5-1987

Using Music in Teaching Social Skills to Mentally Retarded Subjects

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USING MUSIC IN TEACHING SOCIAL SKILLS TO MENTALLY RETARDED SUBJECTS

by

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A thesis submitted in partial fulfillment of
the requirements for the degree

of

MASTER OF SCIENCE

in

Psychology

Approved:

UTAH STATE UNIVERSITY
Logan, Utah

1987

DEDICATION

To my Mom, Patricia L. Barron, and my Dad, Van H. Barron, for getting me started.

And to my husband, Michal S. Johnson, for keeping me going.

ACKNOWLEDGMENTS

I would like to thank Dr. Carol Tingey for the ideas, the role modeling, and the support she has given me during my educational experience.

With extreme awe and appreciation, I would like to thank Dr. Walter Borg for being so formidable in my imagination and so real in person.

I would like to extend a warm smile and a hug to Dr. Elwin C. Nielsen because he did the same for me when that was all I needed.

And finally, I would like to express my thanks to Dr. Glen Casto for being there.

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Tamara R. Barron-Johnson

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ABSTRACT

Using Music in Teaching Social Skills
to Mentally Retarded Subjects
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Utah State University, 1987

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The purpose of this study was to determine the extent to which Melodies to Assist Social Interaction (MASI) would affect the social skills performance of the educable mentally retarded.

The study employed a pretest-posttest control group design with an N of 27 mentally-retarded subjects. It also employed a one-group pretest-posttest design with an N of 8 non-mentally retarded subjects.

All of the subjects received a pre- and post-score for their social skills performance level. Nineteen of the mentally-retarded subjects and all eight non-mentally retarded subjects received the MASI social skills teaching program as part of their regular curriculum.

The pre- and post-treatment performance was analyzed by a correlated means t-test. An analysis of covariance was

used in which the posttest means were compared using the pretest means as a covariate.

It was concluded that MASI did not have an impact, positive or negative, on the social skills performance level of the subjects.

(81 pages)

CHAPTER I

INTRODUCTION

In order to live in our society today one must master a variety of skills. Both academic and occupational skills receive a great deal of emphasis in everyday life as well as in the world of research. Academic as well as occupational skills are valuable, yet may not be mastered at all by an individual who hasn't first mastered the social skills (Cartledge & Milburn, 1978).

Subsumed under social skills are such diverse constructs as eye contact, verbalizations, timing and sequencing, gestures, voice tone, assertiveness, etc. Social skills have been defined in a variety of molar and molecular ways (Edmonson & Han, 1983; Fleming & Fleming, 1982; Bellack, 1979; Smith & Greenberg, 1979). Throughout the myriad of definitions a chord of agreement does appear. Social skills are a variety of verbal and nonverbal behaviors which one should have if one is to engage in adaptive interactions with others. These interactions can be positive or negative but they always include the self and one other person. Through association with peers and other people in the individual's environment, one learns to make social comparisons between one's self and others which leads

to a personal identity. Interpersonal relationships are also a vehicle for developing moral standards, for learning how to settle one's differences with others, and for learning how to time one's reactions and initiations appropriately (Stocking, Arezzo, & Leavitt, 1979).

Social skills are necessary components for developing interpersonal interactions (Gresham, 1981; Johnson & Johnson, 1983). Deficits in social skills can lead to difficulties in community and personal adjustment. The difficulties due to social skills deficits are experienced by a wide variety of populations including: emotionally disturbed children, unassertive children and adults, mildly maladjusted college students, normal children, and retarded children and adults (Cowen, Pederson, Babigian, Izzo, & Trost, 1973; Gresham, 1981; Libet & Lewinsohn, 1973; Phillips & Zigler, 1961). This plethora of target populations differ greatly as to their particular needs and as to which treatments will be effective for them. The present research focuses on the educably mentally retarded person.

The social skills package that was tested in this research was developed for use with the mentally retarded population. Melodies to Assist Social Interaction (MASI) (Tingey-Michaelis, 1979) was designed to teach social skills

through the use of music as a stimulus cue. Although this program has been used in the public schools, empirical evidence regarding its effectiveness could not be found in the literature.

Problem Statement

There is a need for handicapped children to develop social skills. The problem is that there exists a lack of evidence that one specific program, Melodies to Assist Social Interaction (MASI), can be used to teach social skills effectively.

Purpose and Objectives

It was the purpose of this study to determine the extent to which the use of MASI would affect the social skills performance of a sample of educable mentally retarded persons.

Specifically, the main objectives were:

1. To determine whether the experimental group would show a difference in their pretreatment and posttreatment social skills performance level.

2. To determine the extent to which the experimental group who receive MASI would improve, deteriorate, or remain unchanged in their level of social skills performance as compared to the control group.

3. To determine the effectiveness and specific strengths and weaknesses of MASI as perceived by the teachers during a brief interview and from the structured questionnaire.

Such information is needed to provide data of the influences of the MASI product on the students' social skills performance. The results will be used to determine if any changes need to be made in the MASI product or if it should be used in the future.

Hypotheses

1. The experimental group will show no difference between their pre and adjusted post observation scores on the Social Skills Observation Checklist.

2. The experimental subjects will show no difference in their adjusted post observation scores on the Social Skills Observation Checklist as compared to the control group.

3. The teachers who use MASI to teach social skills will perceive no difference in the social skills performance level of their pupils from the pre and adjusted post observation scores.

CHAPTER II

LITERATURE REVIEW

Roles Played by the Environment and Mainstreaming in the Acquisition of Social Skills

There has been an increase in the practice of mainstreaming the educable mentally retarded into regular classrooms, community based group homes and structured work environments. The trend toward normal community living for this population may contain social and financial advantages in the long run. An individual that can function with a minimum of supervision costs society less than an individual that can function only under constant supervision.

The advantages for the retarded individual would be: more personal freedom, more social acceptance, and the possibility that the retarded individual would realize financial advantages, such as higher pay and an increase in the variety of jobs available.

In order to be placed in a minimally supervised type of community setting, the retarded person needs to have mastered certain self-help skills. However, being able to exist as a member of a community and having a positive adjustment to community life are two different concepts. Research indicates that the majority of retarded persons

already have mastered the personal self-help skills required for community placement but are deficient in social skills necessary for positive community adjustment (Matson & Andrasik, 1982; Ross & Ross, 1973). This lack of social skills is considered to be a major reason why communities socially isolate retarded persons (Ruben, Krus, & Balow, 1973).

When individuals are socially rejected and socially isolated, they are removed from the environment where social skills can be learned.

The social environment, itself, is a necessary component in the acquisition of social skills. Integrated day care settings and/or mainstreaming projects help the mentally retarded in two ways: (1) The setting exposes the mentally retarded to normal children where they may learn from their normal peers; (2) The setting exposes normal children to the mentally retarded and therefore the normal children's prejudice against mentally retarded children may decrease.

Jenkins, Speltz, and Odom (1985) were able to show that the mentally retarded preschoolers in integrated settings performed significantly higher in "peer entry" situations than their non-integrated peers. The integrated mentally retarded engaged in play with their non-handicapped peers at

a higher frequency, even when the non-handicapped peer had noticably more advanced skills than the handicapped individual.

Normal children form concrete opinions about other people as early as kindergarten age. Normal children prefer other normal children first, with physically handicapped second, mentally retarded and emotionally disturbed third, and delinquents and extremely mentally ill last (Weiss, 1986). However, through positive exposure to the mentally retarded, these attitudes can be altered.

The mentally retarded's social skills can effect the attitude others have toward the mentally retarded. Mentally retarded children that are perceived as being aggressive or withdrawn are not as readily accepted as the mentally retarded children that are perceived to be socially competent. But the aggressive or withdrawn mentally retarded children are still accepted over normal children who act similarly (Siperstein & Bak, 1985).

To further the perception of the mentally retarded as competent, mainstreaming projects where the mentally retarded take on the role of "tutor" have been utilized. One such example of this is using mentally retarded children to tutor sign language. Tutoring allows the mentally retarded to interact socially, which may lead to an increase

in social skills (Osguthorpe, Eiserman, Shisler, 1985).

Specific Components Needed in a Social Skills Program

In addition to social interaction, a variety of other components are needed to train the mentally retarded in specific social sills. Training programs that emphasize social skills are needed in addition to mainstreaming projects. The extensive components to train the mentally retarded in social skills have been developed in the last two decades.

For the retarded person, acquiring these social skills - takes repetition after repetition, extended staff hours and training costs. However, the time and money may be well spent. Van Den Pol, Iwata, Ivancic, Page, Neff, and Whitley (1981) have shown that three retarded persons, who were taught twenty-two restaurant usage skills, showed a performance level equal to or exceeding the performance level of a normative sample on all but four of the skills, one year following the termination of training.

Repetition is not the only component of successful social skills training packages. Role playing and/or modeling, instructions, and constructive feedback are usually included in social skills training packages.

Role playing is frequently used to teach and to assess social skills (Keller & Carlson, 1974; O'Conner, 1969,

1972). Whether the role playing is "directed" by an instructor or by the student, it can be effective (Morrison & Newcomer, 1975). During role play students can practice skills that they will need in adult life. Role playing situations can be structured around a certain theme or skill that needs to be emphasized such as preparing dinner, talking on the telephone, etc. It also allows the instructor to evaluate each student's skill level and to correct a student's deficits (Young-Woodward, 1984).

Role playing a social skill allows a mentally retarded individual the chance to practice the skill in a "safe" setting, to interact with others, to receive and give feedback, and to pair up with a less skilled peer or to pair up with a more skilled peer.

Verbal and behavioral feedback in the form of positive reinforcement, punishers, and ignoring, have been used with varying effectiveness (Baran, 1973; Oden and Asher, 1977). It is important in giving feedback that one talks about how skills are not learned "all at once" and that everyone, even the trainer, has made mistakes. It is also emphasized that when giving feedback, it is unnecessary to correct every mistake, every time (Stocking et al., 1979).

Currently, research on training social skills shows a trend in using all of the aforementioned techniques in

combination (Day, Powell, Dy-Lin, & Stowitschek, 1982; Van Den Pol et al., 1981; Monson, Greenspan, & Simeonsson, 1979; Eisler, Hersen, Miller, & Blanchard, 1975). The combined approach allows the trainer a variety of methods and techniques to teach social skills. Its diversity keeps the task from becoming boring to the trainer or the trainee. Both group and single-subject designs have been used to test social skills training packages which employ a combination of techniques (Edmonson & Han, 1983; Day et al., 1982; Matson & Andrasik, 1982; Smith & Greenburg, 1979).

However, there have been concerns raised surrounding the efficacy of much of the social skills training package research.

In a 1978 review of the social skill assessment and training (Van Hasselt, Hersen, Whitehill, & Bellack, 1978), the reviewers stated that much of the previous research on social skills assessment and training have had a multitude of problems.

Teacher ratings and sociometric ratings were often used to determine the effectiveness of the training procedures. The reviewers (Van Hasselt et al., 1978) cite researchers who have found a lack of agreement between behavioral data and these two measures.

A second issue addressed by the reviewers is the lack of agreement on how one categorizes and defines what a social skill is. Van Hasselt et al. (1978) recommended that there be more empirical research into which social skills are important and at what developmental stage the social skill becomes a necessity.

The third problem Van Hasselt et al. (1978) addressed was the generalizability of the results and the use of follow-up research.

A more recent review (Robertson, Richardson, & Youngson, 1984) indicated that the emphasis in social skills training for the mentally retarded is performance-oriented. Individual behaviors are trained and measured, but motivational, perceptual, and cognitive processes are ignored in most of the current research, according to the reviewers.

Robertson et al. (1984) then reviewed 22 single subject design studies and 16 group comparison studies to determine if the social skills programs have been successful in achieving changes.

The single subject studies described their subjects using IQ's or the AAMD criteria for establishing a level of handicap or did not give any relevant information concerning

the subject's handicaps or IQ. The methods used to train the social skills included a mixture of the following: social reinforcement, prompting, shaping, instructions, feedback, role playing, coaching, and modeling. The social skills that the studies used for target behaviors included a variety of verbal and non-verbal social skills (i.e., cooperative play, eye contact, speech fluency, gestures, posture, loudness, etc.). All of these studied were able to show some level of experimental control over the target behaviors. However, 12 of the 22 single subject design studies did not include any follow-up assessment of the treatment. Of the remaining ten studies only six studies included a follow-up that lasted longer than four weeks. Therefore, a powerful determinant of effectiveness, that being long term maintenance of the social skill, was not available.

Of the 22 single subject studies, one stands out as having achieved a high level of significance. In this study, Matson and Zeiss (1979) trained two female inpatients of a psychiatric ward who were diagnosed as mixed psychosis and mental retardation. The target behaviors that were treated were: making inappropriate statements, arguing, swearing, tantrums (defined as screaming and yelling with

occasional physical attacks on inanimate objects) and interruptions. The treatment was designed to decrease the target behaviors. When the target behaviors occurred, the subjects would have to describe the situation and then appropriate alternative responses were trained using instructions, modeling, rehearsal, and feedback. A follow-up was done on all the target behaviors six weeks after treatment had ceased. All treatment and assessment was done in the patients' natural environment.

Patient A went from an average of three arguments per day to zero. Patient B went from 1.3 arguments per day to zero. Both A and B maintained zero arguments six weeks after treatment.

Patient A went from 1.3 tantrums per day to .16 tantrums per day. Patient B went from 1.0 tantrums per day to 0.08 tantrums per day. Both patients had zero tantrums six weeks after treatment.

The behaviors measured, that is, interruptions and socially inapprorpaite statements, did not remain at zero six weeks after treatment. However, the baseline for both patients A and B for both behaviors was above 5.0 per day.

It can be concluded that using real-life situations as opposed to role play scripts may increase both

generalization and maintenance of a social skill. This is an issue that will be addressed further in reviewing Robertson et al.'s conclusions.

The group comparison studies described their subjects using age and IQ level for the most part. Some studies did not describe the method used to determine the subjects' mental handicap classification. Target behaviors and training methods used in the group comparison studies were similar to the ones described for the single subject studies. Of the sixteen group comparison studies, only two were unable to demonstrate a significate (alpha equals 0.5 or 0.1) improvement in the social skills measured. However, six of the sixteen studies did not assess for generalization and ten of the studies did not have any follow-up assessment. Once again, a powerful determinant of effectiveness, that being long term maintenance of the social skill, was not available.

Of the 16 group comparison studies, Matson and Senatore's (1981) study showed the most significant results. Thirty-two subjects were homogeneously matched in triads. One member was then rendomly assigned to (1) no treatment control, (2) traditional psychotherapy, or (3) social skills training. All subjects received a pretest,

posttest, and follow-up assessment. A social validation assessment was made of the sheltered workshop environment to determine which social skills would be most valuable to the clients to learn. The target behaviors were (1) making appropriate statements of one word, (2) making appropriate statements of more than one word, and (3) decreasing inappropriate statements.

The social skills training package used role playing, social reinforcement, modeling, and feedback to train the social skills.

The traditional psychotherapy treatment used discussion of the behaviors and empathetic reactions toward others.

Only the group which received the social skills training improved on the target behaviors. Significant levels were $P < 0.0001$ for making appropriate statements of one word, $P < 0.0001$ for making appropriate statements of more then one word, and $P < 0.0001$ for decresing inappropriate statements. A 3-month posttreatment follow-up showed alpha levels of $P < 0.0001$, $P < 0.0001$, and $P < 0.0017$.

Therefore, social skills training can be effective and useful. One of the possible reasons for the success of Matson and Senatore (1981) may be due to their assessing

which skills were socially valid for others in the client's environment. An issue that will be addressed further in Robertson et al.'s (1984) conclusions.

Robertson et al. (1984) concluded that many of the studies reviewed stated a need for a more systematic process in determining which social skills are socially valid, which generalize and how long the social skills are maintained. It was suggested that this be done for all training programs and their components.

Many social skills training packages have been developed and used over the years. New training packages have appeared and are appearing that use a multifaceted technique. One such package that addresses some of the issues raised by Van Hasselt et al. (1978) and Robertson et al. (1984) is currently in press.

Michelson and Mannarino (1986) used group comparative studies to develop their package.

Statistically significant results were obtained after treatment and after a 1-month follow-up assessment for the 80 4th grade, elementary-aged children (Michelson & Wood, 1980a).

Statistically significant results were obtained after treatment and after a one-year follow-up for the 61

socially-maladjusted, outpatient boys (Michelson & Wood, 1980b).

From the above research, Michelson and Mannarino (1986) developed a social skills training package. The package contains 17 modules, each module trains a specific social skill. These modules contains rationale for trainers, sample teaching lectures, introduction to the skill, modeling examples with a three-step process (between trainers, between trainer and child, between children), feedback from trainers and peers, reinforcement from trainers and peers, a summary lesson, a review lesson and homework. The special skills addressed in the package include compliments, complaints, expressing empathy, refusing unreasonable requests, standing up for one's rights, dealing with authority figures, mixed sex interactions, initiating, maintaining and terminating conversations and other interpersonal domains. At this date, there is no evidence of how the package works as a unit since the package itself is still in press. However, since the development of the package included testing for social validation, behavior generalization, and behavior maintenance, all issues addressed in the research reviews (Van Hasselt, et al., 1978; Roberton et al., 1984), one may

reasonable expect that this social skills training package maybe found more effective than the packages developed in the past.

Therefore, it is the conclusion of this author that many social skills training programs exist. The research reviewers of social skills training packages indicate a need for additional research for testing and refining the existing packages. However, there is no evidence that indicates the superiority of either single subject design research or group design research in the area of empirically-testing social skills training packages.

One of the interesting approaches to training social skills is found in the Melodies to Assist Social Interaction (MASI) package (Tingey-Michaelis, 1979). MASI uses a combined approach, with the added stimulus cue of music. The music helps the learner remember the instructions as commercials are remembered or as the words to songs are remembered.

CHAPTER III

PROCEDURE

Experimental Design

The study employed a pretest-posttest control group design with non-random assignment of the entire classroom group to treatment or non-treatment. Each teacher's classroom was treated as an intact group according to the existing classroom structure. The individual student was used as the unit of statistical analysis. The subjects in these groups were diagnosed as mentally retarded.

In this part of the experiment, there were three experimental classrooms and one control classroom. The experimental classrooms had a total of 20 mentally retarded subjects; however, one subject was lost from the experiment due to a physical illness. The mentally retarded subjects in this group, from this point on, will be referred to as Experimental Group A.

The control classroom contained eight mentally retarded subjects. The mentally retarded subjects in this group, from this point on, will be referred to as Control Group A.

Both groups did receive a pretest and a posttest. Only the experimental group received the treatment. The

schematic diagram from Borg and Gall (1983) that describes this design is:

O X O O = pre & post test
O O X = treatment

In addition, the study employed a one-group pretest-posttest design with all students receiving the treatment condition. The individual student was used as the unit of statistical analysis. The subjects in this group were not mentally retarded.

In this part of the experiment, there was only one experimental classroom. The classroom had a total of eight non-mentally retarded subjects. There was no control group. The non-mentally retarded subjects in this group, from this point on, will be referred to as Experimental Group B.

All of the subjects in Experimental Group B received a pretest and a posttest, and the treatment. The schematic diagram from Borg and Gall (1983) that describes this design is:

O X O O = pre & post test
X = treatment

Sampling Procedure

The subjects for both Experiments A and B were non-

randomly selected. The administrators in the Billings School District were approached and a request for four classrooms of educable mentally retarded subjects with an N of 30 total students was made.

Two schools and five classrooms were selected by the administrators. One of the classrooms was a non-mentally retarded transitional kindergarten/first grade combination class. This group will be defined more explicitly in the subjects section.

The four classrooms with educable mentally retarded subjects consisted of an N of 31 students; however, three of the 31 students were not used because the students' speech and hearing handicaps made it difficult to determine if they had performed the target behaviors. This left the experimenter with a total N of 28. Of these 28 subjects, one was lost due to attrition.

The four classrooms were then treated as intact groups. As a group, the subjects were assigned to treatment group or control group. This decision was based on the number of children per school who would be receiving the treatment. The experimenter decided since the majority of the children were located in the lower middle class school (23) that the three classrooms in that school would receive treatment. In the upper middle class school, the classrooms

were located on opposite ends of the building. The classroom with four subjects was chosen to receive treatment in hopes of controlling for contamination (i.e., less children singing the songs out on the playground). The eight children in the remaining classroom were then selected as the Control Group A.

There were some differences in socioeconomic status between the schools. One had a newer physical plant and more playground equipment. The subjects in this school were middle to upper middle class in appearance. The Control Group A classroom and one Experimental Group A classroom came from the middle to upper middle class school.

The other school had a very old physical plant with minimal playground equipment. The subjects in this school were lower middle to lower class in appearance. Two Experimental Group A classrooms came from the lower middle to lower class school. The Experimental Group B classroom also came from the lower middle to lower class school.

Subjects

Students. The mentally retarded experimental subjects for both the control and the experimental group consisted of children with a mean age of 80 months and their mental age ranged from 55 to 78 with a mean of 64. There were 19

Experimental Group A subjects and 8 Control Group A subjects.

The non-mentally retarded subjects consisted of children with a mean age of 72 months and their mental age ranged from 85 to 110 with a mean of 95. There were 8 non-mentally retarded rexperimental subjects in Experimental Group B.

All of the subjects in this group had attended a full year of kindergarten. The classroom was a first grade classroom. The kindergarten skills that the subjects needed remediation in were taught as well as the new first grade level information.

All of the subjects in Experimental Groups A and B and in Control Group A were enrolled in a Billings, Montana school.

Teachers. The five teachers were all present members of a Billings, Montana school faculty, who were currently teaching in the self-contained classrooms. None of the teachers had previous experience with the teaching package.

Settings

Instructional setting. The instructional sessions were conducted in the existing, self-contained classrooms located in a Billings school.

The subjects in Experimental Groups A and B received

the treatment three times a week for 20 minutes. Whether a subject was absent during an instructional session was not monitored.

Assessment setting. The observations for collecting data occurred in a naturalistic setting. The naturalistic setting consisted of student performance in the classroom and during free play time outdoors on the playground.

Treatment Phase Procedures

Instrument. Melodies to Assist Social Interaction (MASI) (Tingey-Michaelis, 1979) consists of 16 songs with music and lyrics, that instructed the listener about a particular social skill (i.e., saying, "thank you"). There was a music and lyrics and a music only stimulus condition for each behavior included in the package.

Tingey-Michaelis (1979) indicated that music helps the students express their feelings and also gives a child a positive example to imitate. She indicated that the music is an original approach to teaching "Career of Life" behaviors.

The package uses music to teach the social skills through association. Each melodic phrase is used only with one particular social skill. The melody and song words are repeated several times in the course of the song. The words of the song mention circumstances and the three molecular

components involved in emitting the behavior.

The molecular components are (1) holding one's head up, (2) looking at the face of the speaker, and (3) looking directly into the eyes of the speaker. The song repeats "I look at you when you talk to me" (Tingey-Michaelis, 1979) over and over, with the above three behavior descriptors interspersed throughout the text. (Note: In the test of the song, the vocabulary is simple.

A "Criterion for Participation" is also provided in the manual. Instructors can incorporate this criteria in their IEP's and in their evaluations of students' behaviors. Examples of how to do this are also included in the manual.

In the actual treatment, the teacher introduces the skill to be learned by describing it (i.e., "Class, we are going to learn to say thank-you. Thank-you is a word phrase that we say when we have received an object, have a request fulfilled or when we receive permission.").

The teacher would then role play an example (i.e., receiving a crayon), play the song, and role play another example.

The children would then be asked by the teacher to act out the behaviors the song describes while the song is played.

When the teacher has the children role play a

particular social skill, the "instrumental only" version of the song was played in the background as a stimulus cue indicating which behavior is expected.

This sequence would be repeated until the subject reached criterion M or some other level of mastery defined in the IEP.

Repetition of the instructions, songs, and role play situations is emphasized in the treatment manual. Repetition must be done for the mentally retarded child to learn. Their ability to grasp concepts is very slow and frequent repetitions are needed.

Behavioral measures. Three social skills were selected from the sixteen skills contained in the MASI program. These skills were selected by determining a skill in the "easy" range, a skill in the "middle" range, and a skill in the "difficult" range. The easy to difficult range was defined developmentally by using the norm age that a child would acquire the specific skill, i.e., easy skills normally acquired at age 2, difficult skills normally acquired at age 4. The target behaviors were: saying "thank you," looking at a person who is talking to you and taking turns.

"Thank you" behavior was defined as an instance when the subject verbally states the phrase "thank you" after receiving an object, having a verbal request fulfilled or

receiving permission.

"Looking at" behavior was defined as an instance when the subject's eyes were on the face of the speaker or when the subject made eye contact with the speaker.

"Taking turns" behavior was defined as an instance when two or more subjects were using an object which can only be used by one person at one time and they alternated who used the object (i.e., when there was only one object and three subjects wanted to use it).

Each subject's performance was assessed during four pretest and four posttest observations. Each observation was 15 minutes in duration.

During the 15-minute observation, only one subject was assessed per observer. There were no instances where an observer assessed more than one subject per 15-minute observation.

Three of the four pretreatment observations were conducted in the naturalistic setting. The remaining pretreatment observation was done during the structured setting (see Appendix D).

Three of the four posttreatment observations were conducted in the naturalistic setting. The remaining posttreatment observation was done during the structured setting.

Subjects were observed throughout the entire school day. If a subject was observed twice in the morning and once in the afternoon during the pretreatment observation the same sequence was followed for the posttreatment observation.

The structured interaction setting was a "show and tell about food" lesson (see Appendix D). For the pre observation lesson, each teacher received a box containing a banana, an apple, a bag of jelly beans, a box of animal crackers, a jar of pickles, a bag of gumdrops, a kiwi fruit, a couple of avocados, table knives, napkins, and plates. He or she described the food item and asked questions about it (where grown, hard or soft, sweet or sour, rough or smooth). During this time, the observer watched for (1) thank-you, (2) looking at and (3) taking turns. There were not enough items for each child. After each item was passed around the teacher instructed the children that they could taste the items.

For the post-interaction setting, the teachers received the same container with similar items. They again gave the "show and tell about food" lesson.

The observers indicated the individual subject's performance in the target behavior areas on the Social Skills Observation Checklist developed for this project (see

Appendix A). The observers used the frequency count recording method described in Borg and Gall (1983). The specific performance requirements were listed on the checklist. Written instructions for using the checklist were provided to all of the observers (see Appendix B).

The skills were observed and tallied on the Social Skills Observation Checklist. On the observation sheet each skill is listed. If the child emitted the behavior alone, a circle was placed on the sheet. If the child emitted the behavior after adult intervention (AI), the skill and AI were circled. If the opportunity to emit the behavior did not occur no marks were made. If the opportunity to emit the behavior did occur but the child did NOT emit the behavior, an X was marked on the observation sheet.

Observers. Four observers were trained in the use of the Behavior Checklist prior to the actual data collection. Classification of the written instructions, video-taped examples, and a question and answer period on what constitutes a target behavior and a non-target behavior were used to train the observers. The observer training continued until at least 80 percent agreement was obtained. To insure against observer drift, the observers were retrained before the posttest observations.

Checks on observer agreement were made during the

actual data collection. The observers were told to observe the same subject at the same time but were not told that they were observing the same subject.

Interobserver agreement. Interobserver agreement was computed using the equation

$$\frac{\text{Agreements}}{\text{Agreements and disagreements}} \times 100$$

The interobserver agreement for the pretest observations ranged from 71 percent to 83 percent with the mean percentage of agreement being 78 percent.

The interobserver agreement for the posttest observations ranged from 74 percent to 87 percent with the mean percentage of agreement being 83 percent.

Teacher instructions. The experimental group teachers received inservice training on how to use the MASI materials. For each behavior targeted, the teachers received the songs and materials needed to implement treatment. The teacher played the songs and engaged in the role playing tasks described in the manual for teaching each target behavior. The teacher taught the social skills for 20 minutes, 3 times per week. The treatment phase lasted 4 weeks.

Teacher evaluation. All of the teachers were asked to

respond to a questionnaire concerning the procedures and materials used in the study (see Appendix C). A posttreatment interview was also done to gather teacher comments and suggestions on the MASI materials.

Analysis

The pre- and posttreatment performance of the experimental group was analyzed by a correlated means t-test. This was done to determine if the difference between the pretest and posttest means was statistically significant.

An analysis of covariance was used in which the posttest means were compared using the pretest means as a covariate. The skills were analyzed separately. The skills were grouped by the level of difficulty to learn.

Pretest and posttest means and standard deviations were calculated for both the control and experimental groups.

Data for hypothesis three were gathered via a semistructured interview and the teacher evaluation. Teachers' feedback and suggestions were incorporated in the discussion. This included anecdotal statements.

The teacher feedback on the Teacher Evaluation Form was presented in mean response and standard deviation for each item. A global estimate of how positively the teachers viewed the package was given.

CHAPTER IV

RESULTS

There were three objectives for this study. The first objective was to determine if the experimental group would show a difference in their pretreatment and posttreatment social skills performance level. The second objective was to determine if the social skills performance level of the experimental group who received MASI differed from the control who did not receive MASI. The third objective was to determine what the teacher's perception of MASI would be. The results that follow are reported separately by objective.

Social Skills Performance Level

Experimental Group A. A major objective of this study was to determine if Experimental Group A would show a significant difference in their pretreatment and posttreatment social skills performance level. Performance in specific social skills (i.e., Thank-you, Looking at, and Taking Turns) were chosen to assess social skills performance.

Frequency counts were taken of each subject's behavior across two conditions: unstructured and structured. The

unstructured condition simply was the naturalistic setting which existed in the classroom and on the playground. The structured setting was the lesson about food described in Appendix D.

The three behaviors were broken down to three types of responses. Thank-You (TU), Looking AT (LA), and Taking Turns (TT) meant the subject emitted the behavior when the opportunity was presented. TUAI, LAAI, TTAI meant that the subject emitted the behavior when an adult intervened or prompted the subject when the opportunity was presented. NTU, NLA and NTT meant the subject did not emit the behavior when the opportunity was presented.

Table 1 shows the means and standard deviations for all of the groups and for all of the behaviors measured during the nonstructured condition.

Table 1 also shows no statistically significant difference ($P < .05$) between Experimental Group A's pretest and posttest means for any of the behaviors except Not Looking At (NLA).

For the behavior Not Looking At (NLA), Experimental Group A showed a significant decrease. This decrease could indicate that the subjects' ability to recognize the opportunity to Look At (LA) had increased because the subjects received less negatives for having the opportunity

Table 1

Means, Standard Deviations and T-Test Results for the Behaviors Measured by the Social Skills Observation Checklist for the Non-Structured Condition

		Pretest		Posttest				
Behavior	No. of cases	Mean	SD	Mean	SD	T-value	DF	Two-tailed prob
THANK-YOU (TU)								
Exper. A	19	0.7368	1.240	0.4211	0.838	-0.86	18	0.401
Control	8	1.1250	1.356	0.5000	0.535	-1.17	7	0.279
Exper. B	8	0.6250	0.518	0.3750	0.061	-0.68	7	0.516
TU with ADULT INTERVENTION (TUAI)								
Exper. A	19	0.526	0.229	0.0526	0.229	0.00	18	1.000
Control	8	0.1250	0.354	0.2500	0.463	0.55	7	0.598
Exper. B	8	0.000	0.000	0.0000	0.000	0.00	7	1.000
NOT SAYING THANK—YOU (NTU)								
Exper. A	19	1.9474	1.471	1.2632	1.147	-1.28	18	0.218
Control	8	0.8750	0.835	1.2500	1.165	0.89	7	0.402
Exper. B	8	0.8750	0.835	0.7500	1.035	-0.28	7	0.785
LOOKING AT (LA)								
Exper. A	19	41.9474	14.065	50.8421	16.443	1.98	18	0.063
Control	8	31.5000	11.600	47.6250	14.081	1.95	7	0.092
Exper. B	8	31.8750	16.313	51.5000	7.387	3.22	7	0.015*
LA with ADULT INTERVENTION (LAAI)								
Exper. A	19	1.3158	1.455	0.7895	1.316	-1.16	18	0.262
Control	8	1.3750	1.506	0.8750	0.991	-1.08	7	0.316
Exper. B	8	0.3750	1.061	0.2500	0.707	-0.26	7	0.802
NOT LOOKING AT (NLA)								
Exper. A	19	15.1053	9.786	9.2105	5.978	-2.76	18	0.013*
Control	8	20.1250	29.580	12.6250	8.975	-0.84	7	0.430
Exper. B	8	7.2500	5.392	4.3750	4.838	-1.50	7	0.177
TAKING TURNS (TT)								
Exper. A	19	12.4737	6.586	16.1579	6.230	2.03	18	0.058
Control	8	9.6250	4.926	6.7500	1.832	-1.40	7	0.203
Exper. B	8	18.3750	9.576	17.3750	5.755	09.27	7	0.791
TT with ADULT INTERVENTION (TTAI)								
Exper. A	19	1.4211	2.244	0.9474	1.471	-0.73	18	0.476
Control	8	2.8750	2.475	0.5000	0.535	-2.97	7	0.021*
Exper. B	8	0.6250	1.188	0.0000	0.000	-1.49	7	0.180
NOT TAKING TURNS (NTT)								
Exper. A	19	1.4737	1.775	1.2579	1.893	1.10	18	0.476
Control	8	2.3750	3.021	1.1250	2.642	-1.93	7	0.095
Exper. B	8	5.8750	4.422	2.5000	1.512	-2.12	7	0.072

*Significant Values

to emit the behavior but doing nothing.

Table 1 shows no statistically significant difference ($P < .05$) between Experimental Group B's pretest and posttest means for all of the behaviors except Looking At (LA).

Experimental Group B had a significiant increase in emitting the behavior Looking At (LA) when the opportunity arose. This may be due to the fact that the subjects had more opportunities in the posttreatment observation.

Table 2 shows the means and standard deviations for all of the groups and all of the behaviors measured during the structured condition.

For the Looking At (LA) constellation (LA, LAAI, and NLA) a fairly large gain was found for Experimental Group A and for Control Group A. The gains made by Control Group A cancel the gains by Experimental Group A rendering the LA, LAAT, NLA results insignificant.

Experimental Group A shows a significant decrease for Not Taking Turns (NTT). However, Control Group A shows a significant increase in Taking Turns (TT). Therefore, the control group made more gains on emitting the positive behavior that was being trained. This renders the TT, TTAI, NTT results insignificant.

Table 2

Means, Standard Deviations and T-Test Results for the Behaviors Measured by the Social Skills Observation Checklist for the Structured Condition

		Pretest		Posttest				
Behavior	No. of cases	Mean	SD	Mean	SD	T-value	DF	Two-tailed prob
THANK-YOU (TU)								
Exper. A	19	0.7895	0.855	1.000	0.943	1.17	18	0.259
Control	8	0.2500	0.463	0.7500	0.707	1.32	7	0.227
Exper. B	8	0.2500	0.463	0.6250	0.916	1.16	7	0.285
TU with ADULT INTERVENTION (TUAI)								
Exper. A	19	0.000	0.000	0.0526	0.229	1.00	18	0.331
Control	8	0.1250	0.354	0.2500	0.463	0.55	7	0.598
Exper. B	8	0.000	0.000	0.0000	0.000	0.00	7	1.000
NOT SAYING THANK-YOU (NTU)								
Exper. A	19	3.1579	0.958	2.9474	0.970	-1.07	18	0.297
Control	8	3.6250	0.518	3.000	0.926	-1.49	7	0.180
Exper. B	8	3.5000	1.069	3.3750	0.916	-0.24	7	0.815
LOOKING AT (LA)								
Exper. A	19	14.1579	6.760	18.0526	8.521	1.56	18	0.137
Control	8	9.7500	3.284	22.2500	8.259	4.14	7	0.004*
Exper. B	8	11.0000	4.309	24.1250	8.999	3.44	7	0.011*
LA with ADULT INTERVENTION (LAAI)								
Exper. A	19	0.5263	1.020	0.5226	0.229	-2.28	18	0.035*
Control	8	1.1250	0.835	0.1250	0.354	-3.74	7	0.007*
Exper. B	8	0.3750	0.744	0.0000	0.000	-1.43	7	0.197
NOT LOOKING AT (NLA)								
Exper. A	19	3.7368	2.423	2.0000	2.887	-3.25	18	0.004*
Control	8	5.3750	3.926	2.6250	1.923	-1.72	7	0.130
Exper. B	8	4.0000	3.854	1.8750	1.727	-1.55	7	0.164
TAKING TURNS (TT)								
Exper. A	19	9.1053	4.040	10.1053	3.446	1.04	18	0.313
Control	8	7.7500	3.105	10.6250	3.292	2.80	7	0.026*
Exper. B	8	14.6250	3.623	12.0000	2.128	-1.59	7	0.155
TT with ADULT INTERVENTION (TTAI)								
Exper. A	19	1.000	1.155	0.5789	1.610	-0.84	18	0.414
Control	8	0.7500	1.389	0.5000	1.069	-0.36	7	0.732
Exper. B	8	0.3750	0.518	0.0000	0.000	-2.05	7	0.080
NOT TAKING TURNS								
Exper. A	19	1.6316	1.300	0.5789	1.216	-2.58	18	0.019*
Control	8	2.1250	2.295	0.5000	0.756	-1.80	7	0.116
Exper. B	8	0.5000	0.756	1.1250	1.246	1.17	7	0.279

*Significant Values

Experimental Group A vs.
Control Group A

The second objective of the study was to determine if the social skills performance level of Experimental Group A who recieved MASI differed from Control Group A who did not receive MASI.

An analysis of covariance was used in which the posttest means were compared using the pretest means as a covariate. The skills were analyzed separately.

Only the variable Thank-You (TU) had missing data. Data were available for all of the subjects for all of the other behaviors.

The results for this objective were non-significant. The ANCOVA tables can be found in Appendix F.

The only significant information is that all three groups generally, but not consistently, performed the behaviors appropriately at a higher rate when in the structured setting.

In conclusion, both hypotheses one and two were supported. MASI made no difference in the subject's social skills performance level.

Teachers' Perceptions

The third objective of this study was to determine the effectiveness of MASI as perceived by the teachers. The

four teachers that used the MASI materials filled out the Teacher Evaluation Form for Materials (Appendix C). The control teacher who did not receive the MASI materials did not fill out a form.

An anecdotal and non-directive interview was also conducted, the results of which will be reported in Appendix G.

Table 12 (see Appendix F) gives the teachers' exact responses and the average response for each of the eight questions. The quantitative observational evidence of MASI's effectiveness conflicts with the teacher's evaluative perceptions.

CHAPTER V

DISCUSSION AND CONCLUSIONS

This chapter contains a discussion of the data, alternate hypothesis that may explain the failure to get significant data, and the conclusions drawn from the data.

Discussion

A possible reason the experiment did not bring about significant results could be the amount of time (1 hour) that was spent sampling the student's behavior, due to the fact that during the school day, many a 15-minute time period may go by where there is no opportunity to emit any of the behaviors measured in the experiment.

The second possible reason could be the small N. Nineteen subjects from the total population of EMR children is a very minute sample. The results may have been confounded severely by the small sample size.

However, the small N may not be a factor in this study because the control group showed the same gains as the experimental group. Small N is a factor in studies that do not get statistically significant differences but do get a difference in performance between the control group and the experimental groups.

Sampling bias may also have contributed to the non-significant results. When random sampling is not possible, it is desirable to select subjects from comparable groups. It should be noted that the control group subjects were drawn from a school with different characteristics (i.e., physical plant, SES) than the school where the majority of the experimental subjects were drawn from.

A pattern of increasing the appropriate behavior, decreasing the need for adult prompts, and decreasing the inappropriate behavior was found for the Looking At constellation in the non-structured and structured condition for all of the three groups. This trend would be expected to occur in any learning situation and can not be attributed to MASI.

The behavior "Thank-You" was not an appropriate choice for the academic setting. A possible explanation for this result may be the nature of the academic setting. Students receive a variety of things from the teacher (i.e., papers, crayons, pencils, etc.); however, in the academic setting, the behavior "Thank-You" is usually admitted as a response to a request (i.e., "May I go to the bathroom?") rather than a response for receiving an object. The definition of the behavior "Thank-You" may need to be altered for the academic setting.

One explanation for the lack of significant difference between Experimental Group A and Control Group A is that factors other than those used in the MASI program may affect the acquisition of the three behaviors. Such factors might be parental influences, physical health, type of teaching style, teaching aide and how much time an aide can be in a teacher's classroom, teacher expectation, teacher's aide's expectation, parental expectation, maturation, and the student's becoming "test-wise."

All of the groups performed differently under the two conditions non-structure and structure. However, this non-structure and structure difference may be due to observer effects and environmental cues.

Therefore, results indicating that structure and non-structure interacted with or perhaps affected performance can not be clearly defined.

Conclusions

The purpose of this study was to determine the effectiveness of the MASI social skills training program.

There is no significant evidence that MASI had any positive effect on the subjects' acquisition of social skills. At the same time, there is no significant evidence that MASI had any adverse effect on the subjects'

acquisition of social skills. However, the teachers perceived MASI as a positive tool for teaching the social skills.

Recommendations for Further Research

In future studies of MASI, the following recommendations are made:

1. Examine the use of same age tutors versus classroom instruction using MASI as the training program.
2. Investigate MASI's effectiveness in training the social skills using various training time lengths.
3. Pre-poll the classroom and use only behaviors that are relevant to the academic setting.

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APPENDICES

Appendix A
Social Skills Observation Checklist

Date _____ Observer _____

Time Begin _____ Time End _____ Code _____

(TU) Thank-You (LA) Looking At (TT) Taking Turns

(AI) Adult Intervention

1.	TU	LA	TT	AI	TU	LA	TT	AI
2.	TU	LA	TT	AI	TU	LA	TT	AI
3.	TU	LA	TT	AI	TU	LA	TT	AI
4.	TU	LA	TT	AI	TU	LA	TT	AI
5.	TU	LA	TT	AI	TU	LA	TT	AI
6.	TU	LA	TT	AI	TU	LA	TT	AI
7.	TU	LA	TT	AI	TU	LA	TT	AI
8.	TU	LA	TT	AI	TU	LA	TT	AI
9.	TU	LA	TT	AI	TU	LA	TT	AI
10.	TU	LA	TT	AI	TU	LA	TT	AI
11.	TU	LA	TT	AI	TU	LA	TT	AI
12.	TU	LA	TT	AI	TU	LA	TT	AI
13.	TU	LA	TT	AI	TU	LA	TT	AI
14.	TU	LA	TT	AI	TU	LA	TT	AI
15.	TU	LA	TT	AI	TU	LA	TT	AI
16.	TU	LA	TT	AI	TU	LA	TT	AI
17.	TU	LA	TT	AI	TU	LA	TT	AI
18.	TU	LA	TT	AI	TU	LA	TT	AI
19.	TU	LA	TT	AI	TU	LA	TT	AI
20.	TU	LA	TT	AI	TU	LA	TT	AI

Appendix B
Instructions for Observers

The behaviors you will be observing are:

"Thank you": Behavior is defined as an instance when the subject verbally states the phrase "thank you" after receiving an object, having a verbal request fulfilled or receiving permission. (TU)

Looking at": Behavior is defined as an instance when the subject's eyes were on the face of the speaker, or when the subject made eye contact with the speaker. (LA)

"Taking Turns": Behavior is defined as an instance when two or more subjects were using an object which can only be used by one person at one time and they alternated who used the object (i.e., when there was only one object and three subjects want to use it). (TT)

Your observation checklist example is attached. Line 1 looks like:

1. TU LA TT AI TU LA TT AI

TU equals Thank-You
LA equals Looking At
TT equals Taking Turns
AI equals Adult Intervention

If the subject has the opportunity to emit the behavior "Thank-You" (TU), recognizes the opportunity, then emits the behavior, your checklist will look like this:

1. (TU) LA TT AI TU LA TT AI

If the subject has the opportunity to emit the behavior Thank-You (TU), does not recognize the opportunity, is prompted by an adult (i.e., "Johnny, what do we say when we receive a crayon?"), and then emits the behavior, your checklist looks like this:

1. (TU) LA TT (AI) TU LA TT AI

If the subject has the opportunity to emit the behavior "Thank-You," does not recognize the opportunity, is not prompted by an adult, and then does nothing, your behavior checklist looks like this:

1. ~~TU~~ LA TT AI TU LA TT AI

1. You will never cross out AI.
2. You will be circling the behavior alone, or the behavior and AI.
3. You will be crossing out the behavior as follows:

1. TU (LA) TT (AI) You saw a child look at an adult who was speaking after the adult told the child to do so.

1. TU LA (TT) AI You saw a child take his/her turn at something.

1. TU LA ~~TT~~ ~~AI~~ You've messed up.

1. TU LA TT AI — You saw a child take his/her turn after being told to do so by an adult.

1. TU ~~LA~~ TT AI — You saw a child who had the opportunity to look at a speaker but did not look at the speaker.

1. TU LA ~~TT~~ AI — You saw a child who had an opportunity to take a turn but did not take a turn.

G O O D L U C K ! !

Appendix C
Teacher Evaluation Form for Materials

Answer the questions by circling one number. "1" indicates High and "5" indicates Low.

1. How satisfied were you with the results of the social skills package you used?

   High 1 2 3 4 5 Low

2. How successful do you feel the package was in improving the social skills of the students?

   High 1 2 3 4 5 Low

3. To what extent do you feel the procedures were sufficient to produce a lasting behavior change in the behavior of the students?

   High 1 2 3 4 5 Low

4. How would you rate the student's satisfaction or enjoyment of the package?

   High 1 2 3 4 5 Low

5. Did you receive feedback from the parents about the skills being taught?

   High 1 2 3 4 5 Low

6. How would you evaluate the following package components:

   Teacher's Manual

   High 1 2 3 4 5 Low

   Song Material

   High 1 2 3 4 5 Low

   Tally Sheet

   High 1 2 3 4 5 Low

7. How likely would you be to recommend this package to other teachers?

   High 1 2 3 4 5 Low

8. What is the likelihood that you will use the package partially or in its entirety next year?

   High 1 2 3 4 5 Low

Appendix D
Show and Tell About Food
A Script for Teachers

I will have numbers for each child to wear. The numbers will be pinned to their chests and backs. This will be for identification. For this structured observation have four of the children sitting around a table. Please locate the table in such a way that the observers can sit at different spots around the outside of the table circle. This will allow all of the children's faces to be seen.

Please ask the children to raise their hands quietly if they want to answer a question. Give each child a chance to answer questions, touch things, and to pass things out. If a child grabs and object and smashes it, please use an additional fruit or pickle from the box.

O.K., we're going to guess what kind of things are in this big box. So cover your eyes and listen. (Take out the box of animal crackers.) I have something that is hard and sweet and crunchy. The things I have come in the shapes of monkeys, elephants and bears. Who can show me a nice quiet hand and tell me what's in my box?"

(If the children are unable to guess, put the animal cracker box in the middle of the table and ask again if they know what it is.)

"I'm going to pass around the box so each one of you can look at it. I want you to point at the pictures and tell me what you see." (Give box to each student and ask them if they know the name of one of the animals.)

"Can you imagine anyone smart enough to make crackers that look like animals? Who likes animal crackers? O.K., I'm going to choose a hostess/host to pass out the animal crackers."

"Who can tell me who you serve first if you're the hostess/ host? That's right. _____, you can be the hostess/host."

"As you receive your cracker, look at it, feel it, and think about it." (Wait until all of the children have a cracker.) "Let's talk about our crackers. What kind of animal did you get?" (Call on each child and ask what animal he/she has.)

"Are the crackers hard or soft? Listen to the cracker. (Break your cracker in half.) Is it hard or soft? Let's take a bite of our crackers. Is the cracker hard or soft, _____? Is the cracker sweet or sour, _____? What color is the cracker?"

"O.K. Hide your eyes! I have something green that comes in a jar and it's sour and when we go to a hamburger place like McDonald's, we get them on our hamburgers. What is it?" (If none of the children can guess, put the jar on the table and ask if any of them know what it is.)

"A PICKLE!!! A sour pickle; we call it dill. Who likes pickles?" (Pull a pickle out of the jar and hold it up. Run your finger along it then have each child do so.)

"Feel the bumps on the pickle? Is the pickle smooth or rough? Feel the table top, it's smooth. The

pickle is rough." (Squeeze the pickle yourself, then allow each child to do so.)

"Is the pickle hard or soft, _____?"

"O.K., I'm going to cut up the pickle. How many pieces will I need?" (Have the children count.) "I'll pass out the pieces, now I want everyone to wait until we all have our piece of pickle."

"Who's tough enough to eat their pickle? Let's all take a bite at once."

"I want to see a nice, quiet hand. _____, is the pickle sweet or sour?" "SOUR!" "That's right. Who can tell me what color the pickle is?"

"I have a bag from the store. I'll give you a hint, it's CANDY! "It comes in different colors, our president likes to eat them, sometimes we get them in our Easter basket. Who can raise their hand and tell me what it is?" (If the children cannot guess, put the bag on the table and ask again if anyone knows what it is.) "JELLY BEANS!!"

"Let's see. _____, will you pass these out? Remember who do we serve first, not the hostess/host. Now, wait to eat your goodie." (Make sure each child only gets one.)

"I've got a <u>(color)</u> one!" (Ask each child what color they have.)

"Let's take a bite of our jelly beans. Yummy! Mine tastes like _____. _____, what does yours taste like?" (Ask each child what their's tastes like.)

"_____, are jelly beans sweet or sour?" (Remember that there are lemon jelly beans and the child's jelly bean may taste sour, while your jelly bean tastes sweet.) "Is the jelly bean hard or soft? Is it smooth or rough?"

"Hide your eyes, I have something else. It's green, we make guacamole out of it, it's rough and it grows on a tree." (Show them the avacado.) "Who knows what it is?"

(Pass the avacado around.) "_____, what does the avacado feel like, hard or soft? _____, what does the avacado feel like, rough or smooth?" (Then ask all the children to say "rough" at once.)

"You sound like a bunch of dogs! Rowf, rowf! Now I'm going to cut up the avacado and give each of you a piece." (If a child doesn't want to taste it, do not force them.)

"Does an avacado taste sweet or sour? Neither?" "Where does the avacado grow, _____? Right, on a tree." "What color is the avacado?"

"Now hide your eyes, I have something else."

"I have something yellow and sweet and it grows on trees and we buy it in the store. It's a smooth fruit, can someone raise their hand and tell me what it is?" "A BANANA!!" "I want each of you to feel the banana, is it smooth or rough, _____?" "Smooth!"

"Who likes bananas? Raise your hand if you want a piece of banana." (Cut up the banana and give each child a piece.)

"_____, is the banana sweet or sour?" (Hold up a pickle and a banana.) "_____, touch the banana, now touch the pickle. Tell me which one is smooth. Which one is rough? _____, which one is green? _____, which one is yellow?" "Is a banana hard or soft?"

"Alright, hide your eyes everyone, I have something that's a fruit. Open your eyes and look at it. (Hold up the kiwi.) "Does anyone know what this is called?" "It's called a KIWI!! Let's all say KEEE-WEEE!!! What a neat word." "Wait until you see the inside of the kiwi!" (Cut it in half.) "Isn't it pretty?" "_____, what color is it?" (Take out a second kiwi.) "Feel the outside of the kiwi." (Let all the children feel it.) "_____, is the kiwi smooth or rough?" (Peel the kiwi before giving the children a taste.)

"_____, is the kiwi sweet or sour? Did you like it?" "Is it hard or soft?"

"Hide your eyes, I have something else in this box. It's red and it's sweet and it grows on a tree and it's a fruit. Raise your hand and tell me what it is. AN APPLE!!" (Pass the apple around.) "_____, is the apple smooth or rough? _____, is the apple hard or soft?"

"I'm going to cut up the apple. Who would like to pass out the pieces? _____, you will be hostess/host." "Let's taste our piece of apple. _____, is it sweet or sour?" "What color is the outside of the apple?" "What color is the inside?"

"I have one more thing in this box so hide your eyes. Oh, it comes in a bag, and it's a lot of different colors and it's sweet and here it is!" (Put gumdrops on the table.)

"Does anyone know what these are called? Candy is one name for them. We can also call them gumdrops. Let's see, will _____ be the hostess/host? Now, let's all wait to taste them until everyone has one."

"Feel your gum drop, _____. How does it feel? Smooth or rough? What color do you have, _____?" (Ask each child what color he/she has.)

"Let's eat them. _____, was the candy hard or soft?" "_____, was the candy sweet or sour?"

At this point, you can hold up the different objects and ask which one is smooth, rough, soft, hard, sweet, or sour. Then ask the children to help clean up.

Appendix G
Informed Consent Permission Slip

Dear Parents,

Our school has been chosen to participate in the evaluation of a new teaching package. The package uses music to teach social skills. The skills for the package that we will use are: (1) saying thank-you, (2) looking at the person who is speaking, and (3) taking turns. The package uses music to teach the concepts.

The songs will be used in conjunction with the regular class curriculum. We will be playing the songs three times per week.

The evaluation will last six weeks. The student's performance of the above skills (i.e., whether the behaviors increase, decrease, or stay the same) will help us determine if the program would be an asset in teaching the above skills.

I give my permission for _____
to participate in the above program.

_____
Parent or Guardian

Appendix F
Analysis of Covariance Tables for the Dependent Variables

Table 3

Analysis of Covariance Table for the Dependent Variable Thank-you (TU)
(Alpha = 0.05)

Source	dF	MS	F	SIG(F)
Group	2	0.0194	0.336	0.717
Subject/Group	32	0.0634	1.372	0.255
Pretest	1	0.1239	2.681	0.121
Structure	1	0.1645	3.560	0.077
Structure x Group	2	0.1863	4.033	0.038*
Error	16	0.0462		
Total	123			

*Significant Values

Table 4

Analysis of Covariance Table for the Dependent Variable Thank-you with Adult Intervention (TUAI)
(Alpha = 0.05)

Source	dF	MS	F	SIG(F)
Group	2	0.0123	2.363	0.110
Subject/Group	32	0.0054	1.298	0.295
Pretest	1	0.0150	3.641	0.074
Structure	1	0.000013	0.003	0.955
Structure x Group	2	0.0019	0.479	0.627
Error	16	0.0041		
Total	123			

Table 5

Analysis of Covariance Table for the Dependent Variable Not Saying Thank-you (NTU)
(Alpha = 0.05)

Source	dF	MS	F	SIG(F)
Group	2	0.0574	0.849	0.437
Subject/Group	32	0.7360	1.733	0.122
Pretest	1	0.1185	2.791	0.114
Structure	1	0.1706	4.017	0.062
Structure x Group	2	0.1169	3.932	0.041*
Error	16	0.0425		
Total	123			

*Significant Values

Table 6

Analysis of Covariance Table for the Dependent Variable Looking At (LA)
(Alpha = 0.05)

Source	dF	MS	F	SIG(F)
Group	2	0.0117	0.657	0.525
Subject/Group	32	0.0190	1.764	0.115
Pretest	1	0.0002	0.016	0.900
Structure	1	0.0568	5.274	0.035*
Structure x Group	2	0.00002	0.002	0.998
Error	16	0.0022		
Total	123			

*Significant Values

Table 7

Analysis of Covariance Table for the Dependent Variable Looking At with Adult Intervention (LAAI) (Alpha = 0.05)

Source	dF	MS	F	SIG(F)
Group	2	0.00004	0.343	0.712
Subject/Group	32	0.0001	0.696	0.813
Pretest	1	0.000029	0.157	0.697
Structure	1	0.0024	1.304	0.270
Structure x Group	2	0.0003	1.579	0.237
Error	16	0.0001		
Total	123			

Table 8

Analysis of Covariance Table for the Dependent Variable Not Looking At (NLA)
(Alpha = 0.05)

Source	dF	MS	F	SIG(F)
Group	2	0.0134	0.769	0.472
Subject/Group	32	0.0189	1.994	0.072
Pretest	1	0.0002	0.024	0.878
Structure	1	0.0499	5.258	0.036*
Structure x Group	2	0.0002	0.023	0.978
Error	16	0.0094		
Total	123			

*Significant Values

Table 9

Analysis of Covariance Table for the Dependent Variable Taking Turns (TT)
(Alpha = 0.05)

Source	dF	MS	F	SIG(F)
Group	2	0.0009	0.058	0.944
Subject/Group	32	0.0169	0.635	0.866
Pretest	1	0.0907	3.393	0.084
Structure	1	0.0535	2.002	0.176
Structure x Group	2	0.0117	0.437	0.653
Error	16	0.0267		
Total	123			

Table 10

Analysis of Covariance Table for the Dependent Variable Taking Turns with Adult Intervention (TTAI) (Alpha = 0.05)

Source	dF	MS	F	SIG(F)
Group	2	0.013	1.35	0.275
Subject/Group	32	0.009	0.78	0.735
Pretest	1	0.053	4.496	.050*
Structure	1	0.00016	0.0134	0.909
Structure x Group	2	0.00016	0.0135	0.987
Error	16	0.0118		
Total	123			

*Significant Values

Table 11

Analysis of Covariance Table for the Dependent Variable Not Taking Turns (NTT)
(Alpha = 0.05)

Source	dF	MS	F	SIG(F)
Group	2	0.0057	0.7016	0.503
Subject/Group	32	0.0075	0.954	0.562
Pretest	1	0.0007	0.0828	0.777
Structure	1	0.0166	2.1212	0.165
Structure x Group	2	0.0004	0.528	0.949
Error	16	0.0078		
Total	123			

Table 12

Teacher Evaluation Responses

Possible Responses: High	1	2	3	4	5	Low
	Teacher's Responses				Average Rating	
1. Results from package were satisfactory.	1	2	3	4	2.5	
2. Successfully improved students' social skills.	2	2	3	4	2.75	
3. Procedures sufficient enough to produce lasting change.	2	2	3	3	2.5	
4. Students' enjoyment of MASI package	1	1	1	4	1.75	
5. Received parental feedback on package.	0	0	0	2	0.5	
6. Rating of package components:						
A. Teachers Manual	1	2	3	3	2.25	
B. Song Material	1	1	1	4	1.75	
C. Tally Sheet	1	3	5	3	3.0	
7. Likelihood of recommending package to other teachers.	1	2	2	4	2.25	
8. Future use of package partially or in its entirety.	1	1	1	4	2.0	

Appendix G
Teachers' Comments

The teacher's non-directed interview brought out a few comments that will now be discussed.

The teachers felt that MASI was a fun way to introduce the concepts of social skills. The following quotes were taken from a recording of the interview.

Quotes

". . .effective in that they really tuned in and are aware of looking at when talking to other people."

"It brings the looking at to their attention in a fun manner, it wasn't nagging."

"They enjoyed taking turns and you could see leadership coming out. The one's that pretended they were being me and taking turns."

"Taking turns is the one I still see kids doing. I thought it was one we would lose."

"You see thank-you in the lunch room and after gym and when you pass out papers."

Teachers had some comments on how to improve the effectiveness of the program; they were:

(1) Tape the kids singing the MASI songs and let them listen to themselves sing.

(2) The music is very juvenile and primary and should

not be used with the older kids. Great for pre-school and kindergarten.