 items	1 2	3 4
4. Vowel Elements	p.3 - all 8 items	1 2 3 4 5	6 7 8
5. Special Vowel Rules	p.4 - all 8 items	1 2 3 4 5	6 7 8
6. Syllables	p.5 - first 4 items	1 2	3 4
7. Compound Words	p.5 - last 4 items	1 2	3 4
8. Vocabulary	p.6 - all 8 items	1 2 3 4 5	6 7 8
9. Common Syllables	p.7 - all 8 items	1 2 3 4 5	6 7 8
10. Plural Forms	p.8 - first 4 items	1 2	3 4
11. Homonyms, Antonyms, Synonyms	p.8 - last 6 items	1 2 3 4	5 6
12. Word Meaning	p.9 - all 8 items	1 2 3 4 5	6 7 8
13. Sentence Meaning	p.10 - all 4 items	1 2	3 4
14. Meani from Context	p.11 - first 4 items	1 2	3 4
15. Paragraph Meaning	pp 12-15 - first item	1 2	3 4
16. Drawing Conclusions	pp 12-15 - second item	1 2	3 4
17. Sequence of Events	pp 12-15 - last item	1 2	3 4
18. Following Directions	p.11 - last 4 items	1 2	3 4

to the weakness of any of the groups except in an incidental way. It was done merely to satisfy the writer's curiosity

EVALUATION

Analysis of Data, Objective One

One of the objectives of the practicum was to raise by eight months the reading level of 30 (60%) of the students in the experimental groups. Specifically 15 of the students in the tutor group and 15 of the students in the tutee group would have had to increase their reading level by eight months for the practicum to be counted a success. The posttest grade equivalent was compared to the pretest grade equivalent taken from the Gates-MacGinitie Reading Tests (GMRT) to determine if this had been done. In reality, the practicum was only six months duration, so six months' gain would have shown one month gain for one month of treatment.

Tutor Experimental Group-Vocabulary: Table 2 (page 74) reveals that with an N of 24, 20 students progressed, two regressed, and the scores of two remained the same when the pretest and posttest vocabulary scores were compared. Thirteen (54%) met the criterion established in the practicum of gaining eight months. Eighteen of the students (75%) gained six months, or one month's gain for each month of treatment. The mean gain of the group was .9 years, while the highest gain made by a student was 3.0 years.

The range of the differences between the pretest and posttest was from minus 1.0 to a high of 3.0, having a spread of 4.0 years. The pretest scores ranged from 4.4 to 9.2, a spread of 4.8. The posttest scores showed a range from a low of 4.8 to a high of 9.9, a spread of 5.1 years.

The tutor experimental group showed only 13 students (54%) making a gain in vocabulary of eight months or more, so the treatment was not successful when compared to the established criteria of 15 students (60%) gaining eight months. However, as suggested, since the practicum treatment lasted only six months and the more realistic criterion of six months' gain for six months' instruction might be applied, it should be noted that 18 (75%) of the students did meet that criterion. In that light the treatment might be considered successful.

Tutor Experimental Group-Comprehension: Table 2 further reveals that among the same students (N=24) 18 students progressed, four regressed, and two remained the same with regard to scores on the Gates-MacGinitie comprehension subtest. Sixteen of the students (67%) gained eight or more months during the course of the practicum. Sixteen (67%) gained one month or more for each month of treatment. The mean gain in comprehension for the group was 1.88, while the biggest gain made by a student was 6.4 years.

The differences in the pre-and posttest scores ranged from a low of minus 1.0 to a high of 6.4, a spread of 7.4 years. The pretest scores ranged from a low of 4.2 to a high of 11.9, a spread of 7.7 years. The range of the posttest scores was from a low of 4.7 to a high of 11.9 years, a spread of 7.2 years.

Since 16 (67%) students among the tutor experimental group made a gain of eight months or more in comprehension, the criterion of 60 percent as set forth was met and surpassed; the treatment was, therefore, considered to have been successful.

TABLE 2

Tutor Experimental (High Readers)
Gates MacGinitie Reading Test
Grade Equivalent Scores
(N=24)

	Vocabulary			Comprehension		
I.D. Numbers	Pretest	Posttest	Diff.	Pretest	Posttest	Diff.
135728	6.0	7.6	1.6	5.6	7.1	1.5
135477	5.8	4.8	-1.0	5.1	4.7	- .4
180191	4.5	7.2	2.7	5.3	7.6	2.3
246065	4.4	5.0	.6	4.9	5.1	.2
135157	8.4	8.0	- .4	6.8	9.5	2.7
135069	5.5	5.5	.0	4.8	6.1	1.3
226164	4.7	5.5	.8	5.1	7.6	2.5
135341	6.8	7.2	.4	6.8	7.6	.8
135377	6.8	7.6	.8	5.8	7.1	1.3
135690	4.7	6.0	1.5	5.8	5.3	- .5
135055	6.5	9.5	3.0	11.9	11.9	.0
135691	4.8	5.5	.7	5.8	8.1	2.3
135078	6.0	6.8	.8	7.1	10.6	3.5
135348	5.8	6.5	.7	5.6	11.6	6.0
135080	5.5	6.2	.7	6.8	8.8	2.0
135081	4.5	6.8	1.3	4.2	10.6	6.4
135093	6.2	6.2	.0	5.3	9.5	4.2
135094	8.0	8.8	.8	7.1	11.9	4.8
135096	6.8	9.5	2.7	7.6	11.6	4.0
135643	6.2	7.?	1.0	7.1	6.1	-1.0
135321	6.0	6..	.2	6.1	5.5	- .6

TABLE 2 (continued)

I.D. Numbers	Vocabulary			Comprehension		
	Pretest	Posttest	Diff.	Pretest	Posttest	Diff.
353004	5.2	6.2	1.0	4.8	5.3	- .5
135101	9.2	9.9	.7	7.6	8.8	1.2
135108	6.2	8.0	1.8	10.6	10.6	.0
Total			22.4			45.0
Mean Gain			.9			1.88

Tutee Experimental Group-Vocabulary: Table 3 (see page 77) reveals the tutee experimental group (N=21) scores on the Gates-MacGinitie Vocabulary and Comprehension subtests. On the former subtest, pre-test-posttest scores show that 18 students progressed, two regressed, and one remained the same. Eleven (52%) of the students gained eight months or more during the practicum. Fourteen (67%) gained one month or more for each month of tutoring instruction. The mean gain in vocabulary by the group was .8 (eight months), and the highest gain made by a student was 2.5 years.

The differences in the pre-and posttest scores ranged from a low of minus 0.5 to a high of 2.5, a spread of 3.0 years. The pretest scores ranged from a low of 1.5 to a high of 3.7, a spread of 2.2 years. The posttest scores ranged from a low of 1.6 to a high of 5.1, a spread of 3.5 years.

Since the tutee experimental group showed only 11 students (52%) making a gain of eight months or more in vocabulary, the criterion as set forth was not met; the treatment was, therefore, not considered to have been successful. Again, however, it might be noted that 67 percent of the students did gain one month or more per one month of instruction when the six-month (rather than eight month) treatment is taken into consideration; and in that light again, the treatment might be considered successful.

Tutee Experimental Group-Comprehension: Pretest-posttest scores in Table 3 (see page 77) reveal that of the 21 students, 12 progressed, seven regressed, and two remained the same on the comprehension subtest. Six of the students (29%) gained eight months or more during the practicum. Eight

TABLE 3

Tutee Experimental Group (Low Readers)
Gates-MacGinitie Reading Test
Grade Equivalent Scores
(N=21)

I.D. Numbers	Vocabulary			Comprehension		
	Pretest	Posttest	Diff.	Pretest	Posttest	Diff.
135223	2.4	3.6	1.2	2.7	4.5	1.8
131666	3.5	3.9	.4	3.4	1.7	-1.7
135479	3.2	3.9	.7	3.9	3.9	.0
180077	2.4	3.0	.6	2.7	3.4	.7
127579	3.1	4.6	1.5	3.7	5.0	1.3
135421	2.6	3.1	.5	1.7	2.5	.8
281405	2.8	2.7	- .1	2.6	2.6	.0
135247	3.6	4.6	1.0	4.9	5.8	.9
135708	2.7	3.5	.8	3.1	2.9	- .2
311578	2.9	4.0	1.1	3.6	4.5	.9
135473	3.7	3.2	- .5	2.9	1.9	-1.0
138704	3.4	4.6	1.2	2.9	3.5	.6
135385	1.6	2.2	.6	2.2	2.4	.2
135692	2.4	2.4	.0	2.6	2.7	.1
135399	1.5	1.6	.1	3.0	2.0	-1.0
195821	2.9	3.7	.8	3.9	2.2	-1.7
135062	2.7	4.4	1.7	3.6	4.9	1.3
135053	2.2	2.6	.4	2.4	1.9	- .5
125271	1.5	4.0	2.5	2.4	2.9	.5

TABLE 3 (continued)

I.D. Numbers	Vocabulary			Comprehension		
	Pretest	Posttest	Diff.	Pretest	Posttest	Diff.
135429	3.6	5.1	1.5	3.1	3.0	-.1
135393	3.5	4.4	.9	4.3	4.5	.2
Total			16.9			3.1
Mean Gain			.8			.1

(38%) of the students gained one month or more for each month of instruction. The mean gain in comprehension for the group was 0.1 with the highest gain being 1.8 years.

The differences between the comprehension pre-and posttest scores ranged from a low of minus 1.7 to a high of 1.8, a spread of 3.5 years. The pretest scores ranged from a low of 1.7 to a high of 4.9, a spread of 3.2 years. The posttest scores ranged from a low of 1.7 to a high of 5.8, a spread of 4.1 years.

The tutee experimental group comprehension pretest-posttest scores thus showed six students (29%) making a gain of eight months or more in comprehension during the period of the treatment. The criterion of 60% gaining eight months was therefore not met, and the treatment was thus not considered to have been successful. Even when the single criterion of six months' gain for six months' treatment is applied, only 38% of the students achieved that gain, and the practicum treatment could not be considered successful even in that light.

Summary of Objective One: The Gates-MacGinitie pretest-posttest scores revealed that the tutor experimental group on the vocabulary subtest, and the tutee experimental group on both the vocabulary and comprehension subtests failed to meet the criterion as set forth. The practicum treatment was, therefore, considered not to have been successful. On the other hand, the comprehension subtest scores of the tutor experimental group met the criterion set forth and was, therefore, considered to have been successful. However, since the treatment effected gains in only

one of four sets of subtests, thus attaining the established criteria in only one of four instances, objective one was considered not to have been reached.

As suggested previously, however, the scores might validly be considered in the light of the six months' rather than eight months' duration of the treatment and the concomitant criterion of 60 percent of the students gaining one month per one month of instruction. The tutor experimental group (vocabulary subtest) had 18 students (75%), the tutor experimental group (comprehension subtest) had 16 students (67%), and the tutee experimental group (vocabulary subtest) had 14 students (67%) making gains of one month or more for each month of tutoring instruction. Considering that the students were from an inner-city school and were very low in reading, this amount of gain certainly pleased the author.

Analysis of Data, Objective Two

Objective two of the evaluation hypothesized that the experimental groups would show greater achievement gain than the control groups. The gains were measured from the pre-and posttest raw score data for vocabulary and comprehension from the Gates-MacGinitie Reading Tests (GMRT) and the Iowa Tests of Basic Skills (ITBS). The raw score data are shown in Appendices O through V.

Statistical Design: In considering the type of statistical design, the Campbell and Stanley[15] monograph was consulted. That monograph suggested that a quasi-experimental design would work well with groups

[15] Ibid-Table 2, page 210.

that might be non-equivalent. Campbell and Stanley advised using analysis of covariance when regression might be a threat to the internal validity of the project.[16] When t-tests were run on pretest raw scores they showed there was no significant differences in the groups. However, it was decided that even though the groups were initially similar, the analysis of covariance would be the best design to use because of the possibility that one group would learn faster than the other. That decision was buttressed by an understanding that the analysis of covariance would give more power in the analysis of the results of the treatment. The steps outlined by Winer[17] were followed to find F statistic. The F statistical tables were consulted to find the level of significance.

The hypotheses were stated as null hypotheses, that is, there would be no difference in the achievement of the experimental and control groups. The null hypotheses would be rejected at the .05 level of significance.

Handling of the Data: Computer cards were punched to reflect the data shown in Appendices, O, P, Q, R, S, T, U, and V. When this was completed, the cards were taken to the DISD Department of Research, Evaluation, and Information Systems (R & E). A senior evaluator determined the type of data needed for the analysis of covariance and programmed the computer so this information could be obtained. The cards were run through the programmed computer, which gave a printout showing summary statistics for each group, test, and subtest. The printout also gave the analysis of

[16] Ibid - page 219.

[17] B. J. Winer, Statistical Principles in Experimental Design, New York: McGraw-Hill, 1962, (pp. 578-594).

covariance summary results for the group, test, and subtest. The summary results are shown in Tables 4 through 11. The analysis of covariance results is shown in Tables 12 through 20.

Summary of Objective Two: The F statistic showed that the experimental groups did not gain more at the .05 level of significance than did the control groups in any category tested. In two categories the control groups' gain was significant at the .05 level over the gain of the experimental groups.

The criteria as set forth in objective two were thus not met; therefore, the practicum was not considered to have been successful.

It might be well to point out at this point that Harry Stone School concentrated on a non-graded basal reading program during the 1974-75 and the 1975-76 school year. The median reading percentile rank for the sixth-grade students in 1974 was 8.75. Based on the reading scores on the Iowa Tests of Basic Skills administered during the spring of 1976, the median reading percentile rank had increased to 12.0. The median percentile rank was based on large-city norms.

It is true that the percentile rank was still very low, but progress had been made and that was encouraging. Perhaps the upgrading of the basal reading program caused the control group to do as well or better than the experimental group. This is merely a theory. There are no hard statistics to show that the basal reading program was the reason the control group did well in comparison with the experimental group.

TABLE 4

Tutee Summary Statistics
Gates-MacGinitie Reading Tests
Raw Scores
Vocabulary

	Experimental	Control
Dependent Variable Mean	32.10	32.91
Covariate Mean	24.86	26.59
Group Beta	.5917	.7296
Standard Deviation-Dependent Variable	6.65	6.19
Standard Deviation-Covariate	6.61	4.40
Adjusted Means	32.66	32.37
Total Beta	.6356	

Note: Since the adjusted means of the experimental group was larger than that of the control group, any difference in the groups shown by F was in favor of the experimental group.

TABLE 5

Tutor Summary Statistics
Gates-MacGinitie Reading Tests
Raw Scores
Vocabulary

	Experimental	Control
Dependent Variable Mean	34.93	35.42
Covariate Mean	31.50	31.23
Group Beta	.6758	.3944
Standard Deviation-Dependent Variable	4.32	3.21
Standard Deviation-Covariate	4.53	5.22
Adjusted Means	34.85	35.49
Total Beta	.5097	

Note: Since the adjusted means of the control group was larger than that of the experimental group, any difference in the groups shown by F was in favor of the control group.

TABLE 6

Tutee Summary Statistics
Iowa Tests of Basic Skills
Raw Scores
Vocabulary

	Experimental	Control
Dependent Variable Mean	12.10	13.73
Covariate Mean	10.33	9.86
Group Beta	.3620	.0496
Standard Deviation-Dependent Variable	4.10	3.61
Standard Deviation-Covariate	4.12	3.51
Adjusted Means	12.05	13.77
Total Beta	.1844	

Note: Since the adjusted means of the control group was larger than that of the experimental group, any difference in the groups shown by F was in favor of the control group.

TABLE 7

Tutor Summary Statistics
Iowa Tests of Basic Skills
Raw Scores
Vocabulary

	Experimental	Control
Dependent Variable Mean	31.17	32.31
Covariate Mean	27.75	26.96
Group Beta	.8603	.6850
Standard Deviation-Dependent Variable	6.30	4.53
Standard Deviation-Covariate	6.47	5.11
Adjusted Means	30.84	32.61
Total Beta	.7894	

Note: Since the adjusted means of the control group was larger than that of the experimental group, any difference in the groups shown by F was in favor of the control group.

TABLE 8

Tutee Summary Statistics
Gates-MacGinitie Reading Tests
Raw Scores
Comprehension

	Experimental	Control
Dependent Variable Mean	24.38	28.91
Covariate Mean	23.19	22.64
Group Beta	.8046	.3314
Standard Deviation-Dependent Variable	9.45	5.78
Standard Deviation-Covariate	7.29	6.56
Adjusted Means	24.21	29.07
Total Beta	.5873	

Note: Since the adjusted means of the control group was larger than that of the experimental group, any difference in the groups shown by F was in favor of the control group.

TABLE 9

Tutor Summary Statistics
Gates-MacGinitie Reading Tests
Raw Scores
Comprehension

	Experimental	Control
Dependent Variable Mean	43.67	44.08
Covariate Mean	38.79	40.38
Group Beta	.5136	.3424
Standard Deviation-Dependent Variable	5.29	3.90
Standard Deviation	5.47	5.08
Adjusted Means	44.02	43.75
Total Beta	.4307	

Note: Since the adjusted means of the experimental group was larger than that of the control group, any difference in the groups shown by F was in favor of the experimental group.

TABLE 10

Tutee Summary Statistics
Iowa Tests of Basic Skills
Raw Scores
Comprehension

	Experimental	Control
Dependent Variable Mean	22.57	20.91
Covariate Mean	18.10	18.77
Group Beta	.5533	.2823
Standard Deviation-Dependent Variable	8.02	8.00
Standard Deviation-Covariate	6.27	4.64
Adjusted Means	22.73	20.76
Total Beta	.4545	

Note: Since the adjusted means of the experimental group was larger than that of the control group, any difference in the groups shown by F was in the experimental group.

TABLE 11
Tutor Summary Statistics
Iowa Tests of Basic Skills
Raw Scores
Comprehension

	Experimental	Control
Dependent Variable Mean	41.71	44.31
Covariate Mean	39.50	38.73
Group Beta	.8877	.4682
Standard Deviation-Dependent Variable	10.51	7.54
Adjusted Means	8.77	7.81
Total Beta	.6936	

Note: Since the adjusted means of the control group was larger than that of the experimental group, any difference in the groups shown by F was in favor of the control group.

TABLE 12

Analysis of Covariance Summary Results
Gates-MacGinitie Reading Tests
Tutee Raw Scores
Vocabulary

Source of Variation	Sum of Squares	Mean Square	Degree of Freedom	F
Within Groups	1172.61	29.315	40	
Between Groups	0.870	0.870	1	.030

The hypothesis tested was that there was no difference at the .05 level of significance in the mean reading vocabulary achievement of the tutee experimental group and the tutee control group as measured by pre- and posttest raw scores on the Gates-MacGinitie Reading Tests. Absolute value of F (.030) is less than the critical value of F (4.08); therefore, the hypothesis that there would be no significant difference in groups was accepted.

TABLE 13

Analysis of Covariance Summary Results
Gates-MacGinitie Reading Tests
Tutee Raw Scores
Vocabulary

Source of Variation	Sum of Squares	Mean Square	Degree of Freedom	F
Within Groups	388.76	8.272	47	
Between Groups	5.166	5.166	1	.625

The hypothesis tested was that there was no difference at the .05 level of significance in the mean reading vocabulary achievement of the tutor experimental group and the tutor control group as measured by pre- and posttest raw scores on the Gates-MacGinitie Reading Tests. Absolute value of F (.625) is less than the critical value of F (4.08); therefore, the hypothesis that there would be no significant difference in groups was accepted.

TABLE 14

Summary of Covariance Summary Results
Iowa Tests of Basic Skills
Tutee Raw Score
Vocabulary

Source of Variation	Sum of Squares	Mean Square	Degree of Freedom	F
Within Groups	589.79	14.745	40	
Between Groups	31.611	31.611	1	2.14

The hypothesis tested was that there was no difference at the .05 level of significance in the mean reading vocabulary achievement of the tutee experimental group and the tutee control group as measured by pre-and post-test raw scores on the Iowa Tests of Basic Skills. Absolute value of F (2.14) is less than the critical value of F (4.08); therefore, the hypothesis that there will be no significant difference between the groups was accepted. The F of 2.14, although not significant, favored the control group.

TABLE 15

Analysis of Covariance Summary Results
Iowa Tests of Basic Skills
Tutor Raw Scores
Vocabulary

Source of Variation	Sum of Squares	Mean Square	Degree of Freedom	F
Within Groups	420.09	8.938	47	
Between Groups	38.625	38.625	1	4.32

The hypothesis tested was that there was no difference at the .05 level of significance in the mean reading vocabulary achievement of the tutor experimental group and the tutor control group as measured by pre- and posttest raw scores on the Iowa Tests of Basic Skills. Absolute value of F (4.32) is larger than the critical value of F (F.08); therefore, the hypothesis that there would no difference was rejected. By referring to Table 19, it was determined that the adjusted mean of the control group was higher than that of the experimental group; so the significant gain in achievement favored the control group.

TABLE 16

Analysis of Covariance Summary Results
Gates-MacGinitie Reading Tests
Tutee Raw Scores
Comprehension

Source of Variation	Sum of Squares	Mean Square	Degree of Freedom	F
Within Groups	1810.63	45.266	40	
Between Groups	252.676	252.676	1	5.58

The hypothesis tested was that there was no difference at the .05 level of significance in the mean reading comprehension achievement of the tutee-experimental group and the tutee control group as measured by pre-and posttest raw scores on the Gates-MacGinitie Reading Tests. Absolute value of F (5.58) is larger than the critical value of F (4.08); therefore, the hypothesis that there would be no significant difference in the groups was rejected at the .05 level. The adjusted mean shown in Table 20, was larger for the control group; therefore, the significant gain in achievement favored the control group.

TABLE 17

Analysis of Covariance Summary Results
Gates-MacGinitie Reading Tests
Tutor Raw Scores
Comprehension

Source of Variation	Sum of Squares	Mean Square	Degree of Freedom	F
Within Groups	775.73	16.505	47	
Between Groups	0.927	0.927	1	.056

The hypothesis tested was that there was no difference at the .05 level of significance in the Mean reading comprehension achievement of the tutor experimental group and tht tutor control group as measured by pre-and posttest raw scores on the Gates-MacGinitie Reading Tests. Absolute value of F (.056) is less than the critical value of F (4.08); therefore, the hypothesis that there would be no significant difference in the achievement was accepted.

TABLE 18

Analysis of Covariance Summary Results
Iowa Tests of Basic Skills
Tutee Raw Scores
Comprehension

Source of Variation	Sum of Squares	Mean Square	Degree of Freedom	F
Within Groups	2372.91	59.323	40	
Between Groups	41.542	41.542	1	.700

The hypothesis tested was that there was no difference at the .05 level of significance in the mean reading comprehension achievement of the tutee experimental group and the tutee control group as measured by pre-and posttest raw scores on the Iowa Tests of Basic Skills. Absolute value of F (.700) is less than the critical value of F (4.08); therefore, the hypothesis that there would be no significant difference in the achievement of the groups was accepted.

TABLE 19

Analysis of Covariance Summary Results
Iowa Tests of Basic Skills
Tutor Raw Scores
Comprehension

Source of Variation	Sum of Squares	Mean Square	Degree of Freedom	F
Within Groups	2377.29	50.581	47	
Between Groups	122.216	122.216	1	2.416

The hypothesis tested was that there was no difference at the .05 level of significance in the mean reading comprehension achievement of the tutor experimental group and the tutor control group as measured by pre-and posttest raw scores on the Iowa Tests of Basic Skills. Absolute value of F (2.416) is less than the critical value of F (4.08); therefore, the hypothesis that there would be no significant difference between the groups was accepted. The F of 2.416, although not significant, favored the control group.

TABLE 20

Summary of Absolute F
Gates-MacGinitie Reading Tests
And
Iowa Tests of Basic Skills

	Gates-MacGinitie Reading Tests		Iowa Tests of Basic Skills	
	Vocabulary	Comprehension	Vocabulary	Comprehension
Tutors	.625	.056	4.321 significant favors controls	2.416 favors control
Tutees	.03	5.582 significant favors control	2.144 favors control	.700

Note: Enter F Tables at .95, Freedom of 1, N of 40; Critical F is 4.08.

Analysis of Evaluation, Objective Three

A statement made in the proposal said, "Achievement gains made by tutees will be compared to gains made by tutors. This will determine if program is more beneficial to tutors or tutees."

Table 21 shows this comparison. The information shown in this table was taken from the computer printout listing summary statistics for grade equivalency. On the Gates-MacGinitie Reading Tests (GMRT) vocabulary subtest the tutors showed a mean grade equivalent gain of 9.6 months, while the tutees showed a mean grade equivalent gain of 8.7 months. The tutors thus outgained the tutees .9 months.

On the GMRT comprehension subtest the mean grade equivalent gain made by the tutors was 1.88. That represented a gain of almost two years. The tutee group gained 2.1 months. The tutors thus outgained the tutees by 1.67 or approximately one year and seven months.

On the Iowa Tests of Basic Skills (ITBS) vocabulary subtest the tutors showed a gain of 5.8 months, while the tutees gained 3.6 months. This was a difference of 2.2 months gain by the tutors over the tutees.

On the ITBS comprehension subtest, the tutors showed a gain in mean grade equivalent scores of 1.9 months. The tutees showed a gain of 5.4 months. This was a difference of 3.5 months that the tutee outgained the tutors during the course of the practicum.

Summary of Objective Three: To summarize, the tutors outgained the tutees on both the vocabulary and the comprehension subtests of the GMRT. They also outgained the tutees on the vocabulary section of the ITBS.

TABLE 21

Mean Grade Equivalent Gain Scores
Experimental Groups Only

Vocabulary

(Dependent Variable Mean Minus Covariate Mean)

Groups	Gates-MacGinitie Reading Tests	Iowa Test of Basic Skills
Tutor		
Posttest	6.99	6.46
Pretest	6.02	5.88
Grade Equivalent Gain	.96	.58
Tutee		
Posttest	3.64	3.43
Pretest	2.77	3.07
Grade Equivalent Gain	.87	.36

Comprehension

Tutor		
Posttest	8.28	5.91
Pretest	6.40	5.72
Grade Equivalent Gain	1.88	.19
Tutee		
Posttest	3.27	3.78
Pretest	3.06	3.24
Grade Equivalent Gain	.21	.54

The tutees outgained the tutors on the comprehension section of the ITBS. These figures indicated that the tutors gained more from the practicum than did the tutees. [These data obviously included only the experimental groups.]

Analysis of Evaluation, Objective Four

The reaction of randomly selected students to the program was a part of the evaluation. Each project teacher held a class discussion with the tutor and tutee experimental groups. In the discussion the teacher asked the following questions: "What did you like about the program?" "Why?" "Would you be willing to participate in a tutoring program next year, even if it were offered during your study hall period?"

The students wrote their reactions to the questions and gave them to the project teacher without a signature. The probability was that the students would be more honest in their appraisal if this method was followed. The papers of both the tutor and tutee groups were then shuffled together and numbered. By using the table of random numbers (Popham[18]) five responses were chosen. The responses are given just as they were written by the students, with no attempt to correct spelling, punctuation, or sentence structure.

Student responses:

A:

I believe the program was a good idea for all of us. I believe it was encouraging to the tutors too, like maybe while they

[18] W. James Popham, Educational Statistics, New York, Harper and Row, 1967, (p. 381).

were reading in Rewards and Secret they didn't really know what the meaning of reading was. But while they were teaching the tutees' they learned a lot of things that they didn't know or they didn't hear about.

If I had to pertesapate in this Program next year than to go to Study Hall "I would!" because I find it very interesting, incouraging, pleasant and enjoying to help others if others try to help themselves.

B:

I have had a very nice year with my tutee. Although we went through hardships. My tutee was a smart guy. he went through 5 word-lists before he missed a word. I admitted he did candy in gum, but he never put on the back of chairs or under tables. He never did fight, but he did run around the room playing. But I broke up all of the nonsence. Not only I taught him how to read but I taught him displiline and self-control. No I do not want to be a tutee next year. Not because I don't like it but I do not think I have the ability to tutor.

C:

I Love it a little but the teacher there give to much work and becase there always boss and the give you work sheet save tine it all right but like on friday the more word to do your get to reading there white book I Hate to reading there whit book and when you finish that you got to do somthing else and they do not let you listen to tape sometine but sometine it all right but I samll HATE IT but I WILL come by and look at it sometime no I will not give up study Hall to teach the toter!

D:

I like the program because it helped me in reading and plus we got to listen to tapes and work worksheets and I liked my tutor and she would not be talking to other tutor and she would alway give us a spelling test on ore word list and if we miss the word she word tell us to make a sentance out of the words. That's why I like it.

No. I would not like to be a tutor or a tutee because I need the studying.

E:

I like this reading program because you can do any thing you want to do. Reading is fun once you know how to read when you

read a whole story in the book. [Note: This student did not indicate whether or not he or she would be willing to be in the tutoring program if it were offered next year.]

Summary of Objective Four: Four out of the five randomly selected responses indicated the students liked the program. However, three said they would not be interested in the program next year. One said he or she would take it, and one did not respond to that question.

Based on the responses given by the students, the program might be considered a success this year. There is some doubt as to its success, were it offered next year.

Analysis of Evaluation, Objective Five

The teacher reaction to the project was to be a part of the evaluation. At the conclusion of the practicum, the project teachers were asked to write their honest impressions of the program, either good or bad. The actual reports as submitted by the teachers are shown.

A:

(Copy of report by John Prichett)[19]

> It was fun. It was exciting. It was challenging. It was rewarding even if posttest scores were not as superior as I felt they should have been.
>
> Behavior problem students, in some cases, developed enough responsibility to tackle their reading problems. Scores for a few of my "pets" indicate tremendous accomplishments. Because of these gains, the program was worthwhile.
>
> No program can be a success without the individual's taking the trouble to do it right. Teams which shouldered the load and took the challenge did succeed. Less aggressive individuals who tended to "play" at school may not have learned as much, but scores do indicate a status quo or smaller gain.

[19] John Pritchett Seventh-Grade Language Arts and Social Studies Teacher, Harry Stone School, Dallas, Texas.

Weaknesses in the program were discipline of self (the team had to work together), and the second assignment sheet was too flexible. Pupils enjoyed the memo-pages, first word list, and basal reading.

I would gladly accept the challenge of a tutoring program. If not superior, it must be thought of as equal to teacher-led lessons. I personally feel, with an experienced teacher leading it, the program would be far superior.

B:

(Copy of report by Gay Spencer):[20]

I liked this program very much. The kids did a very good job. I think it helped them all very much. Not only in helping them to read better, but it improved their self-image so much. There were some people in there that wouldn't even talk very much. By the time they finished their program, they had made many more friends and were participating in everything just because they weren't as shy.

The students had more freedom to read what they wanted to do. They also liked listening to the tapes. The assignment sheet gave them short term goals to reach and I think this was good.

There are a few things I would change. I would have a little more controlled classroom. The noise got loud sometimes, and I think if we had started out a little stricter, the program would have been better.

Summary of Objective Five: Both project teachers indicated they liked the program. That is a plus for the project, as the students profited from the experience. Each mentioned some changes they would like to make if they were involved in another tutoring program. From the reactions of the project teachers, I would classify the program as successful.

[20]Gay Spencer, Sixth-Grade Language Arts and Social Studies Teacher, Harry Stone School, Dallas, Texas.

Areas of Possible Improvement

More prior planning would have strengthened the program. For instance, more definite guidelines could have been established for the student's management of the program.

Additional training for tutors would have been helpful. During the first portion of the project, the tutors did not know exactly what to do. Some, for example, were actually doing the assignments the tutees were supposed to be doing under tutor supervision.

There was too little training for the project teachers. Unless a teacher is experienced in working with tutors and tutees, two hours of instruction is not nearly enough training for them to know what should be done. As a result, it was difficult for them to tell the tutors what to do. On the other hand, project teachers were not as passive as recommended by the DISD Instructional Facilitator. It was difficult for them to give up complete control of the classroom. Further instruction of the project teachers would probably have enabled them to strike the happy medium between clarifying tutor-tutee responsibilities and developing their own areas of contribution to the program.

The project would have been improved if the tutors and tutees had volunteered for the program. Since the students were chosen by sections, some had no interest in tutoring from either the tutor or the tutee angle. A few displayed total lack of motivation throughout the project.

In some instances, the tutees resented the tutors. They did not like the tutor to "tell me what to do."

The tutoring period of one hour each day was too long. The tutors could not hold the attention of the tutees for that period of time. When the instruction lasted beyond the attention span of the tutee, the tutor would lose his motivation and more or less give up.

Organization and responsibility in the classroom were not stressed enough. For instance, when the bell rang to end at the class period, the students would leave without replacing material in its proper place. Though efforts were made in the student rap sessions to counteract such problems, certain guidelines should undoubtedly have been established from the very beginning.

Evaluation Summary

Evaluation of the program was made in five areas. The first was reading achievement in vocabulary and comprehension by the tutee and tutor experimental groups. The goal was that 15 students, or 60 percent, from each of the experimental groups would progress eight months or more in reading achievement. Only the tutor group met this criteria and then only on comprehension. Since the results from three of the four subtests failed to meet the criterion set forth, the first area tested was considered not to have been successful. If that criterion were amended to read that 60 percent of the students gaining one month or more in these reading skills per one month of instruction, then the results of the first area would have proved the project to have been successful in this area.

The second area compared on the Gates-MacGinitie Reading Tests (GMRT) and the Iowa Tests of Basic Skills (ITBS) in the vocabulary and

omprehension subtests raw scores. The hypothesis was that there would e no significant difference in the mean achievement gains of the control roups and the experimental groups measured at the .05 level of signifi- ance. On six of the comparisons, the null hypothesis was accepted. here were no significant differences in the mean achievement gains of ie control groups and the experimental groups. On two of the comparisons iere was significant gains, but the gains were in favor of the control roups. The established criterion was, therefore, not met in area two,) it was not considered to have been successful.

Area three involved comparisons of achievement gains made by the xperimental group tutors and tutees to determine which group gained the)st benefit. The tutors outgained the tutees on both vocabulary and com- ehension based on scores from the GMRT. They also outgained the tutees i the vocabulary subtest of the ITBS. The tutees outgained the tutors on ie comprehension section of the ITBS. Results thus revealed that the xperimental group tutors gained more from the practicum than did their tees.

In evaluating area four, five randomly selected students were asked write answers to specific questions, thus revealing their reactions to e project. Four of the five students said they liked the program but uld not be interested in participating in a tutoring program next year. sed on the reactions of the students, the implemented program might be nsidered a success.

In area five, the two project teachers both submitted written reports out their reactions to the practicum. Both were enthusiastic about the

program, but each listed some faults. Their reactions, however, indicated that they believed the practicum to have been successful.

Ultimately in two of the five areas evaluated, the project was considered not to have been successful. Evaluation of two other areas indicated that the project was successful. The remaining area evaluated was a comparison between the mean gains of the tutor and tutee experimental groups with no criterion set forth as to which would achieve more. The areas considered not to have been successful were tested by standard statistical methods. Those areas which indicated success were not amenable to such unambiguous testing. The results of the former must, therefore, be considered to have the greatest strength. As a result, the practicum may not be considered successful.

As mentioned in the abstract, the object of the practicum was two-fold: (a) raise the grade equivalent scores of at least 60 percent of both tutee and tutor experimental groups by eight months, and (b) find greater gains in the experimental group than in a similar control group with the .05 level of significance as critical. The practicum failed to meet these objectives; therefore, it must be considered not to have been successful.

CONCLUSIONS AND RECOMMENDATIONS

1. The overall program was considered not to have been successful.
2. The following recommendations emerged from this practicum:
   a. Longitudinal projects should be conducted in order to determine what the majority of the students need in order to learn effectively under regular classroom instruction.

b. The project teachers, program director, and Instructional Facilitator-Tutoring Programs should do more planning prior to the implementation of a peer tutoring program in a classroom. For example, guidelines must be established for effective classroom organization and responsibilities.

c. Tutor and tutee participation in the program should be voluntary, not mandatory.

d. Additional training should be given the tutors so they would feel comfortable working with the tutees.

e. Selection of teachers for the program should be made after careful consideration of their personalities as well as their teaching methods. Some teachers, for example, just cannot turn the classroom over to the students, even when productive work is going on.

f. Additional training should be arranged for the project teachers. They should be sure of themselves and what needs to be done when the program starts, rather than learning as the program progresses.

g. The tutoring program should be supplemental to all basal reading programs, rather than in lieu of a specific basal program.

FURTHER APPLICATION AND FOLLOW-UP

A copy of this report will be made available to the DISD Instructional Facilitator-Tutoring Programs (title has been changed to Analyst - Tutoring) who started five other schools in April, 1976, on pilot tutoring programs. The Facilitator has seen the statistics from this report as well as the analysis of the areas needing improvement. Based on that information,

changes are already being made in his organization. For the school year 1976-77, for example, the Tutoring Programs resource staff has been increased from one to five in order to increase the availability of their instruction to teachers and tutors. A letter to all principals announcing the increase is shown as Appendix W. One of these resource people was assigned to each sub-district within the DISD. They have been working all summer on material and methods of instructing the tutors and teachers to obtain the best results from a tutoring program. In addition to being available for additional instruction, they will also be available to help during the year any teacher whose program is not progressing satisfactorily. This increased availability should prove to be of great benefit to all future tutoring programs within the DISD.

A copy of this report will also be sent to Dr. Nolan Estes, DISD General Superintendent of Schools. This will be done partly because the report might prove to be useful in planning for other tutoring programs as well as for informational purposes, and partly because the writer is proud of the work invested in the program--by the students, the project teachers, the DISD Instructional Facilitator-Tutoring Programs, and the writer. Even though the overall effort was considered as not successful as measured by the practicum's established criteria, the lessons learned might help others not to make the same mistakes. And, since 60 percent of the students in the experimental groups in three categories made one month of progress for each month of instruction, that is considered to be definite progress in an inner-city school. The writer probably learned more than the students or the project teachers although there are no statistics to prove it.

APPENDICES

APPENDIX A

dallas independent school district

November 17, 1975

Nolan Estes
General Superintendent

To: Principal - Stone
Re: TARP and TAMP Eligibility

Based on the latest information from Texas Education Agency (See attached letter) received in this office November 17, 1975, all of the students on your campus can receive TARP and TAMP instruction.

95% are eligible for reading and 92% are eligible for math. Therefore, they can all be served with the Title I Components.

Sincerely,

Geraldine Dews

Geraldine Dews
Coordinator-TARP/TAMP

GD/hm

APPENDIX B

Texas Education Agency

- STATE BOARD OF EDUCATION
- STATE COMMISSIONER OF EDUCATION
- STATE DEPARTMENT OF EDUCATION

201 East Eleventh Street
Austin, Texas
78701

November 12, 1975

057-905
1975-76
CAFA

Mr. Rogers Barton, Associate Superintendent
Dallas Independent School District
3700 Ross Avenue
Dallas, Texas 75204

Dear Mr. Barton:

This has reference to Title I services for educationally disadvantaged pupils in highly concentrated attendance areas. If the percentage of identified educationally disadvantaged pupils is 75% or greater, such services may be offered to the total enrollment on the particular campus. Dr. Roscoe Smith requested that I send you such a statement.

Sincerely yours,

R. E. Slayton, Director
Division of Compensatory Funding

RES:st

cc To Roscoe Smith

recd
NOV 17 1975

APPENDIX B

HARRY STONE

Grades[1]	6-7	Classroom Teachers[2]	18
		ADA/Teacher Index	20.42
Average Daily Attendance[1]	367.61	ADM/Teacher Index	22.89
Average Daily Membership[1]	411.96		
Attendance Index	89.23		
		Teacher Aides[2]	2
Transactions[1]	98		
Mobility Index	23.79		
Parental Education Level[3]	10.9 yrs.	Housing Valuation[3]	$17,000
Family Income[3]	$7,374	Apartment Rental[3]	$120-130
		Public Housing[3]	None

Major Zoning Classification[3]
Residential

Socioeconomic Status Indicator[3] 1-Lower

Neighborhood Description[3]

Well-maintained paved streets; streets need repair; stable residential area; small grocery, light commercial and neighborhood centers; well-maintained and declining brick or frame single and multi-family housing, new construction of multiple units; regular bus service; maintained and unmaintained vacant land; 2 or more parks with play equipment

Teaching Staff Demographic Information[4]

Age		Race		Experience		Degree	
<26	10	Anglo	52	0-5	49	No Degree	0
26-35	42	Negro	48	6-10	17	A.A.	0
36-45	35	Mex. Amer.	0	11-20	31	B.A.	73
46-55	10	Other	0	21-40	3	M.A.	27
56-65	3					Ph.D.	0
>65	0						

[1]Courtesy of the Pupil Accounting Office. These are 1973-74 figures.

[2]Courtesy of the Department of Elementary Operations. These are 1973-74 figures.

[3]Research Report 74-243. These are based on 1970 census data that were updated for 1973-74.

[4]Research Report 74-246. These are 1973-74 figures and are reported in percentages.

APPENDIX C

Tutor Experimental Group (High Reading Level)
Gates-MacGinitie Reading Test
Pre-test

Subjects	Vocabulary		Comprehension	
	Raw Score	Raw Score Squared	Raw Score	Raw Score Squared
A, G	32	1024	38	1444
A, B	31	961	35	1225
B, T	35	1225	34	1156
B, D	25	625	36	1296
B, B	24	576	34	1156
B, J	39	1521	42	1764
B, K	30	900	33	1089
C, R	26	676	35	1225
C, C	35	1225	42	1764
C, K	36	1296	42	1764
D, R	35	1225	39	1521
E, S	26	676	31	961
E, K	34	1156	50	2500
E, R	27	729	39	1521
H, P	32	1024	43	1849
J, M	31	961	38	1444
J, J	30	900	42	1764
K, T	25	625	29	841
K, A	33	1089	36	1296
M, G	38	1444	43	1849
P, R	35	1225	44	1936
T, A	33	1089	43	1849
T, M	32	1024	40	1600

APPENDIX C (continued)

Subjects	Vocabulary		Comprehension	
	Raw Score	Raw Score Squared	Raw Score	Raw Score Squared
W, C	29	841	33	1089
W, N	41	1681	44	1936
W, V	33	1089	48	2304
Total	827	26807	1013	43143
N = 26				
Mean	31.81		38.96	

APPENDIX D

Tutor Control Group (High Reading Level)
Gates-MacGinitie Reading Test
Pre-test

Subjects	Vocabulary		Comprehension	
	Raw Score	Raw Score Squared	Raw Score	Raw Score Squared
A, J	35	1225	39	1521
B, V	35	1225	39	1521
B, S	29	841	40	1600
C, A	29	841	30	900
C, W	33	1089	40	1600
C, D	30	900	38	1444
C, J	32	1024	34	1156
C, M	31	961	46	2116
F, I	27	729	38	1444
G, J	22	484	41	1681
G, L	30	900	36	1296
G, D	23	529	39	1521
G, T	31	961	34	1156
H, D	30	900	35	1225
J, E	42	1764	47	2209
M, D	29	841	43	1849
Mc C	37	1369	49	2401
Mark, D	34	1156	45	2025
M, L	39	1521	48	2304
M, J	35	1225	45	2025
P, L	28	784	36	1296
P, S	31	961	39	1521

APPENDIX D (continued)

Subjects	Vocabulary		Comprehension	
	Raw Score	Raw Score Squared	Raw Score	Raw Score Squared
P, M	42	1764	47	2209
R, M	26	676	45	2025
S, S	23	529	43	1849
T, A	29	841	42	1764
W, A	29	841	34	1156
W, B	37	1369	49	2401
Total	878	28250	1141	47213
N = 28				
Mean	31.36		40.75	

APPENDIX E

Experimental - Control Groups (High Reading Level)
Gates-MacGinitie Reading Test

Vocabulary - Raw Scores

	Control Group	Experimental Group
N	28	26
Mean	31.36	31.81
Variance	26.61	20.08
Standard Deviation	5.16	4.48
t statistic	-.341	
Critical t(60)	2.00	

Absolute value of t is less than critical t, therefore, accept the hypothesis there is no difference in groups.

Comprehension Raw Scores

	Control Group	Experimental Group
N	28	26
Mean	40.75	38.96
Variance	26.57	58.01
Standard Deviation	5.15	7.62
t statistic	1.03	
Critical t(60)	2.00	

Value of t is less than critical t, therefore, accept the hypothesis there is no difference in groups.

APPENDIX F

Tutee Experimental Group (Low Reading Level)
Gates-MacGinitie Reading Test
Pre-test

Subjects	Vocabulary		Comprehension	
	Raw Score	Raw Score Squared	Raw Score	Raw Score Squared
B, D	21	441	20	400
B, S	32	1024	27	729
B, Q	29	841	31	961
B, T. M.	21	441	20	400
B, J	28	784	30	900
D, R	23	529	11	121
D, E	25	625	19	361
D, P	33	1089	37	1369
E, M	24	576	24	576
E, R	26	676	29	841
F, F	34	1156	22	484
G, L	31	961	22	484
H, T	15	225	15	225
L, M	21	441	19	361
Mc G	12	144	10	100
M, D	29	841	21	441
N, E	27	729	16	256
O, J. L.	26	676	31	961
R, C	24	576	29	841
R, D	19	361	17	289
S, T	13	169	17	289

APPENDIX F (continued)

Subjects	Vocabulary		Comprehension	
	Raw Score	Raw Score Squared	Raw Score	Raw Score Squared
T, E	24	576	19	361
W, S	33	1089	24	576
W, B	32	1024	33	1089
Total	602	15994	543	13415
N = 24				
Mean	25.08		22.63	

APPENDIX G

Tutee Control Group (Low Reading Level)
Gates-MacGinitie Reading Test
Pre-test

Subjects	Vocabulary		Comprehension	
	Raw Score	Raw Score Squared	Raw Score	Raw Score Squared
B, G	30	900	17	289
C, E	23	529	11	121
C, R	19	361	10	100
C, J	34	1156	22	484
C, L	21	441	29	841
D, J	29	841	29	841
D, G	26	676	18	324
F, G	26	676	22	484
G, G	21	441	13	169
G, C	28	784	31	961
H, S	23	529	21	441
K, O	31	961	18	324
M, L	34	1156	31	961
N, B	22	484	30	900
R, N	31	961	25	625
R, G	26	676	25	625
R, S	34	1156	27	729
R, M	24	576	23	529
S, B	25	625	16	256
R, S	31	961	31	961
S, P	29	841	27	729

APPENDIX G (continued)

Subjects	Vocabulary		Comprehension	
	Raw Score	Raw Score Squared	Raw Score	Raw Score Squared
S, F	23	529	16	256
W, B	32	1024	29	841
W, Barry	28	784	25	625
Total	650	18068	546	13416
N = 24				
Mean	27.08		22.75	

APPENDIX H

Experimental - Control Groups (Low Reading Level)
Gates-MacGinitie Reading Test

Vocabulary
Raw Scores

	Control Group	Experimental Group
N	24	24
Mean	27.08	25.08
Variance	20.17	38.86
Standard Deviation	4.49	6.23
t statistic	1.275	
Critical t(60)	2.00	

Value of t is less than critical t. Therefore, the author accepts the hypothesis there is no difference between groups.

Comprehension
Raw Scores

	Control Group	Experimental Group
N	24	24
Mean	22.75	22.63
Variance	49.11	48.16
Standard Deviation	6.58	7.01
t statistic	.059	
Critical t(60)	2.00	

Value of t is less than critical t, therefore, accept the hypothesis there is no difference in groups.

APPENDIX I

Tutee Experimental Group (Low Reading Level)
Iowa Test of Basic Skills
Pre-test

Subjects	Vocabulary		Comprehension	
	Raw Score	Raw Score Squared	Raw Score	Raw Score Squared
B, D	04	16	20	400
B, S	14	196	20	400
B, O	14	196	13	169
B, T	07	49	18	324
B, J	11	121	22	484
D, R	08	64	25	625
D, E	11	121	18	324
D, P	06	36	18	324
E, M	11	121	14	196
E, R	10	100	15	225
F, F	00	--	00	--
G, L	09	81	16	256
H, T	16	256	14	196
L, M	12	144	24	576
Mc G	08	64	16	256
M, D	12	144	12	144
N, F	03	9	06	36
O, J. L.	15	225	14	196
R, C	16	256	22	484
R, D	09	81	30	900
S, T	14	196	17	289

APPENDIX I (continued)

Subjects	Vocabulary		Comprehension	
	Raw Score	Raw Score Squared	Raw Score	Raw Score Squared
T, E	00	--	00	--
W, S	08	64	28	784
Total	218	2540	382	7588
N = 23				
Mean	9.48		16.61	

APPENDIX J

Tutee Control Group (Low Reading Level)
Iowa Test of Basic Skills
Pre-test

Subjects	Vocabulary		Comprehension	
	Raw Score	Raw Score Squared	Raw Score	Raw Score Squared
B, G	11	121	21	441
C, E	09	81	13	169
C, R	16	256	14	196
C, J	09	81	17	289
C, L. A.	14	196	22	484
D, J	14	196	26	676
D, G	08	64	23	529
F, G	09	81	17	289
G, G	10	100	18	324
G, C	10	100	23	529
H, S	06	36	19	361
K, O	08	64	09	81
M, L	06	36	20	400
N, B	04	14	18	324
R, N	11	121	24	576
R, G	09	81	21	441
R, S	14	196	20	400
R, M	08	64	21	441
S, B	14	196	17	289
R, S	03	09	22	484
S, P	12	144	23	529

APPENDIX J (continued)

Subjects	Vocabulary		Comprehension	
	Raw Score	Raw Score Squared	Raw Score	Raw Score Squared
S, F	06	36	09	81
W, B	14	196	14	196
W, Barry	08	64	20	400
Total	233	2533	451	8949
N = 24				
Mean	9.71		18.04	

APPENDIX K

Experimental - Control Groups (Low Reading Level)
Iowa Test of Basic Skills (Reading)

Vocabulary
Raw Scores

	Control Group		Experimental Group
N	24		23
Mean	9.71		9.48
Variance	11.78		21.53
Standard Deviation	3.43		4.64
t statistic		.193	
Critical t(60)		2.00	

Value of t is less than critical t, therefore, accept the hypothesis there is no difference in groups.

Comprehension
Raw Scores

	Control Group		Experimental Group
N	24		23
Mean	18.04		16.61
Variance	20.61		56.52
Standard Deviation	4.54		7.52
t statistic		.789	
Critical t(60)		2.00	

Value of t is less than critical t, therefore, accept the hypothesis there is no difference in the groups.

APPENDIX L

Tutor Experimental Group (High Reading Level)
Iowa Test of Basic Skills
Pre-test

Subjects	Vocabulary		Comprehension	
	Raw Score	Raw Score Squared	Raw Score	Raw Score Squared
A, G	27	729	35	1225
A, B	17	289	30	900
B, T	27	729	20	400
B, D	20	400	20	400
B, B	25	625	33	1089
B, J	31	961	46	2116
B, K	18	324	33	1089
C, R	27	729	43	1849
C, C	32	1024	46	2116
D, R	26	676	39	1521
E, S	12	144	36	1296
E, K	34	1156	52	2704
E, R	31	961	35	1225
H, P	34	1156	54	2916
J, M	31	961	37	1369
J, J	30	900	44	1936
K, T	28	784	32	1024
K, A	22	484	33	1089
M, G	36	1296	58	3364
P, R	33	1089	38	1444
T, A	31	961	31	961

APPENDIX L (continued)

Subjects	Vocabulary		Comprehension	
	Raw Score	Raw Score Squared	Raw Score	Raw Score Squared
T, M	24	576	43	1849
W, C	25	625	36	1296
W, N	37	1369	44	1936
W, V	35	1225	50	2500
Total	693	20173	968	39614
N = 25				
Mean	27.72		38.72	

APPENDIX M

Tutor Control Group (High Reading Level)
Iowa Test of Basic Skills
Pre-test

Subjects	Vocabulary		Comprehension	
	Raw Score	Raw Score Squared	Raw Score	Raw Score Squared
A, J	25	625	29	841
B, V	22	484	38	1444
B, S	32	1024	43	1849
C, A	27	729	45	2025
C, W	20	400	38	1444
C, D	29	841	44	1935
C, J	25	625	34	1156
C, M	34	1156	30	900
F, I	21	441	35	1225
G, J	25	625	29	841
G, L	31	961	29	841
G, D	16	256	29	841
G, T	25	625	36	1296
H, D	25	625	46	2116
J, E	36	1296	28	784
M, D	26	676	47	2209
Mc C	35	1225	49	2401
Mark, D	36	1296	39	1521
M, L	30	900	56	2601
M, J	30	900	50	2500
P, L	23	529	36	1296

APPENDIX M (continued)

Subjects	Vocabulary		Comprehension	
	Raw Score	Raw Score Squared	Raw Score	Raw Score Squared
P, S	27	729	33	1089
P, M	28	784	39	1521
R, M	28	784	50	2500
S, S	21	441	37	1369
T, A	34	1156	34	1156
W, A	24	576	38	1444
W, B	38	1444	65	4225
Total	773	22153	1106	45370
N = 28				
Mean	27.61		39.5	

APPENDIX N

Experimental - Control Groups (High Reading Level)
Iowa Test of Basic Skills (Reading)

Vocabulary
Raw Scores

	Control Group		Experimental Group
N	28		25
Mean	27.61		27.72
Variance	30.10		40.13
Standard Deviation	5.49		6.33
t statistic		-.175	
Critical t (60)		2.00	

Absolute value of t is less than critical t, therefore, accept the hypothesis there is no difference in groups.

Comprehension
Raw Scores

N	28		25
Mean	39.50		38.72
Variance	62.33		88.88
Standard Deviation	7.90		9.43
t statistic		.327	
Critical t (60)		2.00	

Value of t is less than critical t, therefore, accept the hypothesis there is no difference in groups.

APPENDIX O

Tutee Experimental Group (Low Readers)
Gates-MacGinitie Reading Tests
Raw Scores

.D. Number	Vocabulary		Comprehension	
N = 21	Pretest	Posttest	Pretest	Posttest
35223	21	33	20	34
31666	32	35	27	11
35479	29	35	31	31
30077	21	27	20	27
27579	28	39	30	38
35421	23	28	11	18
31405	25	24	19	19
35247	33	39	37	42
35708	24	32	24	22
31578	26	36	29	34
35473	34	29	22	13
38704	31	39	22	28
35385	15	19	15	17
35692	21	21	19	20
35399	12	27	10	14
35821	26	34	31	15
35062	24	38	29	37
35271	13	36	17	22
35429	33	42	24	23
35393	32	38	33	34

APPENDIX P

Tutee Control Group (Low Readers)
Gates-MacGinitie Reading Tests
Raw Scores

I.D. Number	Vocabulary		Comprehension	
N = 21	Pretest	Posttest	Pretest	Posttest
133132	30	30	17	36
179857	23	24	11	26
135730	19	26	10	23
135345	34	41	22	40
211332	21	35	29	35
229518	29	42	29	34
135087	33	41	32	28
166519	20	23	18	24
135272	26	29	22	25
217105	28	37	31	32
125377	23	36	21	28
194316	31	32	18	28
287922	22	36	30	27
281407	31	29	25	21
135267	26	28	25	29
135402	24	41	23	37
135280	25	28	16	30
131296	31	41	31	32
135507	23	25	16	23
313681	32	35	29	34
154404	28	37	25	28
135247	26	28	18	16

APPENDIX Q

Tutee Experimental Group (Low Readers)
Iowa Tests of Basic Skills
Raw Scores

I.D. Number	Vocabulary		Comprehension	
N = 21	Pretest	Posttest	Pretest	Posttest
135223	04	15	20	18
131666	14	16	20	20
135479	14	18	13	17
180077	07	13	18	40
127579	11	12	22	31
135421	08	05	25	18
281405	11	12	18	18
135247	06	13	18	40
135708	11	13	14	19
311578	10	12	15	15
135473	00	05	00	06
138704	09	11	16	27
135385	16	06	14	19
135692	12	12	24	20
135399	08	07	16	16
195821	15	08	14	20
135062	16	15	22	26
135053	09	11	30	28
125271	14	18	17	27
135429	08	13	28	23
135393	14	19	16	26

APPENDIX R

Tutee Control Group (Low Readers)
Iowa Tests of Basic Skills
Raw Scores

I.D. Number	Vocabulary		Comprehension	
N = 21	Pretest	Posttest	Pretest	Posttest
133132	11	16	21	18
179857	09	21	13	30
135730	16	14	14	17
135345	09	12	17	20
211332	14	13	22	36
229518	14	14	26	21
135247	08	13	23	12
135272	09	08	17	11
217105	10	18	23	22
125377	06	11	19	13
194316	08	09	09	19
287922	04	15	18	12
281407	11	11	24	16
135267	09	19	21	25
166519	14	12	20	16
135402	08	20	21	41
135280	14	09	17	17
131296	03	15	22	34
135087	12	16	23	20
135507	06	09	09	19
313681	14	14	14	17
154404	08	13	20	24

APPENDIX S

Tutor Experimental Group (High Readers)
Gates-MacGinitie Reading Tests
Raw Scores

I.D. Number	Vocabulary		Comprehension	
N = 21	Pretest	Posttest	Pretest	Posttest
135728	32	37	32	43
135477	31	27	35	32
180191	25	36	36	44
246065	24	28	34	35
135157	39	38	42	47
135069	30	30	33	40
226164	26	30	35	44
135341	35	36	42	44
135377	35	37	39	43
135690	26	32	31	36
135055	34	42	50	50
135691	27	30	39	45
135078	32	35	43	48
135348	31	34	38	49
135080	30	33	42	46
135081	25	35	29	48
135093	33	33	36	47
135094	38	40	43	51
135096	35	42	44	49
135643	33	36	43	40
135321	32	33	40	37
353004	29	33	33	36
135101	41	43	44	46
135108	33	38	48	48

APPENDIX T

Tutor Control Group (High Readers)
Gates-MacGinitie Reading Tests
Raw Scores

I.D. Number	Vocabulary		Comprehension	
N = 21	Pretest	Posttest	Pretest	Posttest
135067	35	38	39	42
135141	35	36	39	42
135119	29	37	40	42
135420	29	40	30	43
135677	33	39	40	47
123102	30	35	38	45
135678	32	36	34	40
135071	31	35	46	48
135459	27	36	38	36
180018	22	31	41	39
135183	30	31	36	39
148274	23	29	39	40
148404	31	35	34	51
135077	30	33	35	48
135713	42	38	47	50
135171	29	35	43	47
135693	37	38	49	51
195212	34	38	45	49
135082	39	42	48	47
135206	35	38	45	44
135128	28	33	36	40
135504	31	38	39	43
135095	42	34	47	46
127284	26	34	45	45

APPENDIX T (continued)

I.D. Number N = 21	Vocabulary		Comprehension	
	Pretest	Posttest	Pretest	Posttest
135220	23	30	43	45
353000	29	32	34	42

APPENDIX U

Tutor Experimental Group (High Readers)
Iowa Tests of Basic Skills
Raw Scores

I.D. Number	Vocabulary		Comprehension	
N = 21	Pretest	Posttest	Pretest	Posttest
135728	27	28	35	35
135477	17	19	30	33
180191	20	30	20	44
246065	25	30	33	35
135157	31	33	46	48
135069	18	20	33	23
226164	27	27	43	42
135341	32	36	46	48
135377	26	31	39	38
135690	12	20	36	40
135055	34	37	52	58
135691	31	28	35	32
135078	34	37	54	58
135348	31	29	37	45
135080	30	35	44	47
135081	28	36	32	49
135093	22	26	33	28
135094	36	39	58	66
135096	33	41	38	38
135643	31	32	31	27
135321	24	26	43	40
353004	25	30	36	31
135101	37	44	40	47
135108	35	38	50	49

APPENDIX V

Tutor Control Group (High Readers)
Iowa Tests of Basic Skills
Raw Scores

I.D. Number	Vocabulary		Comprehension	
N = 21	Pretest	Posttest	Pretest	Posttest
135061	25	37	29	39
135141	22	28	38	51
135119	32	36	43	50
135420	27	32	45	52
135677	20	34	38	46
123102	29	38	44	44
135678	25	30	34	45
135071	34	36	30	43
135459	21	24	35	28
180018	25	26	29	36
135183	31	30	29	40
148274	16	26	29	30
148404	25	29	36	46
135077	25	32	46	35
135713	36	39	28	52
135171	26	33	47	49
135693	35	40	49	59
195212	36	39	39	43
135082	30	32	56	56
135206	30	35	50	44
135128	23	28	36	37
135504	27	34	33	40
135095	28	34	39	44

APPENDIX V (continued)

I.D. Number N = 21	Vocabulary		Comprehension	
	Pretest	Posttest	Pretest	Posttest
127284	28	34	50	50
135220	21	27	37	51
353000	24	27	38	48

APPENDIX W

MEMO

DALLAS INDEPENDENT SCHOOL DISTRICT
SCHOOL ADMINISTRATION BUILDING 3700 ROSS AVE.

August 9, 1976

All Principals

cc:

Tutoring Staff

The tutoring department will be better able to serve you during the 1976-1977 school year because of the addition of five professional staff members. Each Resource Teacher - Tutoring will be responsible for the programs in one of the five sub-districts. Their names and assignments are as follows:

NAME	SUB-DISTRICT
Mary V. Dunn	Northwest
Priscilla Watkins	Southwest
Elizabeth Jackson	East Oak Cliff
Alayne Nelson	Southeast
Mary Ellen McElroy	Northeast

These teachers will be assisted by our Resourse Aides - Tutoring:

Jackie Richardson
Ruchele Evans

Please feel free to call on any of our staff if we may assist you in any manner. Our new telephone number is 421-1386.

Sincerely,

Jim Daniel

Jim Daniel
Analyst - Tutoring

APPROVED:

B. J. Stamps
Assistant Superintendent-
Instructional Services

George W. Reid
George Reid
Assistant Superintendent-
Secondary Operations

Otto M. Fridia, Jr.
Otto M. Fridia, Jr.
Assistant Superintendent-
Elementary Operations

Yvonne Ewell
Yvonne Ewell
Assistant Superintendent-
East Oak Cliff

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