DOCUMENT RESUME

ED 297 533   EC 210 384

AUTHOR   Trapani, Catherine
TITLE   Peer Tutoring: Integrating Academic and Social Skills
                Remediation in the Classroom.
SPONS AGENCY   National Inst. of Handicapped Research (ED),
                Washington, DC.
PUB DATE   Mar 88
GRANT   G008300148
NOTE   43p.; Paper presented at the Annual Convention of the
                Council for Exceptional Children (66th, Washington,
                DC, March 28-April 1, 1988).
PUB TYPE   Speeches/Conference Papers (150) -- Reports -
                Research/Technical (143)

EDRS PRICE   MF01/PC02 Plus Postage.
DESCRIPTORS   *Cross Age Teaching; Instructional Effectiveness;
                Intermediate Grades; *Interpersonal Competence;
                *Learning Disabilities; Males; Peer Teaching; Skill
                Development; Spelling; Training Methods; *Tutoring
IDENTIFIERS   Rehearsal (Learning)

ABSTRACT
        The study explored the effectiveness of social skills
training and cross-age tutoring on the acquisition and use of social
skills among 20 mainstreamed learning disabled boys (ages 9-12). All
subjects received direct instruction in such communication skills as
greeting, listening, asking questions, answering questions, and
complimenting. Seven of the students then tutored younger children in
spelling. Emphasis was placed on the use of appropriate social
communication skills in the tutoring situation providing an
opportunity for active rehearsal of the target social skills.
Evaluation indicated that experimental subjects responded to the
intervention for two of the target behaviors (greeting and answering
questions). Three figures, 7 tables, and 52 references are included.
(DB)

PEER TUTORING: INTEGRATING ACADEMIC AND SOCIAL SKILLS

REMEDIATION IN THE CLASSROOM

Copyright, 1986
Catherine Trapani, Ph.D.
Assistant Professor of Special Education
Illinois Benedictine College

Paper presented at the Annual Convention of the
Council for Exceptional Children
(66th, Washington, DC, March 28-April 1, 1988)

Peer Tutoring: Integrating Academic and Social Skills
Remediation in the Classroom

Since the inception of PL 94-142 and the wider use of
mainstreaming in special education programming,
professionals have increased their awareness of the social
deficits of learning disabled (LD) individuals. Mildly
handicapped c' ldren have had difficulty making the social-
behavioral adjustments which are demanded in the regular
classroom by teachers and peers.

Numerous sociometric studies of the peer acceptance of
mainstreamed elementary school children have been conducted.
Results indicate that LD children are less accepted and more
overtly rejected than their nonlearning disabled peers (NLD)
(Bruninks, 1978; Gresham, 1986; Scranton & Rykman, 1979).
Additional studies have indicated that the social rejection
of LD children is not limited to peers, but also includes
rejection by parents and teachers (Bryan, 1983). The results
of other studies demonstrate that LD students have negative
verbal interactions with their classmates (Bryan, 1974a) and
present general behavior problems (Cullinan, Epstein, &
Lloyd, 1981; Sutherland, Algozzine, Ysseldyke, & Freeman,
1983). Thus, it appears that academic skill deficits are not

the only important characteristics of learning disabilities and lack of academic achievement not the only concern for remediation.

Various approaches to training ID children in the use of social skills have been employed. Some techniques have been successful in treatment settings, but have not generalized to the natural setting.

Participation as a peer tutor in a social skills training program may help LD children understand the utility of using prosocial behavior. Tutoring may be considered as an active rehearsal or guided practice of the training.

The social skills training strategy used in this study incorporated direct instruction of target behaviors and the cross-age tutoring model. Positive effects were demonstrated on some of the target behaviors.

THE IMPORTANCE OF SOCIAL COMPETENCE

Marcus and Leiserson (1978) believe that there are several advantages to encouraging social competence in children. The child who behaves prosocially may develop social motivation -- learning to value the welfare of others and feeling competent to give assistance. Conversely, children who have not had the opportunity to have cooperative and effective social interaction may become less active social agents. This may lead to difficulties in

forming and maintaining friendships. Previously, emphasis
in remediation was limited to academic and self-help skills,
but the results of studies on behavioral problems have had
an influence on the remedial goals of special educators for
the LD population.

It is widely assumed that peer status is related to an
individual's level of social competence. Correlational
studies in social competence indicate that early problems in
peer group status can affect psycho-social development in
later life. Adolescent delinquency (Keilitz & Dunivant,
1986), dropping out of school (Hartup, 1970), "bad conduct"
discharges from military service (Roff, 1961), and mental
health problems (Cowen, Pederson, Babigian, Izzo & Trost,
1973) have all been related to difficulties in early peer
relations. Similarly, high social status in childhood has
been related to academic achievement (Cobb, 1982) and
inte_personal adjustment in later life (Barclay, 1966). As
the literature indicates, the development of social skills
is important, as peer interactions and social skills may be
relevant to the acquisition of normal labels and roles in
adult life (Greenspan, 1981).

Significance of the Problem

The use of prosocial behaviors may contribute to social
adjustment and influence the level of satisfaction in

interpersonal relationships. Teachers and parents report
that social skills and emotional stability are more likely
to lead to success in school than are IQ and academic
achievement scores (Richards & McCandless 1972). It was
assumed by PL 94-142 that handicapped children would be able
to adapt to the regular class setting by modeling the
behavior of their nonhandicapped peers (Gresham, 1981;
Gottleib, 1979). Studies on the effects of mainstreaming
have demonstrated, however, that LD children are likely to
have fewer social skills than NLD children and are less
accepted by them. Many LD children have trouble complying
with the social demands of the mainstreamed setting and have
problems interacting with teachers and peers (Bryan, 1974a;
Bruininks, 1978; Garret and Crump, 1980; LaGreca & Meisbov,
1978). If positive and negative social behavior tends to be
reciprocal (Staub, 1975), it may be possible that LD
children are at even greater risk for problems in
psychosocial development than their NLD peers. Learning
disabled children who have poor peer relationships may
benefit from social skills training.

A Model of Social Competence

A core group of theoretical models of social competence
have emerged from this literature over the last decade. The
models range from the behavioral approach (Foster & Richey,

1979), to the more recent consideration of perception and
social interaction (Kronick, 1981), communication (Rinn &
Markle, 1981), peer group status (Bryan, 1978), and
cognitive behavior modification (Gresham, 1981). Inasmuch as
the definition and theory influence the "what" and the "how"
of social skills assessment and training, it is important to
understand the orientation, and underlying values implie to bv
various intervention programs. Some programs are narrow,
others are overinclusive; no one accommodates all needs.

Many researchers include social skills in the
theoretical hierarchy of social competence (Greenspan, 1981;
Wine & Smye, 1981). Social skills as defined for the purpose
of this study interface with the concept of social
competence. Social competence is viewed as the result of
social responses and skills that: a) enable the child to
initiate and sustain positive relations with others; b)
foster peer acceptance and successful classroom adjustment;
and c) enable the child to cope with and adapt to the social
environment. This definition is compatible with the
communication model of social competence (Rinn & Markle,
1981). According to the communication model, verbal and
nonverbal responses guide the interpersonal performance of
individuals, affecting other individuals and the environment
by obtaining, removing, or avoiding undesirable outcomes.
These skills, may include: a) joining in social activity; b)

initiating and maintaining conversation; c) perceiving the
social situation regarding the appropriateness of topics,
times and length of conversation; and d) showing empathy for
others.

REVIEW OF THE LITERATURE

Sociometric and behavioral observations of LD
children's peer interactions have established that LD
children have lower social status than their nondisabled
peers. While these studies have provided general
information about LD children's social interaction they have
not addressed the possible cause(s) of low social status.
Recently, researchers have considered some of the
qualitative aspects of LD children's social behavior.
Analyses of the components of social behaviors may help to
identify the reasons why LD children are less liked by their
teachers and peers (i.e., verbal communication, social
perception, self-concept, and role-taking). Since the
social communication, model was employed in this study, the
verbal communications of LD children were of interest.

Communication skills of LD children. Research
indicates that the communication skills of LD children are
less developed than those of their NLD peers. Children who
ask for help, receive it, and children who make rejecting
and competitive statements elicit competition. Negative

social behaviors, including noncompliance and interference, are related to rejection by others (Hartup, Glazer, & Charlesworth, 1967). Learning disabled subjects were observed to make more competitive statements while NLD children showed more consideration in their conversation (Pearl, Bryan, & Donahue 1983). It may be possible that the competitive statements made by LD children contribute to their low social status.

Learning disabled children not only make more negative statements but they also have difficulties initiating, maintaining, and controlling a conversation (Bryan, Donahue, Pearl & Storm, 1981). When using verbal communication to problem-solve, LD children provide low levels of information and have difficulty obtaining information by asking questions (Spekman, 1981). It appears that the communication skills of LD boys may differ from those of LD girls. More simple language is used by LD boys regardless of the age and ability of their audience while adjustments in the levels of complexity of language are made by LD girls. Overall, the language of LD children is less flexible (Bryan & Pflaum, 1978; Soenksen, Flagg, & Schmits, 1981). Using direct observations in the classroom setting, Moore and Simpson (1983) assessed the interaction patterns of mildly handicapped and nonhandicapped children. They indicated that the behaviors of LD and behaviorally disordered (BD)

Both LD and BD subjects were different than nonhandicapped subjects in that they engaged in more negative verbalizations, and while all groups made disruptive statements, the nonhandicapped students made the fewest,

The primary emphasis of the current curriculum is in instruction of academic skills, and the remediation of academic skill deficits has been the major goal of learning disabilities specialists. Although social skills training is not typically included in the regular curriculum the instruction of social communication skills may improve the social interactions of LD children. In view of the evidence regarding the impact of social competence on the acquisition of normal roles in adult life, social skills training is, in this author's view, of paramount importance. The following sections will discuss social skills training of the LD population and the use of peer tutoring as a way to generalize social skill training within the context of the classroom.

Current Practice

In an attempt to respond to the findings of social competence studies that indicate early problems in peer status can negatively affect the psycho-social development of the individual later in life, researchers and practitioners have designed social skill training programs

for the LD population. These programs are aimed at improving social competence and social interactions. In keeping with the social communication model, target behaviors for the LD population include greeting peers, initiating conversations, joining groups, and responding to questions. Cues involving eye contact, appropriate physical contact, and verbal praise are provided. The training components of the communication model described in the literature include a combination of coaching, behavioral rehearsal, modeling and feedback.

Although some research has indicated an improvement in the quality and frequency of social interaction in the treatment setting, as a result of social skills training these changes often are not maintained in the natural setting (Van Hasselt, Hersen, & Whitehall, 1978). Social skills training, therefore, may not generalize and may not be effective in altering social behavior or peer status in natural settings. Researchers should probably concern themselves with the issue of generalization of social skills training before incorporating it into the already overtaxed curriculum (Berler, Gross, & Drabman, 1982). Some issues surrounding the problems of generalization are the context of social skills training, motivation of the student to learn and use social skills, and the students' understanding of the importance of social skills.

To date, social skills training has been conducted in experimental settings using social simulations, role-playing, and prompts given by the training staff. These settings may not be appropriate for the acquisition of social skills. A normal context of interaction, defined as the classroom for children may be more conducive to the effective teaching and application of social skills (Greenspan, 1981; Cartledge & Milburn, 1978). It is in this context that children may best learn the expectations held by peers about appropriate social behavior and the consequences resulting from their social actions. Children with social skills deficits should be instructed about appropriate social behavior in the setting where they will use that behavior and with the individuals with whom they will be interacting. Research has indicated that social competence is dependent upon the reinforcers received from significant others (Asher, Oden & Gottman, 1977; Asher, Singelton, Tinsley, & Hymel, 1979). Reinforcers received for appropriate social skills may be stronger if they are received from peers.

Motivation to demonstrate socially skilled behavior may be enhanced if children can understand the application and consequences of their actions. It is accepted that children learn academic skills better when the concept is clearly defined and they are given positive and negative

examples and relevant applications of the task (Engelmann,
1982). It seems logical that the same methodology should be
employed with the teaching of social skills.

Limiting social skills training to the treatment
setting is not an effective teaching strategy. Social skills
should be taught in a relevant context. Different social
skills are required for different situations. Given the
present understanding of the problem solving strategies of
the learning disabled it is unreasonable to expect an LD
child to adapt social skills to meet different occasions .
without providing direct instruction and guided practice of
this skill.

PURPOSE OF THE STUDY

One approach that may facilitate childrens'
understanding of the importance of social skills, enhance
their motivation to learn and use these. skills, and promote
generalization of social skills training is peer tutoring.
Peer tutoring is operationally defined as the use of
children (same-age or cross-age) as tutors of other children
(Allen, 1976). Major reviews of the tutoring literature
have not typically included research on handicapped
populations. Some relevant studies include those by Cloward
(1976) who states that intelligence and achievement are not
necessarily prerequisites to successful tutoring, and

Osguthorpe & Scruggs (1986), among others, who illustrate
that handicapped individuals can, indeed, function
succes-fully as tutors (Mellberg, 1980; Strain 1981). It is
agreed, therefore, that tutoring provides a conceptually
sound basis for the instruction of handicapped and
nonhandicapped students.

While handicapped children have been tutored in a
variety of subjects and settings, rarely have they been
assigned the role of tutor. The assumption has been made in
the past that handicapped populations would not serve
effectively in this capacity. There is no reason, however,
why members of the handicapped population cannot serve as
tutors, as long as they have some competence in the topic
and are assigned to instruct a younger tutee. Allen's (1976)
work supports the cross-age tutoring model as beneficial to
students. "In learning by teaching, the child who is
teaching finds a meaningful use for the subject,... a
utility for his knowledge" (Gartner, Kohler, & Reissman,
1971, p.60). In the past, tutoring applications have been
used to enhance academic performance and modify the behavior
of a variety of populations. Tutoring studies indicate that
tutors learn as much or more than their tutees.

Kazdin, Matson and Estveldt-Dawson (1984) have found
that analogue evaluation of social skills does not
necessarily correlate highly with skills used in real-life

situations. The use of LD students as tutors in an academic
context may reinforce the social skills that have been
taught to them. Having a practical application for their
knowledge may motivate LD children to understand the
importance of appropriate social communication and to
utilize these skills. Children who talk with peers about
their schoolwork are more likely to learn their les~ons
(Cobb, 1982). Social competence may also be fostered through
the use of prosocial behavior while interacting with peers
during peer tutoring.

The purpose of this study was to explore the
effectiveness of social skills training and cross-age
tutoring on the acquisition and use of social skills among
LD boys. Learning disabled students reviewed direct
instruction formats containing the elements of appropriate
communication skills. Target behaviors included greeting,
listening, asking questions, answering questions and
complimenting. Although the students tutored in spelling,
emphasis was placed on the use of appropriate social
communication skills in order to assist their peers. The
study, therefore, involved those components that have been
identified as important in social skills training: a) the
tutoring intervention involved a classroom project; b) LD
students had the opportunity to apply their training through
active rehearsal of the target skills in the natural

(classroom) setting; and c) LD tutors had the opportunity to receive reinforcers from their peers. The incorporation of the component of active rehearsal (tutoring) made the study distinctly different than other studies of social skills training and the LD population.

METHODOLOGY

The Sample. A total of 20 boys, in the fourth, fifth, and sixth grades participated in this study. The children attended schools within 25 miles of Madison, Wisconsin and came from predominantly white, middle class communities. All of the children were placed in LD resource rooms, but participated in classes with nonhandicapped children for 50% of their class schedule. The subjects were identified as having social skills deficits by their LD teachers. The subjects had a mean chronological age of 11.2 years (range = 9.3 to 12.7), and fell within the average range of intelligence as measured by the WISC-R (M = 93.9, SD = 9.11). The mean pretest spelling score as measured by the Test of Written Spelling (TWS) (Hammill & Larsen, 1976) was 20.4 (SD= 8.32). Teacher ratings of social behavior were evaluated by the Walker Problem Identification Checklist (WPBIC) (Walker, 1982((M = 24.35, SD = 19.08). The Kruskal-Wallis or H test was performed on the pretest for the dependent measures for each group to obtain

Table 1

Demographic, Intellectual, Achievement Characteristics and Teaching Ratings of the 1D Populations

Variable	Experimental n=7			Comparison n=7			Control n=6		
	Mean	SD	Range	Mean	SD	Range	Mean	SD	Range
Age	11.285	1.133	12.7-9.4	10.985	.997	12.3-9.3	11.533	.550	12.6-11.1
WISC-R	94.142	5.956	103-85	92.571	6.948	100-83	95.166	14.524	121-84
IWS pre	19.000	9.363	29-5	21.714	8.220	33-8	20.500	8.479	30-7
IWS post	21.4286	9.4843	32-9	20.000	8.906	32-9	20.833	9.064	29-7
WPBIC pre	21.714	14.2562	43-1	24.8571	23.751	32-6	26.833	21.111	66-2
WPBIC post	13.000	13.063	32-0	18.714	20.790	45-2	15.166	18.594	51-5

N=20

18

information regarding the parity of subjects at the onset of the study. No siznificant differences were detected between the groups. (See Table I for information regarding the sample.)

Subject Assignment. Subjects were assigned randomly to participate in the experimental (n=7), comparison (n=7) or control group (n=6). Experimental and comparison subjects received direct instruction in five target social communication skills: a) greeting, b) asking questions, c) answering questions, d) listening, and e) complimenting.

Social skills training was conducted for seven consecutive days following the pretest. Children in the experimental and comparison groups met together for approximately 30 minutes each day. Training of the five target social skills was conducted according to direct instruction teaching procedures (Engelmann & Carnine, 1982; Carnine and Silbert, 1979). The five target skills were presented individually, over the course of seven consecutive school days, through structured vocabulary formats which clearly defined the meaning of each of the target skills. Each target social skill was presented individually. The direct instruction sequence was standardized across all five target skills and included the following elements: definition of the target skill, presentation of positive and negative examples, asking questions regarding examples,

discussion, review, and role-play.

Experimental subjects tutored NLD second graders ir spelling after the completion of social skills training. Cross-age tutoring was considered to be active rehearsal of the five target behaviors. Comparison subjects worked with an LD peer on regular spelling assignments, while control subjects participated in teacher-taught language arts lessons. All subjects worked for approximately 20-minute periods, three times per week for four weeks.

Instrumentation and Data Collection. Pre and posttest scores were collected on two standardized dependent measures (TWS and WPBIC). A comparison of differences on the medians between the three groups on the pre-and posttest scores of each test was used to measure change in the subjects after the intervention. The third dependent measure consisted of repeated direct observations of the target behaviors which were made by trained observers who were blind to the purpose of the study. Repeated observations were made at three points during the study: prior to the training, post training, and post tutoring. The ratings of the appropriateness of subjects' use of the target behaviors was evaluated by deriving weights through a linear transformation of the data consistently across groups. These weights were then applied to the subjects' actual behavior, thus converting the data to the ordinal scale (Festinger,

1953; Winer, 1962).

Analysis of the Data. Nonparametric statistics were
used in this study because the sample sizes were small,
homogeneity of varirnces was questionable, and the medians
seemed to be more reliable than the means (See Marascuilo &
McSweeney, 1977, p. 263). Three research questions were
inclured in the study which utilized comparisons of three
groups. In order to avoid splitting the Type I error rate,
each of the three questions was treated as a separate study.
Differences on pre - and posttest scores for each question
were compared pairwise between all three groups. Alpha, the
significance level, was set at .05. The Kruskal-Wallis test
was used to determine whether differences existed between
one or more of the groups on each of the dependent measures.

RESULTS

The first hypothesis investigated the differences on
pre-and posttest scores on the TWS (Larsen & Hammill, 1976)
between subjects who received social skills and cross-age
tutoring and those who did not. Differences were detected
between the experimental and comparison groups on the TWS, x^2
= 6.012. (x^2 significant at 5.99, p < .05, see Table 2). The
second hypothesis compared differences in teacher ratings of
LD subjects' social behavior as measured by the WPBIC

Table 2

Hypothesis #1 – Results of Hypothesis Investigating Differences on the Test of Written Spelling

Group	N	Statistical Test	$\bar{\bar{X}}$ Median Ranks	Test Statistic	Probability of Occurrence	Conclusion
Experimental	7	Kruskal-Wallis	6.43	$x^2 = 6.0122$	.0495	reject the null hypothesis
Comparison	7		14.14			
Control	6		11.00			

x^2 significant at 5.99 xp < .05   df = 2

The mean of the median ranks represents the average of combined scores.

(Walker, 1982). No differences were found between the experimental, comparison, and control groups on the Walker.

The third area of interest included hypotheses regarding the use of social skills after social skills training and cross-age tutoring. Hypotheses three through seven were addressed through a set of analyses which were conducted to examine differences in the frequency of occurrence of the five target behaviors between the three groups of LD subjects (i.e., greeting, asking questions, answering question, listening and complimenting). Statistical differences were detected on two of the behaviors (greeting, answering questions) and gains were noted in the use of complimenting.

Significant differences were found on the frequency of occurrence of appropriate greeting, $X^2 = 10.241$. Supplemental analysis using the Mann-Whitney U Test indicated that differences existed between experimental and comparison subjects (p = 0.0037), and experimental and control subjects (p = 0.0117). Changes in use of greeting skills occurred after the social skills training and pre-to-posstest comparisons. (See Tables 3, 4, and Figure 1, for further information.)
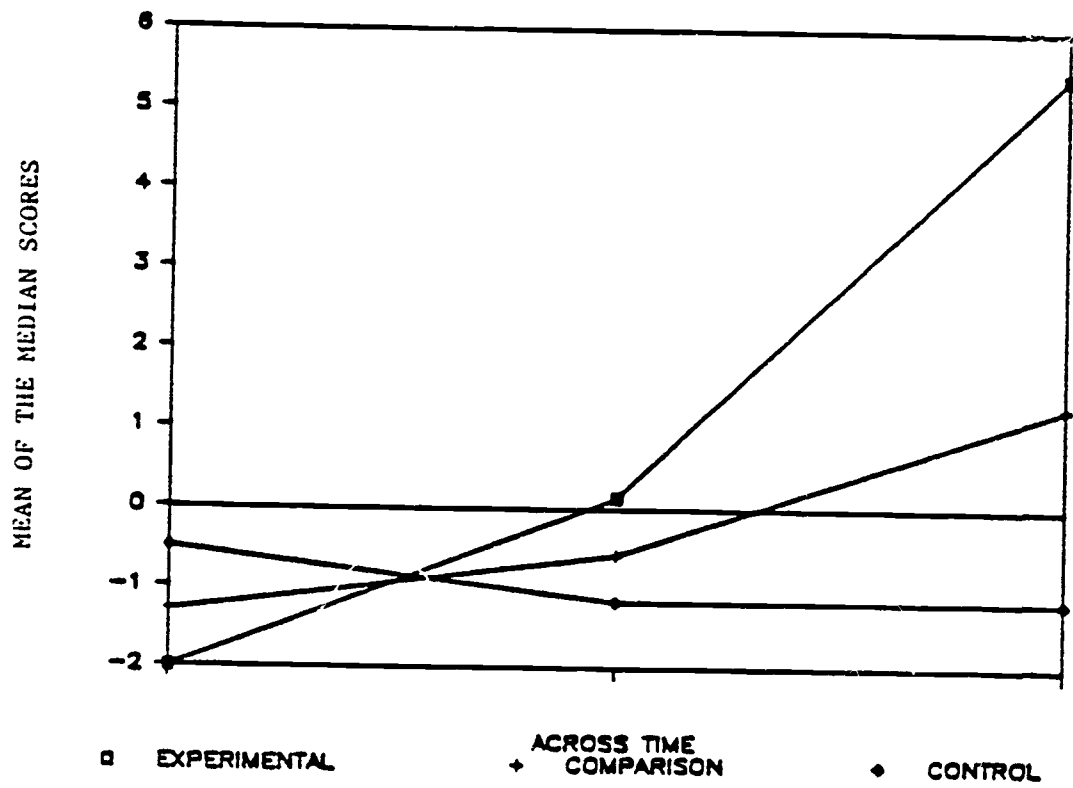
GREETING DATA

Figure 1

Frequency of Occurrence of Greeting Behavior

Table 3

Hypothesis #3 - Results of Hypothesis Investigating Differences on the Frequer.; of Occurrence of Greeting Behavior

Group	N	Statistical Test	$\overline{X}$ Median Ranks	Test Statistic	Probability of Occurrence	Conclusion
Experimental	7	Kruskal-Wallis	4.79	$x^2 = 10.241$	.0060	reject the null hypothesis
Comparison	7		13.43			
Control	6		13.75			

x^2 significant at 5.99 $\times$ p < .05   df = 2

Table 4

Hypothesis #3 - Supplemental Analysis of Differences Between Groups on the Frequency of Greeting Behavior

Group	N	Test Performed	Test Statistic	Exact Probability of Occurrence	Conclusion
Experimental vs.	7	Mann-Whitney	Z = -2.9038	.0037	reject the null hypothesis
Comparison	7			.	
Experimental vs.	7		Z = -2.5034	.0123	reject the null hypothesis
Control	6				
Comparison vs.	7		Z = -2.918	.7704	null not rejected
Control	6				

alpha = .016

26

The x^2 (8.0939) was significant for answering questions; therefore, the alternative hypothesis, that differences existed in the frequency of answering questions between experimental and other subjects, was accepted. (See Table 5, 6, and Figure 2, for further information.)

As can be see in Figure 3, complimenting is not a frequently occurring prosocial behavior. Analysis of the data indicated increases in the use of the behavior by the experimental group as the study progressed, providing clinical support for the use of this intervention (see Table 7).

Within-group Differences. The primary research question investigated the effects of the intervention between the three groups participating in the study. The effectiveness of social skills training and cross-age tutoring was also ascertained by examining the changes in performanc within the members of each of the three groups. Within-group differences attested to the clinical significance of the intervention.

The Matched Pair Wilcoxin test, the nonparametric analogue to the within-subjects t-test was used to analyze the pre/post observations of each subject. Results of the analysis of dependent measures of experimental subjects

ANSWERING DA:A

MEAN OF THE MEDIAN SCORES

ACROSS TIME

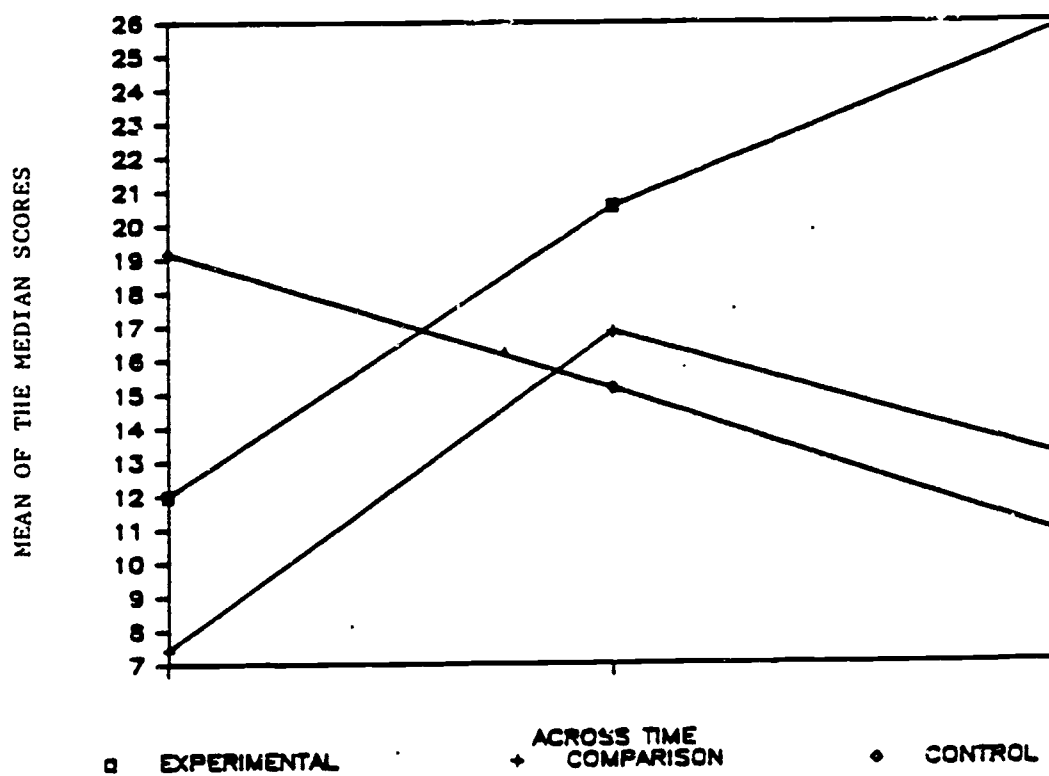□ EXPERIMENTAL   + COMPARISON   ● CONTROL

Figure 2

Frequency of Occurrence of Answering Questions

Table 5

Hypothesis #5 - Results of Hypothesis Investigating Differences on the Frequency of
Occurrence of Answering Questions

Group	N	Statistical Test	$\overline{X}$ Median Ranks	Test Statistic	Probability of Occurrence	Conclusion
Experimental	7	Kruskal-Wallis	6.07	$x^2 = 8.093$	.0175	reject the null hypothesis
Comparison	7		10.71			
Control	6		15.42			

x^2 significant at 5.99 $p < .05$ $df = 2$

Table 6

Hypothesis #5 - Supplemental Analysis of Differences Between Groups on the Frequency of Answering Questions

Group	N	Test Performed	Test Statistic	Exact Probability of Occurrence	Conclusion
Experimental vs. Comparison	7 7	Mann-Whitney U	$Z = -1.7288$	.0839	null not rejected
Experimental vs. Control	7 6		$Z = -2.5034$	.0123	reject the null hypothesis
Comparison vs. Control	7 6		$Z = -1.714$	.0865	null not rejected

alpha = .016

yielded significant within-group differences of three measures: TWS, greeting and answering questions. No significant within group differences were detected for either comparison or control subjects.

SUMMARY

The purpose of the study was to explore the effectiveness of social skills training and cross-age tutoring on the acquisition and use of social skills in the classroom setting. The subjects were 20 mainstreamed, LD boys participating in LD resource rooms in three different school districts. The boys were identified by their teachers as having social skills deficits.

Social skills training included the presentation of direct instruction formats for each of five target behaviors (greeting, asking questions, answering questions, complimenting and listening) included in the study. Upon completion of the social skills training, experimental subjects tutored nonhandicapped second-graders in spelling. Cross-age tutoring was considered to be active rehearsal of social skills training. The effectiveness of the intervention on social behaviors, teacher ratings, and spelling achievement were evaluated.
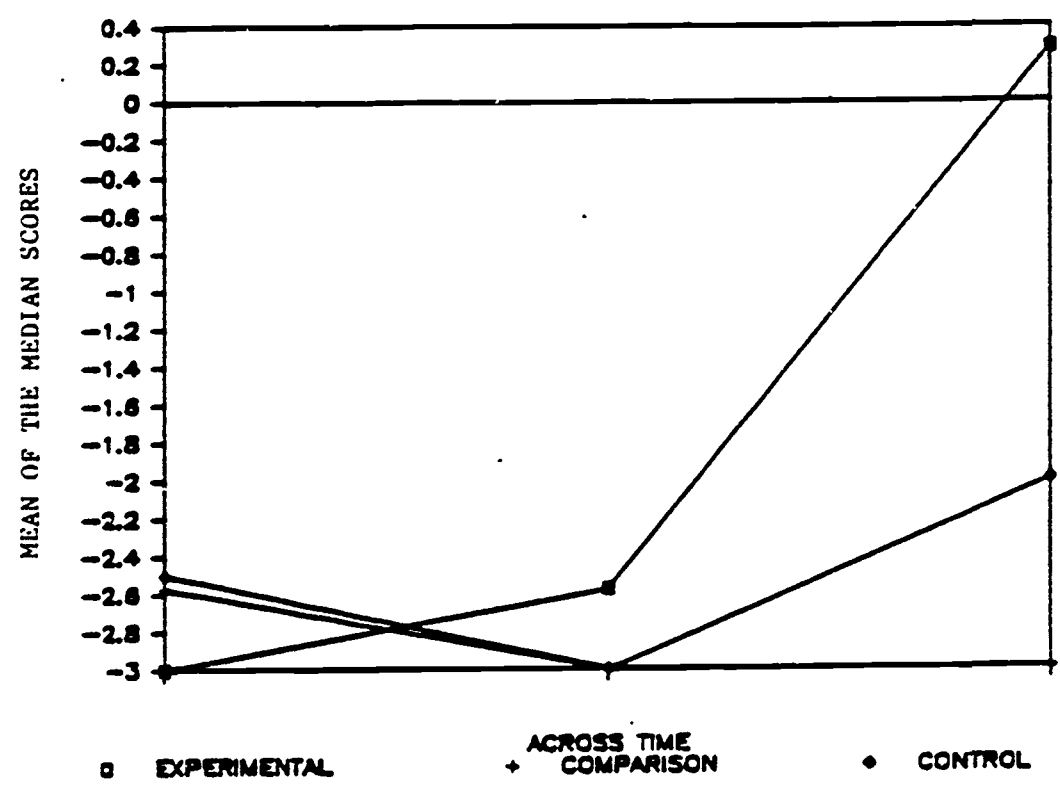
COMPLIMENTING DATA

Figure 3

Frequency of Occurrence of Complimenting Behavior

Table 7

Hypothesis #7 – Results of Hypothesis Investigating Differences in the Frequency
of Occurrence of Complimenting

Group	N	Statistical Test	$\overline{X}$ Median Ranks	Test Statistic	Probability of Occurrence	Conclusion
Experimental	7	Kruskal-Wallis	6.93	$x^2 = 5.672$	.0586	do not reject the null hypothesis
Comparison	7		13.50			
Control	6		11.17			

x^2 significant at 5.99 $p < .05$ $df = 2$

33

The design used in this study was a pre post design
which incorporated repeated measures of the direct
observations. Spelling and teacher ratings were evaluated
by the pre post administration of standardized tests (i.e.,
TWS & WPBIC). Frequencies of the target behaviors were
tallied before and after social skills training to assess
its effects on the use of social skills by the experimental
and comparison subjects. Observations were again conducted
upon completion of cross-age tutoring.

The data were analyzed using the Kruskal-Wallis test (a
nonparametric analogue to the Analysis of Variance).
Supplemental analyses of significant findings were
investigated by the Mann-Whitney U test.

Statistically significant results demonstrated that
experimental subjects responded to the intervention for two
of the target behaviors (greeting, and answering questions).
It was evident through the analysis of test scores and
tallies of direct observations on the other dependent
measures, that the intervention resulted in positive gains.

Consistent with the opinion of previous researchers it
is concluded that cross-age tutoring can be a powerful
treatment for some LD children. The strategy employed in
this study, of incorporating social skills training and
cross-age tutoring is potentially more effective for
promoting generalization of social skills because it

utilized direct instruction of the target skills and active rehearsal of social skills vis-a-vis the tutoring model. There are several implications for future research including thr. effects of the treatment on sociometric status, self-esteem, motivation, and self-monitoring.

REFERENCES

Allen, V. (1976). <u>Children as teachers: Theory and research on tutoring.</u> New York: Academic Press.

Asher, S.R., Oden, S.L., & Gottman, J.H. (1977). Children's friendships in school settings. In L.G. Katz (Ed.), <u>Current topics in early childhood education</u>, Vol. 1. Norwood, NJ: Ablex.

Asher, S.R., Singelton, L.C., Tinsley, B.R., & Hymel, S. (1979). A reliable sociometric measure for preschool children. <u>Developmental Psychology</u>, <u>15</u>, 443-444.

Barclay, J. (1966). Interest patterns associated with measures of social desirability. <u>Personality Guidance Journal</u>, <u>45</u>, 56-60.

Berler, E., Gross, A., & Drabman, R. (1982). Social skills training with children: Proceed with caution. <u>Journal of Applied Behavior Analysis</u>, <u>15</u>, 41-53.

Bruininks, V.L. (1978). Peer status and personality choice of learning disabled and non-learning disabled students. <u>Journal of Learning Disabilities</u>, <u>11b</u>, 484-489.

Bryan, J., & Bryan, T. (1983). The social life of the learning disabled youngster. In J.D. McKinney, & L. Feagans (Eds.), <u>Current topics in learning</u>

disabilities. Norwood, NJ: Ablex Publishing.

Pearl, R., Bryan, T., & Donahue, M. (1983). Social
Behaviors of Learning Disabled Children: A Review.
Topics in Learning and Learning Disabillities.
3, 1-14.

Bryan, T. (1978). Learning disabled children's compre-
hension of nonverbal communication. Journal of
Learning Disabilities, 10, 36-40.

Bryan, T., Donahue, M., Pearl, R., & Sturm, C. (198:.).
Learning disabled children's conversational skills.
Learning Disabled Quarterly, 4, 250-259.

Carnine, D., & Silbert, J. (1979). Direct
instruction reading, Columbus: Charles E.
Merrill.

Cartledge, G., & Milburn, J. (1978). The case for
teaching social skills in the classroom: A review.
Review of Educational Research, 1, 133-156.

Cloward, R.D. (1976). Teenagers as tutors of
academically low achieving children: Impact on
tutors and tutees. In V.L. Allen (Ed.), Children
as teachers: Theory and research in tutoring.
New York: Academic Press.

Cobb, J.A. (1982). The relationship of discrete class-
room behaviors to fourth-grade academic achievement.
Journal of Educational Psychology, 63, 74-80.

Combs, M.L., & Slaby, D.A. (1977). Social skills
    training with children. In B.B Lahey, & A.E. Kazdin
    (Eds.), Advances in clinical child psychology, Vol.
    1 (pp. 161-201). New York: Plenum Press.

Cowen, E.L., Pederson, A., Babigian, H., Izzo, L.D., &
    Trost, M.A. (1973). Long-term follow-up of early
    detected vulnerable children. Journal of Consulting
    and Clinical Psychology, 41, 438-446.

Cullinan, D., Epstein, M., & Lloyd, J. (1981). School
    behavior problems of learning disabled and normal
    girls and boys. Learning Disabled Quarterly, 4,
    163-169.

Devin-Sheehan, L., Feldman, R., & Allen, V.
    (1976). Research on children tutoring children:
    A critical review. Review of Educational Research,
    46, 355-385.

Engelman, S., & Carnine, D. (1982). Theory
    of instruction: Principles and applications.
    New York: Irvington Publishers.

Epstein, M., Cullinan, D., & Lloyd, J. (1986).
    Behavior problem patterns among the learning
    disabled: III - Replication across age and sex.
    Learning Disabled Quarterly, 9, 43-54.

Festinger, L. (1953). Research methods in the
    behavioral sciences. New York: Holt,

Rhinehart & Winston.

Foster, S.L., & Ritchey, W.L. (1979). Issues in the
    assessment of social competence. Journal of Applied
    Behavior Analysis, 12, 625-638.

Garret, M., & Crump, D. (1980). Peer acceptance,
    teacher preference and self appraisal of social
    status among learning disabled students. Learning
    Disabilities Quarterly, 3, 42-48.

Gartner, A., Kohler, M., & Riesman, F. (1971).
    Children teach children: Learning by teaching.
    New York: Harper & Row.

Gottlieb, J. (1979). Placement in the least restrict-
    ive environment in LRE: Developing criteria for
    evaluation of the least restrictive environment
    provision. Philadelphia: Research for Better
    Schools.

Gottman, J., Conzo, J., & Rasmussen, B. (1975). Social
    interaction, social competence and friendship in
    children. Child Development, 46, 709-718.

Greenspan, S. (1981). Defining childhood social
    competence: A proposed working model. In E. Keogh
    (Ed.), Advances in Special Education, Vol. 3
    (pp. 1-39). Connecticut: JAI Press.

Gresham, F. (1981). Social skills training with
    handicapped children: A review. Review of

Educational Research, 51, 139-176.

Gresham, F., & Reschly, D.J. (1986). Social skill deficits and low peer acceptance of mainstreamed learning disabled children. Learning Disabilities Quarterly, 9, 23-32.

Hartup, W.W. (1970). Peer interaction and social organization, In P.H. Mussen (Ed.), Carmichael's manual of child psychology, Vol. 2 . New York: Wiley.

Hartup, W.W., Glazer, J.A., & Charlesworth, R. (1967). Peer reinforcement and sociometric status. Child Development, 38, 1017-1024.

Hazel, J.S., Schumacker, J.B., Sherman, J.A., & Sheldon, J. (1982). Application of a group training program in social skills and problem solving to learning disabled and non-learning disabled youth. Learning Disability Quarterly, 5, 398-408.

Kronick, D. (1981). Social development of learning disabled persons. San Francisco: Jossey-Bass, Inc.

La Greca, A.M., & Mesibov, G.B. (1981). Facilitating interpersonal functioning with peers in learning

disabled children. Journal of Learning Disabilities, 14, 197-238.

Marascuilo, L.A., & McSweeney, M. (1977). Non-parametric and distribution-free methods for the social sciences. Monterey, CA: Brooks/Cole.

Marcus, R.R., & Leiserson, M. (1978). Encouraging helping behavior. Young Children, 33 (6), 24-44.

Matson, J., Kazdin, A., Estveldt-Dawson, K. (1980) Training interpersonal skills among mentally retarded and socially dysfuncctional children. Behavior Research and Therapy, 18, 419-427.

Mellberg, D. B., (1981). The effects of the handicapped and non-handicapped tutor on the academic achievement of the economically dis-advantaged adolescent tutor and the elementary age tutee. Dissertation Abstracts International, 42, 659.

Moore, S., & Simpson, R. (1983). Reciprocity in the teacher-pupil and peer verbal interactions of learning disabled, behavior disordered, and regular education students. Learning Disabilities Quarterly, 7, 30-38.

Osguthorpe, R. T., Scruggs, T., (1986). Special Education Students as Tutors: A Review and Analysis Remedial and Special Education. 7, 15-25.

Richards, H.C., & McCandless, B.R. (1972).

   Socialization dimensions among five-year-old slum

   children. Journal of Educational Psychology,

   63, 44-55.

Rinn, R.C., & Markle, A. (1981). Modification of skill

   deficits in children. In A.S. Bellack, & M. Hersen

   (Eds.), Research and practice in social skills

   training. New Y rk: Plenum Press.

Roff, M. (1961). Childhood social interactions and young

   adult bad conduct. Journal of Abnormal and Social

   Psychology, 63, 333-337.

Soenksen, P., Flagg, C., & Schmitz, D. (1981). Social

   communication in learning disabled students: A

   pragmatic analysis. Journal of Learning

   Disabilities, 14, 283-282.

Spekman, N. J., (1981). Dyadic verbal communication

   abilities of learning disabled and normally

   achieving fourth- and fifth-grade boys. Learning

   Disabilities Quarterly, 4, 139-151.

Strain, P., (Ed.). (1981). The utilization of

   classroom peers as behavior change agents.

   New York: Plenum Press.

Staub, E.L. (1975). The development of prosocial

   behavior in children. Morristown, NJ: General

   Learning Press.

Sutherland, J., Algozzine, R., Ysseldyke, J., & Freeman, S. (1983). Changing peer perceptions: Effects of labels and assigned attributes. _Journal of Learning Disabilities_, _16_, 217-220.

Van Hasselt, V.B., Hersen, M., Whitehill, & Bellack, A. (1979). Social skill assessment and training for children: An evaluative review. _Behavior Research and Therapy_, _17_, 413-437.

Walker, H. M. (1970). _Walker Problem Behavior Identification Checklist_. Western Psychological Services, Los Angeles, CA.

Wine, J.D., & Smye, M.D. (Eds.) (1981). _Social competence_. New York: Guilford Press

Winer, B.J. (1962). _Statistical principles in experimental design_. New York: McGraw-Hill.