

PEER-TUTORING AN INNOVATIVE  
INSTRUCTIONAL APPROACH IN  
LINDEN ELEMENTARY SCHOOL

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An Abstract  
Presented to  
The Graduate Council of  
Austin Peay State University

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In Partial Fulfillment  
of the Requirements for the Degree  
Specialist in Education

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by  
Sarah W. Lyon  
August 1981

## ABSTRACT

This case study reports the efforts of a small school in Perry County, Tennessee to provide a new approach of instruction in hopes of improving the academic skills of its students.

Peer tutoring, often written up in education journals as an innovation in instructional procedures is not really new. Small rural schools of our nations have, of necessity, used the older students to help the younger ones since schools were established.

The philosophy is the same, but the tutorial programs of today are far removed from the "hit and miss" instruction of yesterday. Management methods, specialized materials, training programs for teachers and tutors, evaluation methods and concise record keeping are components of today's tutorial programs that leave little to chance.

Exciting and dramatic outcomes were expected and Linden Elementary was not disappointed. Academic gains, attitudinal and behavioral changes coincided with the classic predictions of the various programs reported in the literature. A rise in achievement scores, anticipation of the next tutoring session, pride in "I can do it, too," and cooperation between students in solving problems were results of this effort at the time reported in the study.

The long-range effect has been quite remarkable. Teachers of Linden Elementary have joined in a cooperative effort to write new supplemental materials for the basal reading text and plan to use them in the same manner of the peer-tutoring process. An additional long-range effect has been the reduction of the population in the Title I Reading Room. This reduction was a result of improved achievement test scores in reading. The writer proposes improved achievement scores in reading are a result of the peer-tutoring program.

The time covered by this study includes the time spent in the pilot program in the spring of 1979 and the ensuing school year of 1979-1980.



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To the Graduate Council:

I am submitting herewith a study written by Sarah W. Lyon entitled "Peer Tutoring, An Innovative Instructional Approach in Linden Elementary School." I recommend it be accepted in partial fulfillment for the Specialist in Education degree.

  
Major Professor

We have read this study and  
recommend its acceptance:

  
Second Committee Member

  
Third Committee Member

Accepted for the Graduate Council:

  
Dean of the Graduate School



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## Chapter I

### INTRODUCTION

Basic reading and mathematical skills have always been essential to school success. Today, in a competitive technological society, they are more critical than ever. Nonetheless, the reading and mathematics achievement levels of many Tennessee children, both socially deprived and more affluent, have fallen consistently below national and state norms. Further statistics and samples of teacher opinion repeatedly underscore the fact that these underachieving children, many of whom may be considered educationally deprived, are likely to have disadvantages beyond poor performance in basic academics. Not only does the underachieving child have little chance of competing successfully in the classroom with more skilled students, students lacking fluency in basic academics and expressive language are often rejected or ridiculed outside the classroom. In effect, they are outpaced from the first day of school and remain overshadowed during their school years by students not evidencing similar difficulties. Any initial motivation to learn is quickly extinguished. School becomes a negative, if not hostile, environment.

A great percentage of children who do not meet state or national test norms often come from homes where little

effort has been devoted to nurturing an appreciation of academic learning or the development of appropriate social skills. Consequently, large numbers of school systems have begun to identify social needs as one of their major concerns. This concern appears to be universal; it is pressing; and it has existed for some time. While society has sanctioned schools as a center of cultural diffusion to address this need, today's schools are failing to communicate cultural standards to these students and to equip them with social skills necessary to relate and learn successfully. Educators have recognized the need to replace old responses with new, socially acceptable behaviors, yet they have not had the training, materials, or strategies to address this need in a consistent and effective manner. It is believed that underachieving children, and even many children within and exceeding the normal achievement ranges, do not live comfortably with themselves and others, are insecure and rigid, and do not accept or adjust to change. Still, there have been few alternatives for dealing with these conditions. The tasks of teaching children to think critically, to respect the views of others, to learn how to approach learning, to work cooperatively with others, and to determine mutual goals have not been accomplished satisfactorily. Leaders in education accept the need for children to gain the capacity to continue learning throughout life and that this learning



will often include others. Again, however, they have not had a firm concept or an effective vehicle, much less specific curricula, teaching strategies, or personnel to confidently attack and, hopefully, lessen these problems.

During the second semester of the 1978-1979 school year a pilot program of peer tutoring was initiated in the Title I remedial reading room at Linden Elementary School (Perry County). Approximately 60 reading students were involved, 25 of whom were paired with 25 eighth-grade students. They met daily during the regular class period and engaged in a highly structured procedure of basic phonics and supplementary activities chosen to reinforce the particular skill noted.

Testing at the end of the year revealed some gratifying statistics. The 25 students tutored by the eighth-grade students gained one grade level (on the average) and 40% of them gained more than one grade level, ranging up to 2.8. A survey of the tutors' evaluation of the program was equally pleasing. When asked, "How do you feel about your student's progress?", students gave answers such as "I feel good when he does well," and "It's a good feeling to be able to help him do a better job." Questions such as "Have you benefited by having had the opportunity to participate in this program?" brought replies such as "It has helped me understand why, when some students get discouraged, a little help from someone can mean a lot." Most of the

tutors said they would volunteer again for such a program if given the opportunity. Many said that some of the phonetic principles had not been so clear to them before participating in the program. For this particular group of eighth-grade students, two distinct facts emerged from this experience: (1) their own academic achievement was enhanced, and (2) the attitudinal change was quite remarkable.

This program was expanded in 1979-1980 to include the entire student population of Linden Elementary School. It was moved from the remedial reading room to the classroom, ranging from kindergarten through the eighth grade, and was under the supervision of the individual classroom teachers. Basic math was also presented to the entire student body in the same manner--peer tutoring.

It is the purpose of this paper to describe the results of that expanded program--the Perry County Peer-Mediated Teaching Program [PMTTP]--in Linden Elementary School during the school year 1979-1980.

### Statement of the Problem

Perry County has traditionally had a large percent of its student population (approximately 40%) coming from socially-economically deprived families. Many of these children fit the description of the educationally deprived, underachieving children described in the introduction.

They arrive at school already at a disadvantage and require as much individualization of instruction as possible in order to keep them from falling severely behind their peers. Nonetheless, the intensity and concentration of study required for them to maintain at or near grade level has not been possible. A majority continue to fall behind in their reading and mathematics; primarily, it appears, due to their not having mastered all of the prerequisites required before having to move forward in the curriculum. Remedial efforts have been beneficial; however, these students represent such a heterogenous population in terms of each individual pupil's needs that it has not been feasible to thoroughly assess, prescribe for, and subsequently eliminate all of the learning deficiencies of each student. Consequently, despite continuous efforts to address the academic deficiencies of this group of students, they continue to represent a large portion of Perry County elementary student body.

### Purpose

The purpose of the Perry County Peer-Mediated Teaching Program (PMTTP) is to provide an intense, individualized approach to teaching fundamental, functional reading and mathematics skills to high levels of mastery. Using this strong foundation of basic skills, the PMTTP builds proficiency in higher level, more complex reading and



reasoning skills. In addition to seeking substantial gains in students' academic performance by filling their deficits and establishing mastery in all basics, the intent is to improve their social interactions and self-esteem. To insure students are able to generalize and use the skills they have learned in situations beyond the classroom, the PMTP provides learning situations which promote each student's feelings of self-worth and gives him confidence in his ability to relate in a constructive, enjoyable, and mutually satisfying manner with another student. Primary factors that contribute to achieving personal-social gains in students are: the high rate of positive interactions that necessarily occur daily in the PMTP; the immediate and continuous successes of both tutor and tutoree; and the tremendous increase in self-confidence and sense of comradeship that comes from working in partnership to accomplish a difficult task. An additional purpose of the PMTP is to provide positive parent-school community relationships through frequent contact, increased direct community participation and more effective communication channels.

The objective for this field study is to determine if the PMTP has improved the academic and social skills of the students of Linden Elementary School. Daily involvement in the program and analysis of the data that resulted-- achievement test scores, teachers' evaluations, students'

evaluations, parents' reactions, etc.--have been used to arrive at the conclusions to support or disprove the purpose of the program.

### Limitations

The program for the year under study (1979-1980) was restricted to the students enrolled at Linden Elementary School. Most of the references of this instrument were made to the students of Perry County in general; but for the purpose of implementing this program, students of Linden Elementary were chosen. However, due to the success of the program, the Board of Education and the Superintendent of Schools extended the program to the entire school population of Perry County for the year beginning the next term, 1980-1981.

### Pragmatic Limitations

(1) Since this study was performed in conjunction with the instructional process of Linden Elementary School, many factors could not be controlled for, i.e., the effect of same sex/opposite sex pairs.

(2) Variance in teacher attitudes was deemed to be a possible limitation to the success of this study. While some would accept it as an excellent method of reaching the slow-to-learn and participate to the fullest extent, others would view it as an interruption in their schedule and be somewhat less cooperative.

### Statement of Hypotheses

1. Students of low ability (below grade level) working with students of higher ability (on or above grade level) in a one-to-one relationship (peer-tutoring) for six months will show higher gain than would have normally been expected (0.6).
2. Teachers will detect an improvement in social skills as a result in pairing the students for this learning experience.
3. Students in the role of tutor will acquire a stronger sense of responsibility.
4. The self-esteem of the low ability child will improve when given a method (peer-tutoring) by which he can succeed.

### Structure of the Program

This study involved 400 students and 15 teachers. The students in one first grade room and all the grades up from that level were paired by the teachers for this procedure. A general rule was that the more capable students were paired with the less able students.

Continental Systems' Peer-Mediated Tutoring Program was used as a guide for the program. Since the program as written seems to serve intermediate and upper grades best, an adaptation was attempted for kindergarten and primary grades.



Since kindergarten and some first grade students were unable to read, the director served as the leader and the students, as a group, were the tutorees. The guidelines of the purchased program (Continental Systems, Inc. Peer Mediated Tutoring Program) were followed in the steps presented, but the procedures and supplementary materials differed for the grades that were operating on a one-to-one basis.

Two three-hour periods of in-service for teachers were spent to introduce the materials for reading and for instruction in the management of the program in the classrooms. Another such period was spent later at the time the math portion was initiated. The student tutors were trained in procedures and record keeping for the teams in two sessions prior to the actual tutoring sessions. These training sessions were under the direction of the professional consultants provided by Continental Systems.

Pre-testing in October and post-testing in April, using the Metropolitan Achievement Test, was used to measure gain.

Questionnaires to the teachers as well as the students measured their reactions as to their perceptions of and attitudes toward the program.

In addition to the questionnaire, the teachers were asked to supply to the director a narrative report assessing the program from their points of view. Items to which they were asked to respond were as follows:



1. The materials (Continental Systems) as a guide.
2. The supplementary materials that were provided.
3. Organization of the program.
4. Assumption of responsibility by the tutors.
5. Response of the tutorees to the tutors.
6. Opinion as to the value of the program:
  - a. Has it provided an opportunity for cooperation between the pairs of students?
  - b. Do you detect social adjustments that might not have been possible in the ordinary routine of your classroom?
  - c. Would you say success in this program has improved the self-esteem of the low-ability student?

The following chapters will present a review of the literature on peer tutoring; a detailed description of the program implemented at Linden Elementary School, 1979-1980; and an analysis of that program.

## Chapter II

### REVIEW OF THE LITERATURE

#### Background Information on Peer Tutoring

The first step in becoming knowledgeable in peer tutoring techniques is the answer the question: What is peer tutoring? Peer tutoring, basically, is children teaching children, usually on a one-to-one basis. Studies of peer tutoring often have reported on older students teaching some subject to younger students, a situation more accurately described as cross-age tutoring. "Same-age" and "cross-age" are terms than can be applied when describing peer tutoring.

The process of peer tutoring is certainly not a new concept. Children have been helping and teaching other children for as long as people have banded together with common goals. The literature in anthropology mentions societies which expect or demand the transmission of information and skills from older to younger children. More familiarly, early settlers in America had to rely on the more mature of their children to handle homemaking and caretaking chores and to teach those tasks to younger brothers and sisters, while the parents attended to matters outside of the household. When schooling became possible on the community level, children were sent to a one-room

schoolhouse to receive their instruction. With one teacher to provide that instruction, older or more able students were given the responsibility of teaching younger or less gifted students on a part-time basis. The tutoring arrangements apparently worked, since many of our country's early leaders came from such schools. Children were able to learn their lessons even in a multi-grade classroom with only one teacher.

Before public education existed, Joseph Lancaster founded a school for working-class children in London (Lancaster, 1806). Lancaster was opposed to corporal punishment and it was his thinking that basic education would not only discipline but shape the moral development of his students. He devised a system of peer-mediated instruction which he labeled a "monitorial system." The dramatic and immediate success attracted much attention in educational circles (Ehly & Larsen, 1980).

The monitorial system was effective because of the manner in which instruction was organized and programmed. Graded classes were formed for each of the three academic areas--reading, writing, and arithmetic. The student was placed according to his proficiency in the skill. When he had mastered the skills of that level, it meant automatic promotion to the next level.

Each class was led by a monitor who was proficient in the skills of that level. It was the monitor's task

to oversee the work of about 10 students. The scholars were required to give written or oral responses which the monitor immediately checked for correctness. The children were ranked in class according to their responses.

Opportunities to respond were given to the class in order of their rank. If students responded incorrectly, the monitor continued questioning others in rank order until the correct response was given. The child giving the correct response moved up in the line to the position ahead of the first child responding incorrectly.

Modern day equivalents of earlier tutoring arrangements have been developed to insure that greater attention is given to the needs of each student. Consequently, more time is made available to the teacher to work with students needing special attention. The teacher can make maximum use of the additional time to develop lesson plans or to meet with support staff regarding special problems and needs.

An abundance of studies, mostly anecdotal in nature, have been published on conducting peer tutoring programs in the schools. The anecdotal studies have been very positive in their descriptions of the success of such programs.

Gartner, Kohler, and Riessman (1971), in a review of early references to children teaching children, have noted several discussions of the topic in preceding centuries. Particularly fascinating is the reference to John Comenius



(whose work was first published in 1849), who recommended that the student who wanted to make progress in a subject should arrange to give lessons to others on a regular basis. Comenius mentions the phrase "He who teaches others, teaches himself" as supporting his belief. The learning advantages for the tutor in a tutorial arrangement are also mentioned by Andrew Bell (1832), who stated that he who teaches learns.

William Bentley Fowle (1866) provided the educational theory to support peer tutorial practices. Like Lancaster, Fowle utilized the monitorial approach to education in his school. He believed that children who taught were better able to learn materials, because they were learning by reviewing, not merely memorizing. Fowle believed strongly that children were capable of communicating effectively to other students in a learning arrangement. He wrote that children can be better teachers than adults, for unlike adults, children are more likely to work democratically with their partners, constantly considering their partner's feelings and capacities. He labeled this teaching style as "learner-focused" (Ehly & Larsen, 1980).

### Early Peer Tutorial Projects

Gartner, Kohler and Riessman (1971) are again an excellent source of information on the development of large-scale tutorial projects across the United States.

Their interest in tutorial models is reflected by their participation in several of these projects. Much of the information on early projects is anecdotal in nature.

Lippitt and Lohman (1965) authored one of the first studies that dealt with peer tutoring in the educational environment. This study, conducted in the early 1960s, was responsible for the creation of several tutorial projects designed to meet the academic needs of students. Beginning projects were cross-age in focus. Junior and senior high school students were tutoring elementary school students. Another project involved sixth graders working with kindergarten students. An additional project was started in a camp setting. The tutorial programs were based on several assumptions, as reported by Ehly and Larsen (1980):

1. Younger children often model the behaviors (affective and attitudinal) of older children. This modeling can be utilized in an educational context when the models can be trained in appropriate behaviors.
2. The relationships that tutors establish with the adult support team affect these older children who have been trusted by adults on an important work assignment. Tutors also have the opportunity in the tutorial context to work in peer relationship skills.
3. Tutors, in their duties, are learning the materials more thoroughly than would normally occur in the traditional classroom.
4. Tutors are able to help tutor and tutee by participating in the academic portions of the program.
5. Tutors, through their work and their success with their partners, can become more sure of the academic and affective skills and interpersonal competencies. (pp. 12-13)

Results of these early studies were quite positive. Lippitt and Lohman (1965) reported that both tutor and tutee profited on several dimensions following participation in a tutorial program. Tutees increased scores on academic tests as well as on measures of interest and motivation. Tutors also increased their ability to work with other students and had more positive attitudes toward school.

An interesting sidelight evolved from the data of these early studies, which is discussed by Gartner et al. (1971). They list five types of children who most often benefit from tutorial programs and other student-to-student contacts. The children who benefited most were: (1) those who had experienced previous failure in relating to peers; (2) "babies" in families; (3) oldest children; (4) children who had never worked with older, same-sex children; and (5) those who had no experience in working with others on an equal footing. A common element noted among the five types is the lack of extensive and successful contact with peers.

One characteristic of these earlier efforts at peer tutoring was that they utilized relatively few children and focused more extensively on affective rather than academic variables. Little attention was devoted to developing specific instructional techniques. The main goal was to demonstrate that the tutorial model can work. Indeed, the peer tutoring programs generally appeared to be quite



successful. Soon larger projects involving tutoring were developed and implemented on a large scale.

Mobilization for Youth was begun in the early 1960s in New York City. The project employed several centers throughout the city where high school students tutored fourth and fifth grade students in reading. Students in both the tutor and tutee groups were typically black or Puerto Rican American. Cloward (1967) reported that tutees who received the four hours of tutoring a week made significant improvements in reading achievement. Interestingly, tutors made the most progress, gaining 3.4 years in reading ability in the seven months of sessions.

Youth Tutoring Youth programs were initiated in other areas of the Northeast (Cloward, 1967). An after-school program, YTY used high school-aged children enrolled in the Neighborhood Youth Corps and who were shown to be at least two years behind grade level in reading. These students were trained to tutor younger underachieving students in schools that served ghetto areas. More important than the gains in reading scores that the tutors experienced were increases in the interest levels of these students for academic tasks. The tutors' feelings of personal worth were apparently given a strong boost.

Newmark and Melaragno (1969) reported research findings of the System Development Corporation. As in previous

examples, the children who were involved in the tutorial program benefited. Tutors' academic motivation and interest increased, with an observable impact on their classroom behavior. The children who were being tutored exhibited academic gains and also appeared to be more in tune with the cognitive and affective demands of the classroom.

An ambitious but small-scale tutorial program was described by Gartner et al. (1971), called Each One Teach One. The program, conducted in Yonkers, New York, was schoolwide in scope. Students were tutored and served as tutors for most of the day. Goals for the program for the tutor and tutee were both affective and academic. They included increases in classroom skills, improvements in self-concept and self-esteem, improvements in peer relationships, and improvements in individualized attention to the needs of the students. The program was successful in involving all students in the learning. The initially shy child became more active in peer relationships after a stint as a tutor. Children were able to learn through tutoring, and to become more encouraged with their abilities to perform academically.

Gartner et al. (1971) have described three additional ventures into peer tutoring that proved equally successful. The programs were cross-age in their focus. In the first program, which was sponsored by Hunter College in New York City, college students tutored ten-year-olds who in turn

tutored seven-year-olds. The college students were themselves training to be teachers. Four benefits were believed to result from this program:

1. Two sets of students were receiving tutorial assistance.

2. The self-esteem of the ten-year-olds, who served as tutors, was increased because of their ability to succeed in a learning environment.

3. The regular classroom teachers' work load was reduced with the addition of the college's program.

4. The college students were provided with the opportunity to observe a practical learning situation. With this background, the students would have a more reality-based grasp on the dynamics of learning arrangements.

The second program mentioned by Gartner et al. was an English program based upon the principles of the YTY program in the United States. Tutors, who ranged in age from 13 to 18, tutored other students who ranged in age from 6 to 12. The program lasted for six weeks and was concerned with the improvement of English language skills of the students who were non-English speakers. Upon completion of the program, project staff discovered that both tutors and tutees made greater use of the English language, tutors felt better about themselves, and the community supported this type of program.



In a more peer-oriented program in New Jersey, students at the preschool level worked together in pairs to learn, prepare assignments, and to monitor each other's performance. Goals for the program were to increase language skills, including communication, and to reduce the teacher's load. The monitoring component of the program was important in that the students learned to help others learn and were able to review previous academic materials. So successful was the project that tutors in the program were interested in continuing the learning-with-partners approach when they moved from the preschool level.

This introduction to the broad range of peer tutorial programs has contained several common factors in the studies. Programs in the great majority of instances were cross-age, rather than programs in which children of the same age or grade level tutored each other. Tutorial variables that have been investigated for the effects on outcomes from peer tutorial programs have been oriented toward product rather than process.

### Programmed Tutoring

Programmed tutoring is a form of educational technology first developed in 1960 as an effective means of teaching reading to retarded children. It was later found to be more useful in teaching disadvantaged and low-achieving children in public schools (Harris, 1980). It is a

technique that enables nonprofessionals to provide an effective supplement to classroom teaching of beginning reading and mathematics. It is most effective in the teaching of disadvantaged children, especially the slow learners and "nonlearners" in this group (Ellson, 1976). The teaching activities are tightly prescribed (a) by detailed instructions (programs) that they follow to the letter, (b) by teaching materials and, (c) not the least important, by the patterns of successes and failures of the children they tutor.

The tutors are trained in specific procedures for teaching the recognition of letters and words, the use of phonic rules and context in word analysis, the reading of words, sentences and paragraphs with comprehension and comparable skill in mathematics. The sequence of teaching is carefully planned to provide each child with a systematic coverage of the basic skills. High standards of performance are maintained so that the acquisition of each skill unit is based on mastery of prerequisite skills. The procedures that the tutors follow are highly individualized so that the children progress at the maximum rate of which they are capable; each progresses quickly through material that is easy and spends time only on those skills that he or she finds difficult.

D. G. Ellson, developer of the tutorial program used at Indiana University at Bloomington, reports:

These techniques have proved very successful with disadvantaged children, especially the slower learners, and including those who do not speak English. . . . Comparisons of matched tutored and untutored control groups have shown that programmed tutoring consistently produces large gains in reading achievement. It has reduced the proportion of nonreaders in a disadvantaged population from approximately 10% to less than 1%, and it has reduced the proportion of first-grade failures and assignments to special education classes by 40% to 70%. (Ellson, 1976, p. 2)

Phillip L. Harris, a colleague of Ellson's at Indiana University, reports the following results obtained in validation studies:

Indicators other than test scores have shown: promotions increased by 54%; failures (retentions and assignments to special education classes) reduced by 69%; retentions reduced by 66%; assignments to special education classes were reduced by 74%, 79%, 32%, and 5% in the four years following a year of tutoring in the first grade; there are indications that programmed tutoring is beneficial to educationally handicapped student tutors, with no detrimental effects on tutees. (Harris, 1980, pp. 1-2)

The benefits are not limited to the children who are tutored--the tutors also benefit, both educationally and personally. In one study, underachieving high school students serving as tutors gained over two years in reading level (Ellson, 1976).

Programmed tutoring emphasizes the successes of the learner by reinforcing correct responses with verbal praise, such as "Good," "That's right," and so on. The tutor does not respond verbally to mistakes by the learner. Rather the tutor directs repeated efforts at correcting the deficiencies. Absence of overt negative feedback is combined with working towards the learner's strengths, so



that the learner becomes more confident with his or her abilities. This approach is considered by Ellson to be appropriate for slow learners, who receive a great deal of attention for the failures in learning rather than their successes.

Ellson et al. (1965) emphasized the "therapeutic" effect of programmed tutoring. Students in the programmed tutoring context can display abilities that have not been demonstrated in the classroom. Changes that occur in tutoring frequently extend into the regular classroom. At the least, children who have experienced successes of learning by tutoring will feel more confident about their abilities to learn. Greater confidence can motivate them to try harder in the regular classroom.

#### Reports on Benefits for the Tutee and Tutor

Benefits for the tutor and tutee can be extensive within the context of most peer tutoring activities. In fact, certain educators believe that benefits for the tutor can outweigh in importance benefits for the child being tutored. For the tutee, the child receives increased individual attention, greater closeness and contact with the instructional agent, more immediate and frequent feedback on performance, and a peer model to emulate. This modeling factor may be one of the most powerful change-inducing factors in the peer tutorial model. Children are

able to observe another student who remains focused on the academic materials, who approaches the learning of materials in a calm and competent manner, and who is interested in helping the tutee learn. The child being tutored is very likely to exhibit a previously unobserved ability to grasp the instructional component of the tutoring and to acquire the learning behaviors of the partner. These skills are commonly transferred to the regular classroom to enable the tutee to experience greater academic success.

The fact that a tutee may be more relaxed with a peer tutor, and thus better able to concentrate on learning materials, is supported by a number of studies. Geiser (1969), Hassinger and Via (1969), Bouchillon and Bouchillon (1972), Fleming (1969), Landrum and Martin (1970), and Lippitt and Lohman (1965) have all reported increases in learning outcomes by tutees following a tutorial program. In these studies, student tutors have come from elementary, secondary and college grade levels. Snapp (1970) and Snapp, Oakland and Williams (1972) reported improvements in tutee reading development following a cross-age tutorial program for elementary school children.

Gains experienced by the children being tutored have been reported to transfer to the regular classroom (Gartner et al., 1971).

Gains in self-concept also have been reported for tutees who have recently completed tutorial programs. Ross

(1972), in a program that required students labeled "disadvantaged" to tutor similarly classified students, reported that gains in reading scores and self-concept followed a semester-long program of peer tutoring. Greatest gains were experienced by tutors who had themselves been tutees in previous semesters and by their tutees. Overall, students made better reading and self-concept gains when acting as tutors than when acting as tutees.

The side effects of peer tutoring are, in most instances, positive.

Perhaps the greatest benefits result from the emotional and the psychological experiences of the participants. The prestige gained when a problem child teaches is frequently incalculable. With the prestige comes the opportunity for the child to model teacher-approved, socially appropriate behavior. The child's self-esteem is generally boosted. The child feels worthwhile and is likely to have increased confidence that he or she can perform a job well. This new confidence may well add to the child's sense of adequacy and, subsequently, have a positive influence on the child's behavior in the classroom.

The child who is being tutored also profits from peer tutoring. The child is receiving help from a child who is older or more knowledgeable. In most cases, the child is more relaxed with a peer tutor than with the teacher. The academic or social gains from the tutoring can heighten confidence so that the child can return to the classroom determined to work harder. (Ehly & Larsen, 1976, pp. 476-477)

### Same-Age Tutorial Programs

Programs that have utilized tutors who are the classmates of tutees seldom are cited in the literature. Oakland and Williams (1975) reported gains in word knowledge



and reading comprehension by tutees taught solely by tutors. Ellson, Barber, Engle and Kampwerth (1965) also have mentioned the advantages of tutoring being designed to supplement classroom instruction.

Ehly and Larsen (1976) discussed the results of a peer tutorial program in which sixth graders tutored their classmates in experimental materials in spelling. Student pairs met for 20 sessions, each of which lasted 30 minutes. The effects of a variety of tutor and tutee characteristics on the learning of tutees were analyzed. The authors found that sex of tutor, sex of tutee, type of sex pairing (same-sex versus opposite-sex pairing), peer acceptance and peer rejection of the tutor and tutee, tutor liking for the tutee, and tutee liking for the tutor did not significantly affect the outcome learning scores of the students being tutored. Examination of the data revealed that the only significant predictor of the amount of learning by the tutee was that student's pretutorial spelling score. None of the tutor and tutee characteristic factors listed above was found to predict the speed with which the partners completed their daily assignments.

#### Peer Mediated Instruction

Tutorial programs have differed in the reinforcement systems built into the program, and have varied in the amount of feedback that is provided to the child being

tutored on his or her success. An example of an approach that provides very specific feedback to the tutee is that of Peer Mediated Instruction (PMI). Rosenbaum (1973) proposed the PMI concept, which allows students to work in pairs, with one student designated as the teacher and one as the learner. The "teacher" presents materials such as words from a spelling list to the student, then provides specific correction to student errors. Results from a PMI program in spelling have been positive. Third graders were able to increase spelling scores when they were instructed with the PMI technique. The PMI technique has been reported to be successful in tutorial programs that focused on other content areas.

Ehly (1975) conducted a peer tutorial program in spelling that utilized the PMI approach of providing feedback to the child being tutored. In this study sixth graders tutored each other on spelling words that had been missed on a pretest by all of the tutees. The PMI approach was effective in providing the tutor with the structure necessary to conduct tutorial sessions and in maintaining the tutees' interest throughout the course of the project, which lasted for 20 sessions. Tutees did learn to spell many of the difficult words during the PMI-oriented sessions.

### Summary

To summarize, studies in peer tutoring same-grade or same-age tutoring programs are reported infrequently in the literature. More often mentioned are studies on cross-age tutoring. Benefits for tutors and tutees frequently follow participation in a tutorial program. These benefits can transfer to the regular classroom. Tutorial partners can work productively together regardless of their ages, sex, racial-ethnic status, and intelligence levels. Structuring of content and presentation of materials have varied widely across studies. The more structured approaches, such as the PMI approach and programmed tutoring, can produce learning gains for the child being tutored.



## Chapter III

### METHODOLOGY

#### Description

In 1979, Linden Elementary School (Perry County) implemented the Peer-Mediated Teaching Program (PMTTP) as an innovative approach for accelerating reading and mathematics skill acquisition and proficiency level achievement. The Perry County PMTP was also designed to be a means for developing appropriate social behavior and improving students' self-confidence and self-concept. The PMTP consists of a unique combination of carefully sequenced curriculum materials, a peer-tutoring approach to individualizing instruction, simple, direct teaching strategies and intense daily involvement by all participants. For the teacher the PMTP functions as a total management system which facilitates integration of the content and process of teaching with an easy-to-use, yet thorough record keeping system and continuous access to consultation. It affords total individualization in each of the two primary academic areas being taught and establishes highly positive reciprocal interactions between each student in the teaching-learning team (tutor and tutoree). It was designed so that once implemented, the PMTP would undergo guided modifications so as to insure

that all aspects of the approach are working harmoniously and in the most efficacious manner. The PMTP is highly structured, designed to lead each student to mastery performance of all skills taught, yet is flexible enough to incorporate objectives identified by the supervising teachers into the curriculum.

### Major Activities

The major activities of the PMTP are:

1. Staff orientation, complete preservice and in-service training on all materials and methods associated with the approach, including full descriptions of the roles and responsibilities of all personnel.
2. Tutor training and tutor-tutoree development activities conducted throughout the school year, including training on the PMTP materials and methods and activities to promote sensitivity to and understanding of interpersonal relationships.
3. Program supervision and consultation, including modification recommendations as needed and frequent observations in the classroom with continuous input and feedback to all levels of program implementation.
4. Program evaluation, complete with formal standardized pre- and post-test of all students in reading and mathematics, continuous assessment of classroom implementation and material usage, student attitudes and

behavior changes, and informal assessment of parent and community involvement.

### Expected Outcomes

Several priority goals identified by the Perry County Board of Education and the Superintendent of Schools were expected to be accomplished by employing the PMTP. It was felt this approach to teaching reading and mathematics would result in all student participants demonstrating very substantial improvements in their reading and mathematics performance levels. The performance of students who had not been achieving commensurate to grade level was expected to stabilize and increase significantly. On the average, it would be reasonable to expect that a significant gain would be exhibited almost immediately, regardless of the student's grade level upon entry into the program. Additionally, an increase in average daily attendance, a decrease in behavior and disciplinary problems, a gain in general cognitive skills and a significant change in students' attitudes about themselves and their school was expected. It was felt that the PMTP would facilitate the rapid closing of many learning gaps students have in reading and mathematics and raise their achievement levels. Further, the PMTP would provide an avenue for making positive contacts with the home and would extend cooperativeness and understanding between the school and the community.



## Need

The Perry County Board of Education and Superintendent of Schools felt a change was necessary in the approach that was being employed to address the learning needs of its student population, particularly those from socially-economically deprived families. It was felt that the Peer-Mediated Teaching Program had the greatest potential of all approaches studied for reversing the pattern of failure and underachievement that has characterized so many of those students. It was felt that the daily concentration of self-paced instruction within a tutorial framework would provide students not only with drill and repetition, but with immediate positive reinforcement and correction procedures needed for rapid learning. It was felt that this program would increase the overall academic profile of elementary students and prevent the need for extensive remedial efforts in both academic and social areas in the secondary school. It was believed that this program would also benefit the academic performance of students who were achieving slightly below grade level or not attaining their fullest potential.

It was felt that the positive peer relations, self-confidence and identification with school and the learning process that is promoted by the PMTP would greatly reduce the number of children who would be potential dropouts or run into difficulties with the correctional system when they are older.

The Perry County Peer-Mediated Teaching Program in reading and mathematics attempted to significantly improve the reading and mathematics performance of elementary school students. Modifications in the materials and teaching strategies were tried in a systematic fashion as new objectives and potentially more effective strategies or materials were identified.

The PMTP of Perry County consists of the following processes and materials (each are described in relative detail in the following sections):

1. The Peer-Mediated Teaching Program--(a) the major concepts; (b) the major features affecting child success; (c) the major program components; (d) the PMTP teacher; (e) administrative personnel.
2. Orientation, Preservice and In-Service Training--(a) staff training; (b) tutor training.
3. Parent and Community Involvement.

### The Peer-Mediated Teaching Program

The Perry County Peer-Mediated Teaching Program incorporates proven techniques and materials that have been developed in the areas of psychology, sociology, and education and special education. It is an approach that has been highly effective in increasing the reading and mathematic abilities of students at all grade levels, regardless of their ethnicity or economic and/or educational deprivation.

## Major Concepts

The major concepts upon which the Peer-Mediated Teaching Program is based include:

1. Time on Task. Students differ in the amount of time they need to learn a given unit of material when that unit is set to some mastery criterion. It is impossible to provide the extra time many students need to adequately learn a given task in a group setting. A one-to-one approach best meets this need.

2. Mastery Learning. When sufficient teaching-testing procedures (such as those incorporated into the PMTP) are built into the teaching material to guarantee enough practice to achieve over-learning, 90% or more of all students finally attain the set criterion with little or no regression.

3. Unit Learning. Most approaches to teaching require the student to master concepts in units too large for a significant portion of the population to assimilate. The PMTP introduces the student to skills in units of five, a unit level at which experience has shown the retarded can achieve.

4. Individualized Instruction. Most forms of individualized instruction demand that students work independently, pace themselves, read at or near grade level and have a high degree of self-discipline and motivation. For low-achieving students, these demands are generally



too rigorous since they normally have poor study habits, lack of motivation, lack of self-confidence and/or limited reading ability. However, the need for individualized instruction is obvious. The PMTP relies on the tutor, supervising teacher, student, and materials to dictate pace.

5. Structured Curriculum. The highly structured, sequential approach of programmed learning has long been valued by behavioral psychologists and is incorporated throughout the PMTP.

6. Motivation. It is generally recognized that attentional involvement is the basic medium in which cognitive activity occurs, and the degree of attention governs the accuracy and the efficiency of the final cognitive product. A major determinant of attention can be called motivation. The major factors influencing motivation are to be able to differentiate self from peers, reduce anxiety, to have some expectancy of success. The PMTP is designed to reduce the probability of student errors, increase success experiences, and eliminate undesirable levels of anxiety by providing for repetitive, anticipated learning experiences.

### Major Features

The major features of the PMTP affecting child success include the fact that the program:

1. Teaches only a limited number of facts at one time. The child is not bombarded with complex rules and procedures--he is given simple tasks on which he can succeed.
2. Takes the child through every step necessary in order to learn to acquire a given skill--the program does not assume anything is already known by the student.
3. Reinforces consistently, a procedure which offers the insecure child a strong feeling of success and self-worth and is highly motivating.
4. Makes an instructional director of the teacher, extending her influence and talents to every child in the room rather than requiring personal attention to each child which places the teacher in a hopeless position.
5. Enables the child to make rapid gains. Children in this program attend school more regularly, improve grades in other courses, express themselves much better, appear more adequate and capable of maintaining interpersonal relationships with peers and authority figures. (This feature of PMPT as offered by Continental Systems, is supported by the findings of Gartner, et al. [1979].)
6. Requires very little preparation by teachers.
7. Provides a management system that facilitates the teaching process.
8. Provides for almost total success by all children who are intellectually capable of learning.

9. Results in more academic and personal growth by the tutor than for the tutoree.

### Major Components

The major components of the PMTP include:

1. Materials structured in a sequenced pattern will provide the tools necessary to acquire and gain proficiency in fundamental reading and mathematic skills. Daily records of progress will provide clear performance profiles on each student. Supplementary readers, workbooks and other materials at grade level offer alternatives and a change of pace that keeps the students' interest at peak. Special certificates of recognition, communications to the parents at home, and newspaper items concerning the program all lead to higher motivation of the student and encourage parent involvement.

2. Complete staff orientation and training during an initial preservice and later in-service training session.

3. Continuous supportive consulting and supervisory services throughout the school year to assist teachers in adhering to the process developed for the PMTP. Consultants as needed are invited to assist in assessing and modifying the program to make it work.

4. Tutor training and tutor-tutoree development activities are conducted following the initial staff orientation and preservice to insure tutors are prepared to begin the tutoring process and that the supervising teachers



are able to complete any additional training that may be necessary. The initial preservice requires a minimum of two full days.

5. Evaluation of student performance using formal standardized tests and a pre-test/post-test design is employed in each of the academic areas.

### The PMTP Teacher

Characteristics. The PMTP teacher must possess, or be willing to acquire, the following characteristics: a sincere desire to help students; a willingness to devote the time and energy necessary to make the program a success; knowledge of the tutoring approach as presented by the trained consultants; the ability to work with adults and students; the successful use of classroom management techniques; willingness to follow the PMTP exactly as outlined.

Tasks. The major tasks of the PMTP teacher include: attends staff training; assumes a management role; familiarizes self with the materials of the program; recruits tutors and tutorees in cooperation with the principal, counselors and teachers; communicates program goals and activities to the faculty; maintains classroom discipline; observes tutor-tutoree relationship daily to determine if there are any personality conflicts (if any develop, the team is reassigned); provides daily encouragement to tutor-tutoree teams by providing an

attitude of acceptance, helpfulness and one of positive reinforcement; checks with all students individually to be sure they are following correct procedures; maintains student files; obtains necessary materials and supplies; maintains a record of tutor-tutoree test scores; establishes a systematic filing system for materials so that students may easily find them; maintains a folder for each tutoree; consults with the program director and/or consultant when problems arise.

#### Administrative Personnel

Administrative personnel are appointed to perform certain tasks. The principal, teacher, supervisor and/or director of the program: gains thorough knowledge of the program, its intent and process of implementation; locates space for the tutoring to occur; provides necessary equipment and materials; reorients faculty, parents, and student body to program as required; coordinates in-service sessions as needed; oversees the monitoring of tutors; defines roles and tasks to each member; keeps the building principal informed as to the condition of the tutoring effort in the school; plans and implements staff training sessions; corresponds with consultants as circumstances warrant; has knowledge of the tutoring procedures; communicates the essential benefits and features; quickly handles minor problems before they can develop into major ones; is aware of all program activities; makes arrangements for program, student and staff evaluation.

## Staff Orientation, Preservice and In-Service Training

### Staff Orientation

Preservice and in-service workshops are conducted for the entire school, followed by intensive training of the PMTP supervising teachers and the tutors. During the six hours of training, every facet of PMTP is surveyed. Roles and responsibilities are discussed as well as the rationale, goals and teaching techniques. For the most part, the focus is on the eight major factors necessary for program success. They are:

1. Program organization
2. Program scheduling
3. Tutor selection
4. Curriculum structure
5. Tutor training
6. Tutor-tutoree pairing
7. Program supervision
8. Program evaluation.

Program organization. Formal structure of organization is essential to insure successful operation of any tutoring effort. Some person or persons must be responsible for: (1) identifying tutors and tutorees; (2) explaining the goals of the tutoring program to the students, the faculty and the community; (3) making periodic progress reports to the student body, the faculty and the community;



(4) supervising daily tutoring activities; (5) evaluating student progress; (6) maintaining frequent communication with the classroom teacher; (7) providing frequent staff development activities for the tutors.

Program scheduling. Although scheduling may appear to be a routine matter, the effectiveness of the tutoring effort will be greatly influenced by the choices made. To maximize student achievement, the sessions should be held daily. First and second grade students should be scheduled for a minimum of twenty minutes of tutoring and older students should attend for at least fifty minutes daily. In addition, the gains are further enhanced when several tutor-tutoree teams are scheduled into the same location at the same time.

Tutor selection. The natural tendency when using peer or cross-age tutoring is to select the brightest and the best behaved students to serve as tutors. This may be a mistake. Research has shown that sub-standard achievers can effectively serve as tutors. In the process, this type of tutor will show even greater gains than will the tutoree.

Tutor-tutoree pairing. Random pairing of the students can be 90% effective. It is the other 10% that is critical since an ineffective and undisciplined team can jeopardize the success of the entire program. It is only through observation by an empathetic adult coordinator of tutoring

that an unsuccessful pairing of teams can be quickly recognized and corrective measures taken. Again, effective monitoring of this process is critical to the success to be achieved.

Curriculum structure. Many potentially good tutoring efforts are unsuccessful because of the selection of teaching materials that are required. The lack of continuity and control in such an "eclectic" approach results in gaps in the skills being taught as well as extreme difficulty in training the tutors in the proper usage of the various materials. The PMTP avoids these pitfalls because it: (1) diagnoses the learning needs of each student; (2) utilizes simple but effective teaching techniques; (3) insures that not only are skills necessary for the learning of a content area being taught, but also that mastery learning is being achieved; (4) includes the characteristics of quality instruction (cueing, positive reinforcement, frequent feedback, participation, corrective procedures); (5) provides a teaching environment that enhances the self-concept of the learner.

Tutor training. Tutors must be well trained in all aspects of the tutoring process, of which the actual teaching of skills is only a part. That is, they must learn to keep records, develop rapport with their tutoree, use positive reinforcement, and behave as a role model for their tutoree. Frequent evaluations of the tutor must be

accomplished to insure continued conformity to the teaching system. Additionally, regular staff development sessions must be held to encourage the tutor to maintain a positive attitude as well as to improve teaching skills.

Program supervision. Good supervision begins with the training of the tutors. The second step is to monitor the tutoring process (the skill of the tutor in following the teaching system). Next, the progress of the student must be checked to guarantee that the desired goals are being achieved. Then, an outside observer should regularly check the entire process including record keeping, etc. Regular and frequent observations of the tutoring system will identify and correct potential problems before they become serious. Also, the supervisor provides a frequent source of renewal for the enthusiasm of the tutor, the tutoree and the tutoring coordinator.

Program evaluation. In addition to the year-end evaluation required to determine progress in normative data, a process of continual evaluation is used to identify if and where the tutoring system is failing to produce the desired results. Included in the evaluation are regular and frequent checks on tutoree skill acquisition, tutor and tutoree attitudes, and student body and faculty attitudes.

Tutor training. Following training of the faculty the tutors receive approximately six hours of training. Their roles and responsibilities are presented and discussed along with program goals, teaching strategies, and materials.



Tutors are not expected to absorb every aspect of the program before they actively become involved in it, but thorough preparation minimizes problems and tutor apprehension. Upon completion of the preservice training sessions, tutors possess a general knowledge of the program's philosophy, the tutoring atmosphere and are thoroughly versed in the following technical procedures: (1) use of positive reinforcement; (2) use of assignment sheets; (3) use of the teaching techniques; (4) use of program materials (see Appendices).

In addition to being thoroughly familiar with the technical aspects of the program, tutors also become familiar with their professional responsibilities, what is expected and what is not acceptable. Of considerable importance is their understanding of the relationship between them and the professional teaching staff. The importance of being on time is also stressed.

A rewarding aspect of PMTP, as mentioned, is its positive influence on both the tutor and the tutoree. While it is designed to improve the self-concept of tutorees, it also exerts a strong force on tutors to exercise self-discipline in the execution of their duties.

Parent and community involvement. Parents are made aware of the program through "success notices," letters, the newspaper and word-of-mouth (see Appendices).

### Evaluation Plan

To assess the effect of the PMTP, the following objectives are evaluated:

1. All students who participate in the program will demonstrate a significant improvement in their reading and/or mathematics skills as evidenced in pre-test/post-test score changes.
2. Students who participate will display improved social behavior in and out of the PMTP classroom as reported by other teachers, the principal, parents and other students.
3. Student self-concepts and attitudes toward learning and school will improve as evidenced by teacher observation, consultant evaluation and parent feedback.
4. Student relations will improve as evidenced by the ways tutor teams relate and work together during the PMTP and in situations when the program is not in effect.

## Chapter IV

### RESULTS AND DISCUSSION

#### Results

All students of Linden Elementary, including those who were receiving special help of the Special Education and Title I reading teachers, were pre-tested for reading and mathematics skills in week 11 of the school year and were post-tested for those same skills in week 32. The Metropolitan Achievement Test 1978 Edition, Form J, which had just been published, was used.

The resulting average gain assumes even greater significance considering that approximately one-third of the student population received special services during the year. Approximately 75 students attended the Title I Reading Room each day and more than 60 were identified as learning disabled (LD), educably mentally retarded (EMR), or emotionally disturbed, requiring the services of the Special Education teacher.

#### Hypothesis 1

It was hypothesized that students engaged in a program of peer mediated teaching for a period of six months would evidence a higher gain than would normally be expected (0.6).



Reading. The students in grades K-8 were phased into the reading program between 13th and 17th weeks of the school year. The upper grades (5-8) commenced PMTP in the week 13 of the school year, one fourth grade became involved in week 14, one third grade and one fourth grade class entered the program in week 15, one third grade and one second grade started in week 16, and first grade and kindergarten began in week 17.

The Perry County PMTP in reading yielded the following results, as shown in Table 1 (Comparison of Pre-Test and Post-Test Scores).

The average gain for all students was .79, with a range of from 1.4 for eighth grade students over a 17-week period to .03 for second grade students over a 14-week period. Six of the eleven classrooms gained more than the .06 that would normally be expected, with three classes gaining more than one grade level over the six-month period. Kindergarten showed a gain of 1.2, first grade gained 0.9, fifth grade gained 1.3, sixth and seventh grades each gained 0.9 and eighth grade gained 1.4.

Math. All students participated in the math segment of the PMTP for a total of nine weeks. Onset of the program was in week 23, and continued through week 31 of the school year.

Because of the shorter duration of this segment of the PMTP (9 weeks as opposed to 14-17 for the reading segment)

Table 1

## Linden Elementary School

## Comparison of Pre-Test and Post-Test Scores

Grade Level	Number Students	Test Administered	Mean Sc. Sc.	Fall GE	Mean Sc. Sc.	Spring GE	Difference	
K	53	Pre-Primer	Reading	236.43	PK	410.8	1.2	1.2
	53		Math	251.40	PK	380.1	1.5	1.5
1	31	Primer	Reading	432.61	1.3	579.9	2.2	.9
	31		Math	373.87	1.4	478.0	2.5	1.1
2	41	Primary I	Reading	539.12	1.9	588.3	2.2	.3
	41		Math	444.76	2.2	474.3	2.5	.3
3	42	Primary II	Reading	619.36	2.7	641.4	3.1	.4
	42		Math	507.00	2.9	577.8	4.0	1.1
4	34	Elementary	Reading	667.94	3.6	679.6	4.1	.5
	34		Math	607.05	4.6	641.4	5.3	.7
5	44	Intermediate	Reading	697.20	4.8	721.9	6.1	1.3
	44		Math	607.66	4.6	626.7	5.0	.4
6	42	Intermediate	Reading	710.24	5.5	726.7	6.4	.9
	42		Math	633.88	5.1	664.7	5.5	.4
7	43	Advanced I	Reading	745.26	7.3	760.6	8.2	.9
	43		Math	712.88	7.1	734.8	7.9	.8
8	47	Advanced I	Reading	734.26	6.7	757.6	8.1	1.4
	47		Math	719.21	7.3	740.2	8.1	.8

it is not surprising to find lower levels of achievement gained.

Kindergarten exhibited the most significant improvement, gaining 1.5 grade levels between the pre- and post-test periods. A gain of 1.1 was attained by both the first grade and one third grade classroom. Other grades achieving over the desired improvement level of 0.6 were: seventh, and eighth grades, with gains of 0.8 each, and one fourth grade class and one third grade class with gains of 0.7 each.

Classes failing to attain the desired improvement gain of 0.6 were: the fifth grade, the sixth grade, and one fourth grade class, gaining 0.4 each, and the second grade, gaining 0.3.

Table 2 presents a representative sampling of achievement gains for 115 tutorees in reading and mathematics. The table shows the number of tutorees in the sample attaining the desired 0.6 gain. The table also shows the number of tutorees who pre-tested below grade level and who attained grade level after conclusion of the PMTP.

What the table does not reflect is the magnitude of some of the gains made. It was not at all unusual for gains of one, two or even three grade levels to be reached. For example, all 13 of the seventh grade tutorees who attained at least an 0.6 gain in reading, in actuality



Table 2  
Representative Sampling of Achievement Gains

Grade	No. of Tutorees	Reading		Mathematics	
		No. Attain- ing 0.6	No. Attaining Grade Level	No. Attain- ing 0.6	No. Attaining Grade Level
1	12	10	*	9	5
2	20	3	7	3	5
3	10	1	-	3	1
5	18	16	6	8	3
6	17	11	3	9	4
7	14	13	7	9	6
8	<u>24</u>	<u>20</u>	<u>9</u>	<u>17</u>	<u>3</u>
Totals	115	74	32	58	27

\*All tutorees in grade 1 pre-tested at grade level.

gained at least a full grade level, with an average gain of 1.96. Eighth grade also evidenced some dramatic gains. Nine of the 20 reading tutorees gained at least two full grades, with two more tutorees gaining three grade levels.

As may be noted, the fourth grade has been excluded from this representative sample. While the average gains for the fourth grade as a group do not differ significantly from the other grades (.5 in reading and .7 in math), special circumstances in the one exclusively fourth-grade classroom seemed to exclude that class from the category of "representative." After the onset of the program, the experienced teacher who had participated in the training phase and the pairing of the students assumed another position in the system. She was replaced by a first-year teacher who had not had the benefit of the training.

## Hypothesis 2

Hypothesis 2 states: "Teachers will detect an improvement in social skills as a result in pairing the students for this learning experience."

The Appendix section contains the teachers' assessment questionnaire, which includes three items which addressed this hypothesis. Item #5 was concerned with the response of the tutorees to their tutors. Item #6 asked "Has it provided an opportunity for cooperation between the pairs of students?" And Item #7 asked, "Do you detect social

adjustments that might not have been possible in the ordinary routine of your classroom?"

Teachers' responses to the items mentioned above were generally positive and helpful, particularly from those teachers in the lower grades. These responses were made on their conclusions from a simple questionnaire that the students answered. This questionnaire was designed to reflect the feelings of the students concerning their partner and reading (see Appendix A-2, Students' Questionnaire).

Item #5 (response of the tutorees to their tutors). Teachers reported the following observations. "Feeling of pride in helping teammates." "They all seemed to love having partners." "Some worked well together, but others needed re-pairing." One tutor reported some difficulty accepting the role of tutoree. "Most felt they were working together as a team." "One student told me that it was fun to work with a partner."

Item #6 ("Has it provided an opportunity for cooperation?"). Observations included: "Overall the pairs worked out well." "It has definitely helped cooperation. I can see much improvement with my first graders." "Peer-mediated tutoring has provided much-needed experience in cooperation, taking turns, talking-out problems, willingness to get along, and in the general give-and-take that is a part of life."



Item #7 (Do you detect any social adjustments that might not have been possible in the ordinary routine of your classroom?). Few teachers reported any social adjustments occurred that would not have ordinarily taken place in their classroom, but some did recognize that this program "helped discipline problems," "certainly helped," and "helped identify quickly those students whose social development was lagging behind those of their peers."

The teachers' responses to items #5, 6, and 7 offer some support for hypothesis 2, but it becomes obvious that peer-pair organization cannot correct all the deficits in social skills.

### Hypothesis 3

Hypothesis 3 states: "Students in the role of tutor will acquire a sense of responsibility."

To assess this, the questionnaire in the Appendix section contained an item (#4) which asked each teacher to respond to his perception of the assumption of responsibility by the tutors. Responses were again generally positive, particularly in the lower and intermediate grades. These responses were the result of a questionnaire for the tutors in the program (see Appendix A-3 for Tutors' Questionnaire). "Most students eagerly accepted the role of tutor." "They did a good job of directing the work of the tutoree." "Some of the tutors assumed the responsibility very well." "Most tutors did a

pretty good job of taking on responsibility of being the tutor. They seemed to feel equal in their responsibility, despite the name of the tutor or tutoree." "The tutors accepted their responsibilities with pride and performed their duties well." "Socially, the tutor gained a sense of responsibility toward his fellow student which gave him a greater sensitivity to the low achiever's needs."

Teachers in kindergarten and first grade felt that these students were perhaps too young for "responsibility to another six-year-old" and suggested cross-age pairing would help foster responsibility in the lower grades.

#### Hypothesis 4

Hypothesis 4 states: "The self-esteem of the low ability child will improve when given a method (peer-tutoring) by which he can succeed."

Item #8 of the questionnaire to the teachers asked "Would you say success in this program has improved the self-esteem of the low ability student?"

Again, responses to this item were positive. The conclusions drawn from the questionnaires previously referred to were the basis for these responses.

Reports of promptness in gathering the necessary materials for the day's work and getting to the task with apparent anticipation were frequent. Anxiously awaiting turns for achievement checks by the teacher depicted the assurance on the part of the student of a good report.

One tutor, upon hearing of the death of his tutoree's grandmother, had his parents send flowers in his name. The esteem the tutor held for his partner is obvious and the response of the tutoree toward his partner would be unmeasurable.

The teachers did feel that success in this program had helped to foster self-esteem of the low achiever, "especially when placed with a very high achieving student who continued to praise that child in an honest manner." "Since each student shared the role of tutor, I feel this probably enhanced the self-esteem of the low-ability student." "In my opinion, any success or improvement in a child's achievement automatically raises his self-esteem," and did so in this program.

### Discussion

The objective of this field study, as stated on page 6, is to determine if the PMTP has improved the academic and social skills of students at Linden Elementary School.

To assess this objective, four hypotheses were formulated.

Hypothesis 1 addressed itself to academic skill improvement. It was hypothesized that students engaged in a program of peer mediated teaching for six months would evidence a higher gain than would normally be expected (0.6).



Most of the findings are based on a representative sample of 115 tutorees in the program. This sample excludes kindergarten, the approximately 10% of the student population classified as special education students, and one fourth-grade classroom, for special circumstances previously detailed.

As can be seen in Table 2, larger achievement gains were made by students in grades five through eight. The reason for this appears to be as follows: as was previously mentioned, in PMTP nothing is assumed. Peer mediated teaching is designed to fill in the gaps that may have been missed in the lower grades. Therefore, it stands to reason that students in the upper grades (who may have had more deficiencies in skills) would have more to gain by this type of instruction.

The lack of significant gains in the lower grades seems to have been attenuated by the fact that, particularly in the lower grades, there was a great degree of flexibility in the implementation of the program. It was more a case of two children working together, instead of a tutor-tutee relationship. While flexibility in a program is usually considered advantageous, this material is very structured and needed to be followed exactly as outlined. Through fragmentation and individualizing it loses its power and potential. The teachers were not as dedicated to the format as was desired to affect the outcome.

Also, there was certain pressure from some parents, upon hearing that their child was being "tutored," which may have affected the outcome. The tutor pairs were modified, and students alternated in the positions of tutor and tutoree.

Nevertheless, in assessing the academic success of the program, it must be said that the PMTP did improve the academic skills of students at Linden Elementary School. Even though not all students attained the desired 0.6 gain, the gains that were achieved were higher than those made in previous years through the regular academic instructional program.

Hypotheses 2-4 were formulated to assess improvements made in social skills, specifically the areas of cooperation, responsibility of tutors, and self-image of tutorees.

Responses of the teachers indicate that the program was particularly successful in enhancing the areas of responsibility and self-esteem. These were the areas in which improvements noted seemed to be more directly related to experiences provided by the program.

Thus, both the tutors and the tutorees benefited from participation in the program. Tutors were provided the opportunity to assume and exercise responsibility. Tutorees experienced a rise in self-esteem through academic gains made and the concentrated one-on-one attention by the tutors.

One further point should be made when evaluating the success of the program. Though it was deemed to be generally successful, it did not achieve the unqualified success status of the pilot program. This is probably due to the scope of the program, which is deemed to have been too wide-spread. While the pilot program had been a highly concentrated, closely supervised program involving 25 cross-age pairs, the present program involved some 200 same-age pairs. Perhaps more significant outcomes would have been achieved had the program not been so initially wide-spread, but instead had been concentrated in three or four grades.

### Conclusion

The Perry County PMTP was extended during the 1980-81 to include the entire school system. Results are yet to be assessed, but expectations are that the program will prove to be at least as successful as the period under study.

At the conclusion of the 1980-81 school year, the funding cycle will end and the program, as structured, will be discontinued. This is not to say, however, that there will be no future peer tutoring in Perry County. Many teachers, having seen this process work for their students, have expressed interest in using PMTP as another tool for individualizing instruction in their classrooms.



One of the most positive, and pleasantly unexpected, outcomes of the program has been the evolution and development of teacher-made supplementary materials to the basal reading text. For the 1981-82 school year, supplementary reading materials will be constructed exclusively by the teachers of Perry County, a project for which they have expressed great enthusiasm, and one which is a direct outgrowth of the PMTP experience in the Perry County School System.

Some final observations by the writer:

The process of peer-tutoring in Linden Elementary extended over a period of more than two years. During this time, modifications were made, tutoring pairs were changed, and even the materials used were modified or replaced in an effort to provide the opportunity for the greatest success of the venture. Complex in organization and sometimes frustrating to the supervising personnel, the program has provided benefits that far outweighed the problems encountered, in the opinion of the author. To wit: Title I reading class population will be significantly lower for the upcoming year. Why? More students attained levels in reading, as shown by the spring achievement tests, so as to disqualify them for the special reading classes. The peer-tutoring experience can not be ignored when considered in the light of this fact alone.

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Appendix A  
QUESTIONNAIRES

## Appendix A-1

## TEACHERS' ASSESSMENT QUESTIONNAIRE

To: \_\_\_\_\_

\_\_\_\_\_  
Grade

From: Sarah W. Lyon, Title IV-C

While we are awaiting our test results, there are some other areas on which we would like your assessment.

On the attached pages, would you please respond in narrative form to the points listed below. Feel free to add any other points on which you have some particular feeling.

It would be helpful in compiling your responses if you would handle each point separately. However, the method most comfortable for you will be acceptable.

Thank you for your cooperation.

.....

1. The materials as a guide.
2. The supplementary materials that were provided.
3. Organization of the program.
4. Assumption of responsibility by the tutors.
5. Response of the tutorees to their tutors.
6. Has it provided an opportunity for cooperation between the pairs of students?
7. Do you detect social adjustments that might not have been possible in the ordinary routine of your classroom?
8. Would you say success in this program has improved the self-esteem of the low ability student?
9. Your reaction to the leadership of the program--supervisor and/or supervision--consultants, etc.
10. What recommendations, if any, would you offer as a way of improving the program in the future?
11. Add any anecdotal information of interest, or any comments you would like to include that were not covered in the above statements and questions.

## Appendix A-2

## STUDENT QUESTIONNAIRE

Your Age \_\_\_\_ Boy \_\_\_\_ Teacher's Name \_\_\_\_\_

Your Grade \_\_\_\_ Girl \_\_\_\_ Date \_\_\_\_\_

INSTRUCTIONS: Read each question carefully and think about it. Answer all questions as completely and honestly as you can. This is not a test and we do not want your name. We want to know how you honestly feel.

1. How long have you been working with the person who is now your reading partner?
2. Circle the best answer. Is your reading partner,
  - a. someone you consider a friend?
  - b. someone you consider a good friend?
  - c. someone you work with at school?
  - d. someone hard for you to get along with?
  - e. someone you don't really know very well?
3. Have you learned anything new about your reading buddy?  
What?
4. Have your own feelings towards your reading partner changed since the first day you worked together?  
How?



5. Do the two of you ever do things besides reading together? What?
6. Do you think that you "fit in" at school? Why or why not?
7. Do you think your reading is improving? Why?
8. What is your favorite reading, spelling or writing game?
9. Do you think your teachers like you? Why?
10. What do you like best about school? Least?

TUTOR QUESTIONNAIRE

1. Why did you want to participate in the Individualized Tutoring Program?
2. Would you do it again next year if given the opportunity?  
Yes \_\_\_\_\_ No \_\_\_\_\_  
Why? \_\_\_\_\_ Why not? \_\_\_\_\_  

---
3. What do you like about the tutoring program?
4. What do you dislike about the tutoring program?
5. I feel \_\_\_\_\_ when my tutoree succeeds.
6. How does your tutoree react when you praise him?
7. Does the teacher give you help when you need it?
8. Do you feel your partner will improve more because you work to help him?
9. How do you feel about your tutoree's progress?
10. Have you benefited by having had the opportunity to participate in the Individualized Reading Tutoring Program. If so, how?

Appendix B  
SAMPLE MODULE



Teaching the initial blend--sc

- I. What is alike about these words? Underline the part that is the same in each.

score  
scum

scat  
scar

scalp

- II. Do these words begin with the sound you heard at the beginning of score and scalp? Write yes or no in the blank space.

Example:

a. stop (no)

1. \_\_\_\_\_

6. \_\_\_\_\_

b. scare (yes)

2. \_\_\_\_\_

7. \_\_\_\_\_

3. \_\_\_\_\_

8. \_\_\_\_\_

4. \_\_\_\_\_

9. \_\_\_\_\_

5. \_\_\_\_\_

- III. Build new words by substituting the sc for the letter at the beginning of each word:

Example:

sore (score)

1. pout \_\_\_\_\_

6. lamp \_\_\_\_\_

tar (scar)

2. more \_\_\_\_\_

7. sour \_\_\_\_\_

3. buff \_\_\_\_\_

8. hold \_\_\_\_\_

4. bald \_\_\_\_\_

9. tale \_\_\_\_\_

5. bare \_\_\_\_\_

- IV. Choose one of the new words from above to fit the blank space in each of the sentences.

1. The body of a fish is covered with \_\_\_\_\_.

2. A boy \_\_\_\_\_'s uniform is blue.

3. Sharp rocks cause \_\_\_\_\_ marks on shoes.

4. Water that is too hot can cause \_\_\_\_\_ed hands.

5. The baseball \_\_\_\_\_ was 9-5 for the home team.

- V. With the word parts here, make a word that will fill the sentences. All will begin with sc.

Beginning	Middle	Ending
sc	a	p
	o	t
	oo	ld
		nt

1. Being late for dinner can bring a \_\_\_\_\_ ing from father.
2. " \_\_\_\_\_ " will scare a cat.
3. We build a sand castle by \_\_\_\_\_ ing the sand.
4. An almost full spoon is called a \_\_\_\_\_ teaspoon.

- VI. Can you tell the meaning the the sc words in these sentences?

1. Mother scours the floor when she cleans it.
2. When a cut heals, a scab forms.
3. When a boy is naughty, he might be called a scamp.
4. A scum forms on the top of dirty water.
5. The skin on one's head is the scalp.

- VII. Make up four nonsense words with these parts:

Beginning	Middle	Ending	
		ng	1. _____
	ca	de	2. _____
sc	in	rt	3. _____
	a	lt	4. _____
		dge	5. _____

## Appendix C

### 29 WAYS TO SAY "GOOD FOR YOU"



## 29 WAYS TO SAY "GOOD FOR YOU"\*

Everyone knows that a little praise goes a long way. But a little praise really needs to be something more than a few phrases repeated over and over. Children need more than the traditional "Good," "Very good" and "Fine"--if encouragement is expressed. Here are some additional possibilities:

That's really nice!  
 Thank you very much.  
 Wow!  
 That's great!  
 I like the way you are working.  
 Keep up the good work.  
 Everyone's working so hard.  
 That's quite an improvement.  
 Much better.  
 Keep it up.  
 It's a pleasure to teach when you work this way.  
 Good job.  
 What neat work.  
 You really outdid yourself today.  
 This kind of work pleases me very much.  
 Congratulations! You only missed \_\_\_\_\_.  
 Terrific!  
 I bet your Mom and Dad would be proud to see the  
     job you did.  
 Beautiful!  
 I'm very proud of the way you worked (are working)  
     today.  
 Excellent work!  
 I appreciate your help.  
 Very good. Why don't you show the class?  
 Thank you for (sitting down, being quiet, getting  
     right to work, etc.)  
 Marvelous!  
 Nice going.  
 That's certainly one way of looking at it.  
 That's an interesting point of view.  
 You're really going to town.

---

\*Given to tutors in response to their reaction:  
 "We get tired of saying the same thing."