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A STRUCTURED LEARNING APPROACH:

THE TRAINING OF CLASSROOM PARTICIPATION SKILLS

by

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B.S., St. Cloud State University--Minnesota, 1980

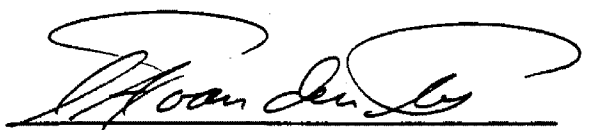Presented in partial fulfillment of the requirements

for the degree of

Master of Arts
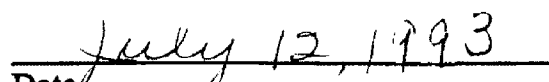
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This study examined the effectiveness of a structured learning approach in the training of classroom participation skills in a with-in subject, multiple-baseline across subjects research design. This approach utilized modeling, role-playing, performance feedback, transfer of training as well as peer role models in the training of four seventh grade students two learning disabled and two cognitively delayed) in a self-contained special education class. Results indicated that the training had clear effects in the self-contained classroom environment for three of the subjects. There were slight effects in the generalization environment for one of the subjects and clear effects for two subjects. Two subjects participated at levels higher than a typical peer in the mainstream classroom.

ACKNOWLEDGEMENTS

I would like to thank the following people for the assistance they provided me in the process of writing this paper. Dr. van den Pol guided me through the process of the research and of the writing this thesis. Without his counsel, this research would not have been possible. I also want to thank my committee members, Dr. Evans, Dr. Herrin and Dr. Patton for reviewing my work and helping me in the culmination of this project. I especially want to acknowledge the inspiration Dr. Evans gave to me in the first conceptualization of this study and to the superior knowledge she imparted in her classes.

My heartfelt thanks also goes to Norma Larson, the observer, without her assistance the data collection in this research study would not have been possible. I would like to recognize the guidance and encouragement that Dr. Edwards provided me. I also would like to thank Bob Washburn for allowing the necessary intrusions in his social studies class and for his extreme patience throughout this study.

Last of all I would like to thank Jon Harvala for his technical assistance, without which the completion of this paper would not have been possible.

iii

TABLE OF CONTENTS

v

CHAPTER 1

Public Law 94-142 mandated that students with disabilities will be educated in the least restrictive environment. Socialization and mutual acceptance were presumed benefits (Turnbull & Turnbull, 1990). Simple proximity of special education students with their nondisabled peers in the mainstream, however, has not always increased social interaction or social acceptance by their peers. According to Gresham (1982a) "Mainstreaming efforts are likely to result in increased social isolation and more restrictive social environments unless provisions are made to train handicapped children in the social skills necessary for effective social interaction and peer acceptance" (p. 423). Roberts and Zubrick (1993) concur in their study that children with disabilities integrated with their peers were more frequently rejected and less accepted. They concluded, "The social acceptance of students with and without disabilities into regular schools requires more than the mere placement of these students into the regular classroom and playground" (p. 201).

Social skills training is an accepted means by which to promote socialization of children with disabilities (Clement-Heist, Siegel & Gaylord-Ross, 1992; Sasso, Melloy & Kavale, 1990; Neel, 1988; Hollinger, 1987; McGinnis & Goldstein, 1984; Strain & Shores, 1983; Gresham, 1982a & 1982b). Skills related to a child's social development include: (1) Classroom Survival Skills; (2) Friendship-Making Skills; (3) Skills for Dealing with Feelings; (4) Skill Alternatives to Aggression; (5) Skills

1

for Dealing with Stress (McGinnis & Goldstein, 1984).

The controversy in the literature concerns the generalization of these skills. McGinnis & Goldstein (1984) recognized the difficulty in promoting the generalization of these skills in other environments and over time. Strain & Shores (1983) questioned whether social skills training will generalize to other settings and indicated the need for further research.

Research Question

Can students with disabilities be trained in classroom participation skills in a special education setting, and do those skills generalize to a mainstream setting?

Definition of Terms

For the purpose of this study, the following terms are defined:

1. Social Skills: "A competent-correlates conceptualization defines (individuals as) socially skilled if these behaviors predict important social outcomes for individuals. Important social outcomes may be acceptance in the peer group, teacher or parent judgements of social competence, success in school, and/or any social behaviors known to correlate with any of the above social outcomes" (Gresham, 1982b, p. 4).

2. Cognitive Delay: "Significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period that adversely affects a child's educational performance (Montana Code Annotated, 20-7-401, 1992, p. 456).

3.   Specific Learning Disability: A "disorder in one or more of the basic

psychological processes involved in understanding or using language, spoken

or written, which may manifest itself in an imperfect ability to listen, think,

speak, read, write, spell or do mathematical calculations" (Montana Code

Annotated, Section 20-7-401, 1992, p. 456-457).

4.   Generalization: "Generalization can be defined as the occurrence of relevant

behavior under different, nontraining conditions (i.e., across subjects, settings,

people, behaviors and/or time) without the scheduling of the same events in

those conditions as had been scheduled in the training conditions" (Gresham,

1982b, p. 27).

5.   Resource Room: Special education placement for less than 50% of the day.

6.   Self-contained: Special education placement for more than 50% of the day.

7.   Mainstream: The educational setting in which the majority of the school

population is served.

Significance of the Study

Many students with disabilities need to develop appropriate social skills for

successful integration in the classroom with their nondisabled peers. Given the

constraints of our already overburdened regular education system, it is unrealistic to

presume that this instruction will be accomplished within the mainstream setting.

Therefore, many special education teachers assume the responsibility for this

instruction. This study will investigate the teaching of classroom skills using an

approach advocated in Skillstreaming the Elementary School Child: A Guide to

Teaching Prosocial Skills (McGinnis & Goldstein, 1984).

Specifically, this study will examine the training of the skill of participating in classroom discussions. The generalization of this skill will facilitate the goal of the inclusion of students with disabilities into mainstream educational environments. This study will also determine whether the classroom participation skills acquired in a self-contained setting will generalize to a mainstream classroom.

CHAPTER 2

REVIEW OF RELATED LITERATURE

Social Skill Deficits

The education of students with learning disabilities and cognitive delays has

been mandated by Public Law 94-142, to occur in the least restrictive environment.

This means that these students have a right to be educated in the mainstream with the

majority of the school population for the greatest amount of time as determined by a

team consisting of the parent, principal, regular education teacher and the special

education teacher. The amount of time is dependent upon the severity and nature of

the student's disability. It is presumed that the student will have the opportunity, in

the mainstream, to develop the social skills necessary to allow him/her to become an

accepted member of society (Cullinan, Sabornie & Crossland, 1992).

The social rejection experienced in mainstream settings often conflicts with the

goals of mainstreaming (Hollinger, 1987). Experiences in the mainstream may not be

enough to ensure social acceptance of disabled students in the mainstream (Cullinan,

Sabornie & Crossland, 1992; Fox, 1989). Gresham (1982a) states, "(a)

nonhandicapped children interact less (often) or more negatively with handicapped

children in the mainstream environments; (b) handicapped children are poorly

accepted by their nonhandicapped peers; and (c) handicapped children do not

automatically model the behavior of their nonhandicapped peers" (p. 425). Nelson

5

(1988), reports that lack of social competence puts students with disabilities at a higher risk for discrimination from their peers and for maladjustment in later life. Pray, Hall & Markley (1992) acknowledged, "Given the long-term effects of social skill deficits, this is an area that certainly needs to be addressed for students with learning disabilities as well as all exceptionalities" (p. 47).

These children may experience difficulties in the area of social skills because of a skill deficit (they don't know what to do), a social performance deficit (they don't know when to use the skill) or a self-control deficit (Gresham, 1982b). Students with disabilities within a special education setting may be utilizing the simpler social network offered in that setting. They will, therefore, spend less time interacting socially with peers in the regular classroom (Coleman, McHam & Minnett, 1992).

Social Skills Training

Historically, the perspective that special education has taken in the realm of social skill deficits has been the development of correctional programs that apply planned consequences for inappropriate behaviors rather than providing direct instruction to teach prosocial skills (Neel, 1988; McGinnis, 1984).

In recent times, however, social skill training of students with disabilities to promote their social integration with nondisabled peers has been on the rise (Sasso, Melloy & Kavale, 1990; Jupp, 1988; Keefe, 1988; Neel, 1988; Lovitt, 1987; McGinnis & Goldstein, 1984; Strain & Shore, 1983; Gresham, 1982a & 1982b). Social integration of a child will be reflected in group membership based on whether

the child (a) is socially accepted by peers, (b) has at least one reciprocal friendship, and (c) is an active and equal participant in activities performed by the peer group (Cullinan, Sabornie & Crossland, 1992). Group membership is often reflected in the classroom participation engaged by the student, disabled or nondisabled.

Nelson (1988) states, "Social skills training and mainstream placements are increasingly part of special education curriculum for mildly handicapped pupils" (p. 19). The importance of academically related social skills training is reflected in the emphasis that teachers place on these skills when writing Individual Educational Program objectives (Pray, Hall & Markley, 1992). In fact, Roberts & Zubrick (1993) determined through teachers' ratings of students that academic behavior and success were indicative of social acceptance.

In the literature there is some discussion as to where this training should take place. Social skills training in the mainstream would increase the likelihood that the skills would generalize to an integrated setting since the training was done in that setting (Roberts, 1991; Hollinger, 1987; Strain & Shore 1983). The difficulty in the inclusion of social skills training in the regular curriculum is that regular educators have been mandated to get "back-to-the-basics" and find it difficult to justify it in their curriculum (Nelson, 1988; McGinnis, 1988).

Gresham (1982a) believes that social skills can be effectively taught in both the self-contained and mainstream settings. He suggests, however, that nondisabled peers are more effective models for the training than peers with disabilities. McCann (1985) agrees with Gresham in that, "Reverse mainstreaming for socialization

purposes represents a valuable addition to the continuum of options for achieving the integrative intent of the least restrictive mandate. Further, such contact may be an intermediate step between total segregation and partial mainstreaming" (p. 17).

Regular education can benefit from the knowledge base in social skill training that special education has developed. Through a collaborative effort, supplemental social skill training in special education can be reinforced in the regular education setting to provide appropriate training for all those who have social difficulties (Coleman & Minnett, 1993).

Generalization of Social Skills Training

The generalization of social skills to the mainstream, taught in a segregated setting, poses a great challenge to the teacher. Stokes and Baer (1977) outlined several methods to promote generalization. Their list included cuing the subjects to elicit natural reinforcers in the natural environment, training more exemplars, training loosely, using delayed reinforcement, using stimuli likely to be found in generalized settings (e.g., peers) and reinforcing self-reports of trained behavior by the subjects. Gresham (1982b) outlines several methods to improve generalization: (a) use more than one trainer; (b) use nonhandicapped peers for modeling in training sessions; (c) use multiple, diverse settings for training sessions; and (d) change the nature of the reinforcement.

McGinnis (1988) indicated a need to plan for the youngster's use of the prosocial skill in real life situations by giving homework assignments in which they practice the skill outside of the training setting. Preparation of the generalized setting

for a student's success in using that skill may also be necessary (Nelson, 1988).

Summary

Social and classroom skills training is a vital component in the curriculum for students with special needs. This training will help to facilitate the students' abilities to deal successfully with the expectations of teachers and parents as well as their peers.

According to Nelson (1988), "The technology for teaching appropriate social behaviors is available, but the technology for maintaining and generalizing these skills lag behind" (p. 22). Hollinger (1987) observed that "...the failure of social skills training to produce relatively consistent treatment effects raises the question of how training procedures could be improved" (p.25).

While there is agreement that the most beneficial setting for this skills training would be the mainstream, the reality is that this is not always an option in many of our public schools. Including nondisabled peers in the training as role models as well as the reinforcement of students' self-reports to promote the generalization of these social skills outside of the training setting, however, may be possible. The training program, Skillstreaming the Elementary School Child: A Guide to Teaching Prosocial Skills (McGinnis & Goldstein, 1984), used in conjunction with nondisabled peer role models may be one method of improving the generalization of classroom participation skills training to mainstream settings.

CHAPTER 3

METHOD

<u>Sample</u>

The subjects in this study were students in a middle school (sixth grade-eighth grade) special education program. The school district serves over a 1000 students (K-eighth grade) in two buildings. The four subjects were in a special education program serving students with learning disabilities and cognitive delays. There were seven students in the class, five males and two females. They were mainstreamed for 33% of the day and provided special education services for 63% of the day, therefore, they were all considered students in a self-contained special education program.

Subject 1 was a 14 year old cognitively delayed female in seventh grade. She had a full scale IQ of 59 (WISC-R) with a strength in the performance domain (IQ of 74) and a verbal IQ of 50. In the area of adaptive behavior functioning she received an adaptive behavior composite of 59 on the Vineland Adaptive Behavior Scales. This scale breaks this composite down into three subcategories. Her communication domain standard score was 52, daily living standard score was 87 and socialization standard score was 55. She has been in a self-contained classroom for core academic classes and mainstreamed for art, physical education, music, keyboarding and lunch/recess. She has been mainstreamed into a regular seventh grade social studies class this year.

10

Subject 2 was a 13 year old learning disabled male in seventh grade. He had a full scale IQ of 81 (WISC-R) with a strength in the performance domain (IQ of 93) and a verbal IQ of 72. He received 50 mg. of imipramine daily for the management of attention deficit hyperactivity disorder and mild depression as prescribed by his doctor. He obtained his academic instruction in a self-contained setting with the same mainstreaming as Subject 1 as well speech/language therapy and occupational therapy.

Subject 3 was a 12 year old cognitively delayed male in seventh grade with a full scale IQ of 60 (WISC-R). He had a relative strength in the performance domain (IQ of 65) and a verbal IQ of 60. On the Vineland Adaptive Behavior Scales he obtained an adaptive behavior composite of 71. The subcategories follow: communication standard score was 62, daily living standard score was 76 and socialization standard score was 94 (average range). He was a very motivated student and participated on the seventh grade basketball team. The mainstreaming in which he was involved in was the same as that listed for the previous subjects.

Subject 4 was a 13 year old learning disabled female in seventh grade. She has had a label of cognitively delayed in the past, however, a recent reevaluation indicated a greater intellectual potential than previously demonstrated by this student. She is now considered a learning disabled student with significant language problems. Her full scale IQ was 76 with a verbal IQ of 66 and a performance IQ of 91. Her adaptive and self-help skills appear to be relatively weak and below average for her age, however, they were not felt to be diagnostically significant. The mainstreaming in which this student was involved corresponds with the other subjects in the study.

She also received speech and language services.

Definition of Variables

The dependent variables in this study were observations, in a training setting and in a generalization setting, of the subjects' classroom participation in group discussions. Definitions of each of these skills can be found in Table 1. The training setting consisted of a physical science class in the self-contained classroom made up of five students with disabilities (four students were in this study). The generalization setting was a mainstream seventh grade social studies class made up of twenty-four students in regular education, two students who received resource room assistance and four students who received self-contained special education services.

The independent variable was the classroom skills training that occurred in the self-contained setting. This training was modeled after McGinnis & Goldstein's book (1984), Skillstreaming the Elementary School Child: A Guide to Teaching Prosocial Skills. Components of this training include modeling, role-playing, performance feedback and transfer of training.

Table 1

Classroom Skills and Definitions

Classroom Skill	Definition
Contributing to classroom discussions when called on: one word response	When called on by the teacher the subject will respond within 5 seconds with a one word response appropriate to the topic currently under discussion in the classroom.
Contributing to classroom discussion when called on: two or more word response	When called on by the teacher the subject will respond within 5 seconds with two or more words in a response appropriate to the topic currently under discussion in the classroom.
Raises hand to volunteer	The subject will raise a hand to volunteer when the teacher requests student participation in the classroom discussion within 5 seconds of the request.
Volunteers and contributes to classroom discussion: one word response	The subject will raise a hand to volunteer when the teacher requests student participation in the classroom discussion within 5 seconds of the request and will respond with a one word response appropriate to the topic currently under discussion.
Volunteers and contributes to classroom discussion: two or more word response	The subject will raise a hand to volunteer when the teacher requests student participation in the classroom discussion within 5 seconds of the request and will respond with two or more words in a response appropriate to the topic currently under discussion.

General Training Procedures

The subjects were observed to establish a baseline of classroom behaviors exhibited in the social studies mainstream class (generalization setting) as well as in a self-contained special education science class (training setting). The classes in which the observations took place remained constant throughout this study. A normative sample of classroom participation behaviors was taken of a typical male and female peer during the observation process in the mainstream classroom (see Figures 1 & 2).

A classroom social skills training class was implemented in the self-contained classroom utilizing a male and female peer in the training sessions as models until mastery of the skill was obtained in the self-contained setting. The training consisted of nine consecutive thirty minute sessions over a span of two weeks and one follow-up session a week later to review progress made towards acquisition of the skills. This structured learning approach to teaching classroom skills utilized in this study consisted of four components. They are modeling, role playing, performance feedback and transfer of training.

Session 1 began with an introduction to classroom skills necessary for success in school. The subjects brainstormed a list which included listening, raising your hand to be called on, being quiet and following directions. They also generated a list of the classes where students would use these skills (e.g., art, health, social studies, keyboarding, etc.). The students then were introduced to the four components that were to be utilized in the training. The session ended with a discussion of peer role models joining the class to assist in the acquisition of this skill. They concluded that

it would be helpful.

In the second session, the trainer reviewed the training procedures as well as the skill of listening which the students had previously been taught. The steps to this skill included eye contact, keeping still and asking appropriate questions of the speaker. This skill was modeled by the peers and the subjects role-played the skill. After performance feedback for each subject, the session ended with an assignment to practice the skill in the physical science class later that day.

The third session began with a review of the first session and a discussion of the new skill to be taught. The skill was called, "Contributing to Classroom Discussions". A chart of the skill steps was presented to the subjects and posted in the classroom. The definition of these steps follow: 1. Think about what the teacher is discussing. 2. Ask yourself (Is what I have to say on the subject under discussion?) 3. Decide (What am I going to say?) 4. Raise your hand. 5. Speak (when called on). The peers modeled the skill in several different situations (science, social studies, health) and used self-talk (verbalizing what they were thinking) during the modeling. The subjects had opportunities to role-play the skill until mastery was obtained in the training sessions (sessions four and five). During the role-playing, the subjects received performance feedback from his/her peers as well as the adult trainer and verbal reinforcement was given for appropriate use of the skill.

The subjects were encouraged to use the skill in the self-contained setting in two group discussion classes, current events/science as well as mainstreamed social studies, over the following weeks. A self-report system was utilized by the subjects.

Subjects were trained during sessions six, seven and eight to self-report the skill being practiced. They tallied, on a piece of graph paper, each time they raised their hands in a class (self-contained current events/science and mainstreamed social studies).

Session nine was utilized in practicing the skill of contributing to class discussions by brainstorming various reinforcements that could be earned by using this skill and using the self-reporting procedure.

Transfer of training (generalization) was encouraged through the use of nondisabled peers as models, opportunities in the mainstream to practice the skill, reinforcement through the use of self-report data keeping and earned computer time as a result of skill usage as well as real-life reinforcement (e.g., verbal praise).

The data taken during the baseline and practice phases in both settings were depicted on graphs (see Figures 3- 10). The data were compared and conclusions were drawn about the training of classroom skills as well as the generalizability of this training.

Interobserver Reliability

Prior to the baseline phase of this study, the observers were trained and interobserver reliability was obtained. This training included limiting the observers' knowledge of the study and specifying narrow definitions of the behaviors in question. The data consisted of a tally of the frequency of behaviors exhibited by the subjects.

Interobserver agreement was obtained by dividing the total number of agreements by the number of agreements plus the number of disagreements and multiplying it by one hundred (Poling & Fuqua, 1986). Percent agreement between

observers was above 90% for three consecutive sessions prior to the taking of the baseline data. This was repeated successfully during the baseline as well as in the training phase of the study to check reliability.

The observer was present in the observation environments (mainstreamed social studies class and self-contained science class) for several days prior to taking data so that the subjects had a chance to become accustomed to the observer's presence in the classroom.

Research Design

This study utilized a within-subject research design (Poling & Fuqua, 1986). It consisted of multiple-baseline across subjects. There was one independent variable and two dependent variables.

Instrumentation

The data were collected by the observer by tallying the frequency of the behaviors. A chart for this collection of data is included in the appendix (see Appendix A).

Anticipated Treatment of Data

The nonparametric data were analyzed visually and by a description of the charts.

Limitations and Assumptions

It is assumed that if there is a change in the frequency of the behavior between the baseline phase and the treatment phase of this study, that the change can be attributed to the classroom skill training that occurred. The students were trained to

participate in group discussions through raising their hands and responding when called on in group discussions. An increase in this behavior in the training setting and/or the generalization setting would indicate that the training had an affect on the students' behavior.

The threats to validity of this study were history and maturation. In the mainstream, the subjects may change his/her skill level by exposure to peer role-models; however, since this has not occurred yet for most of these students, it is doubtful that this will occur in the course of this study. Maturation will be accounted for by limiting this study to 12 weeks.

The generalizability of a within-subject research design is a valid concern (Poling & Fuqua, 1986). The utilization of a multiple baseline across subjects, however, brings more confidence to the conclusions drawn. In this research design it was impossible to withdraw treatment to institute a reversal design due to the fact that the behaviors being trained could not be untrained. The nature of this training is that it is done in a classroom setting, therefore, it would not have been feasible to institute the training of a single subject at a time. This research study expanded the social skills training research initiated by McGinnis & Goldstein (1984). It was hoped that valuable information about training and generalization could be obtained from this study.

This research study developed a data-base of information concerning a variety of individuals. Conclusions were drawn based on the differences and similarities in the results for each subject. Qualitative research suggests hypotheses for the different

effects it had on individual subjects. Elliot Eisner (1991) has stated:

> Qualitative case studies are full of opportunities for generalization.
> Such studies are typically nonrandom, and as case studies they focus on
> the particular. But, as Lee Schulman says, every case is a case of
> something, just as every sample--whether random or not--is a sample of
> something. If we learn something about a case that we did not know at
> the outset of the study, not only have we achieved consciousness of that
> quality or feature, but also we learn to look for that quality or feature
> in other places (p. 207).

The results of this study will, therefore, give the researcher and others one more

piece of information to consider in the implementation of classroom skills training in

their particular educational environment.

CHAPTER 4

RESULTS

In the normative sample, a typical male peer in the generalization setting averaged 1.11 volunteers per ten minute interval over the course of this study (see Figure 1). The typical female peer observed averaged 1.76 volunteers per ten minute interval (see Figure 2).

Subject 1 showed an effect as the result of training in the training setting. Prior to training she averaged 1.34 volunteers per ten minute interval and during training her average increased to 5.01 volunteers per ten minute interval (see Figure 3). Visual inspection showed a minimal effect in the generalization setting. Prior to training, the subject never raised her hand to volunteer. During training, volunteering occurred in two of the nine observations at an average rate of .15 volunteers per ten minute interval (see Figure 4).

Subject 2 maintained his skill level from the baseline through the training phase of this study in the training setting. He averaged 6.47 volunteers per ten minute interval during baseline and 6.62 volunteers per ten minute interval (see Figure 5) during the training phase. He showed an effect in the generalization setting as a result of the training. He averaged .19 volunteers per ten minute interval during the baseline phase. During training the average response rate was 1.42 volunteers per ten minute interval (see Figure 6).

20

Subject 3 showed an effect in the training setting as a result of the training.

His average during baseline was 2.54 volunteers per ten minute interval and increased

to 7.68 volunteers per ten minute interval (see Figure 7) during the training phase. In

the generalization setting he showed an effect with an average of .82 volunteers per

ten minute interval prior to training and an average of 1.55 volunteers per ten minute

interval during training (see Figure 8).

Subject 4 showed an effect in the training setting with an average of 3.58

volunteers per ten minute interval prior to training and 5.99 volunteers per ten minute

interval (see Figure 9) during training. She showed a slight effect in the generaliza-

tion setting. Her baseline mean average was .13 volunteers per ten minute interval.

During training it increased to .27 volunteers per ten minute interval (see Figure 10).

Figure 1.

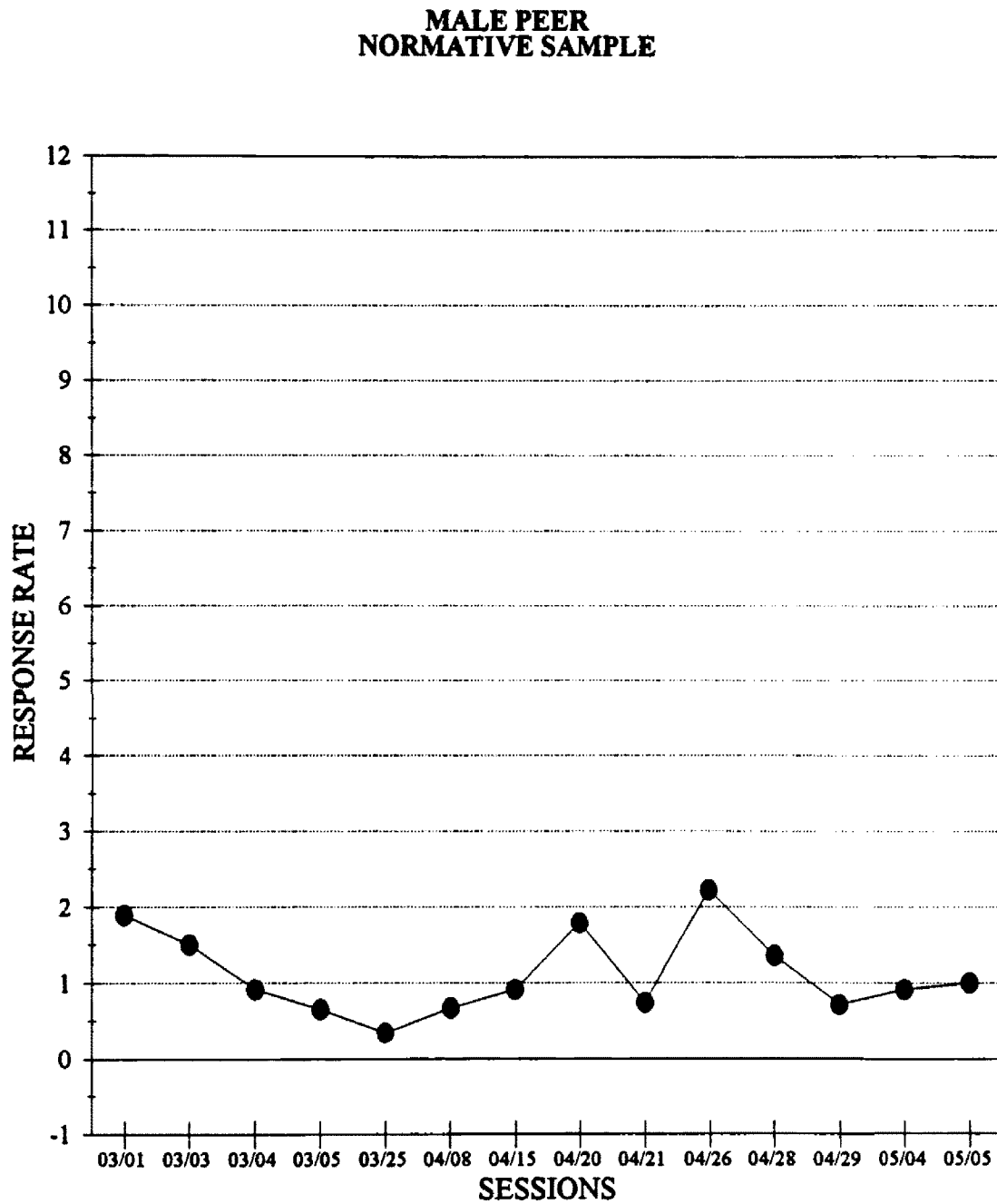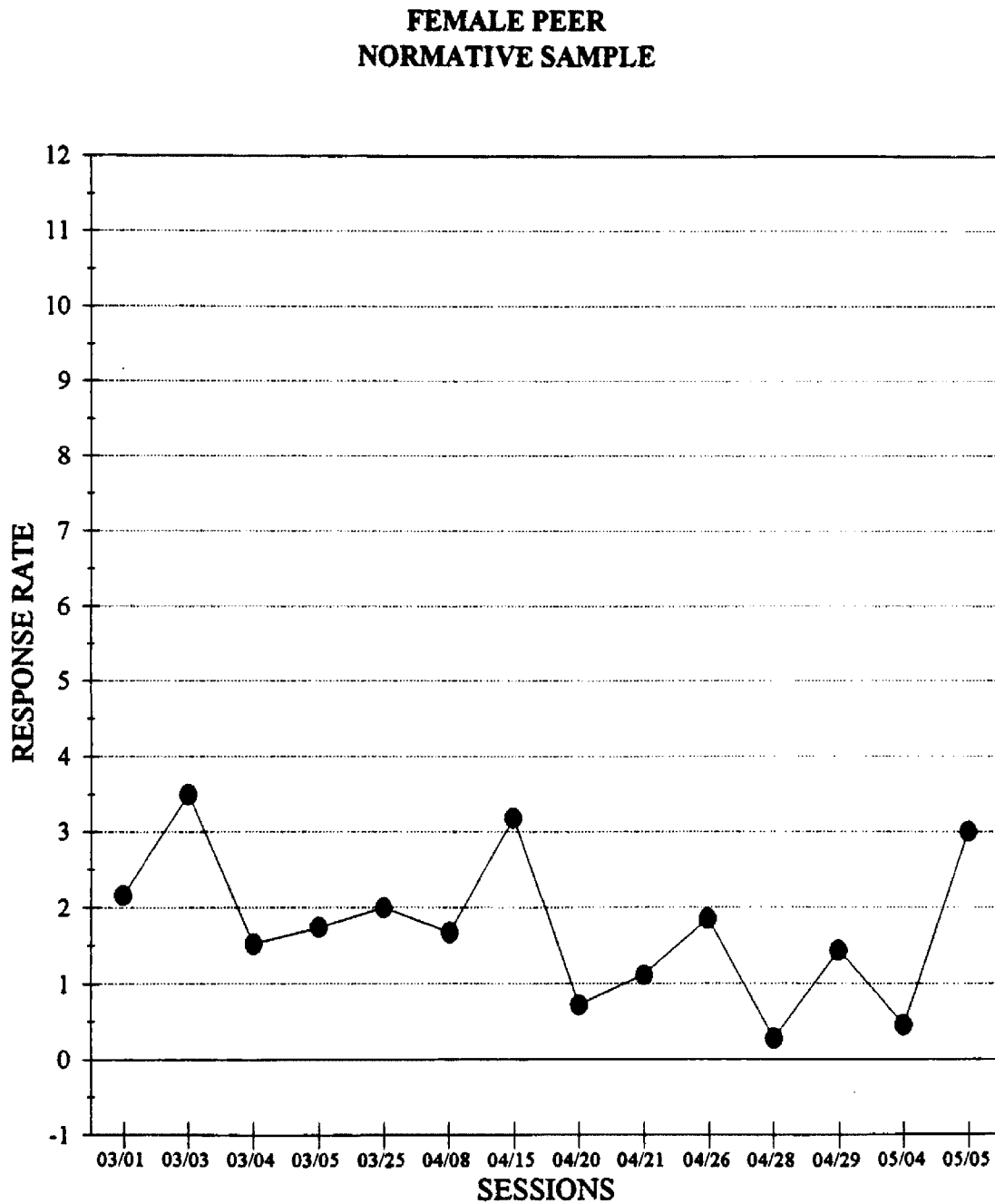Response rate of peer's volunteers per 10 minute interval in generalized setting.

MALE PEER
NORMATIVE SAMPLE

Figure 2.

Response rate of peer's volunteers per 10 minute interval in generalized setting.

FEMALE PEER
NORMATIVE SAMPLE

Figure 3.

Response rate of Subject 1's volunteers per 10 minute interval in training setting.

SUBJECT 1
TRAINING SETTING
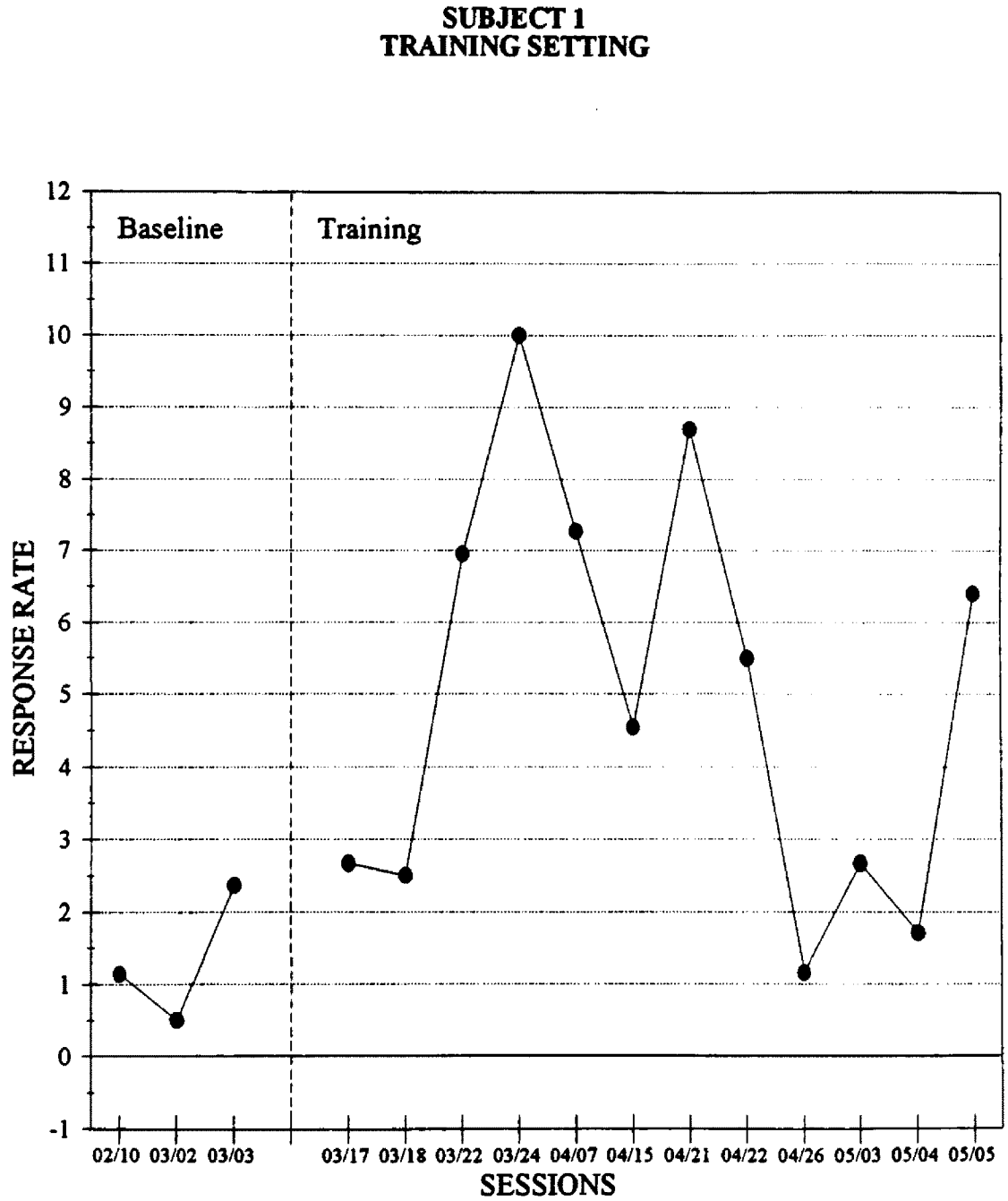
Figure 4.

Response rate of Subject 1's volunteers per 10 minute interval in generalized setting.

SUBJECT 1
GENERALIZED SETTING

Figure 5.

Response rate of Subject 2's volunteers per 10 minute interval in training setting.

SUBJECT 2
TRAINING SETTING
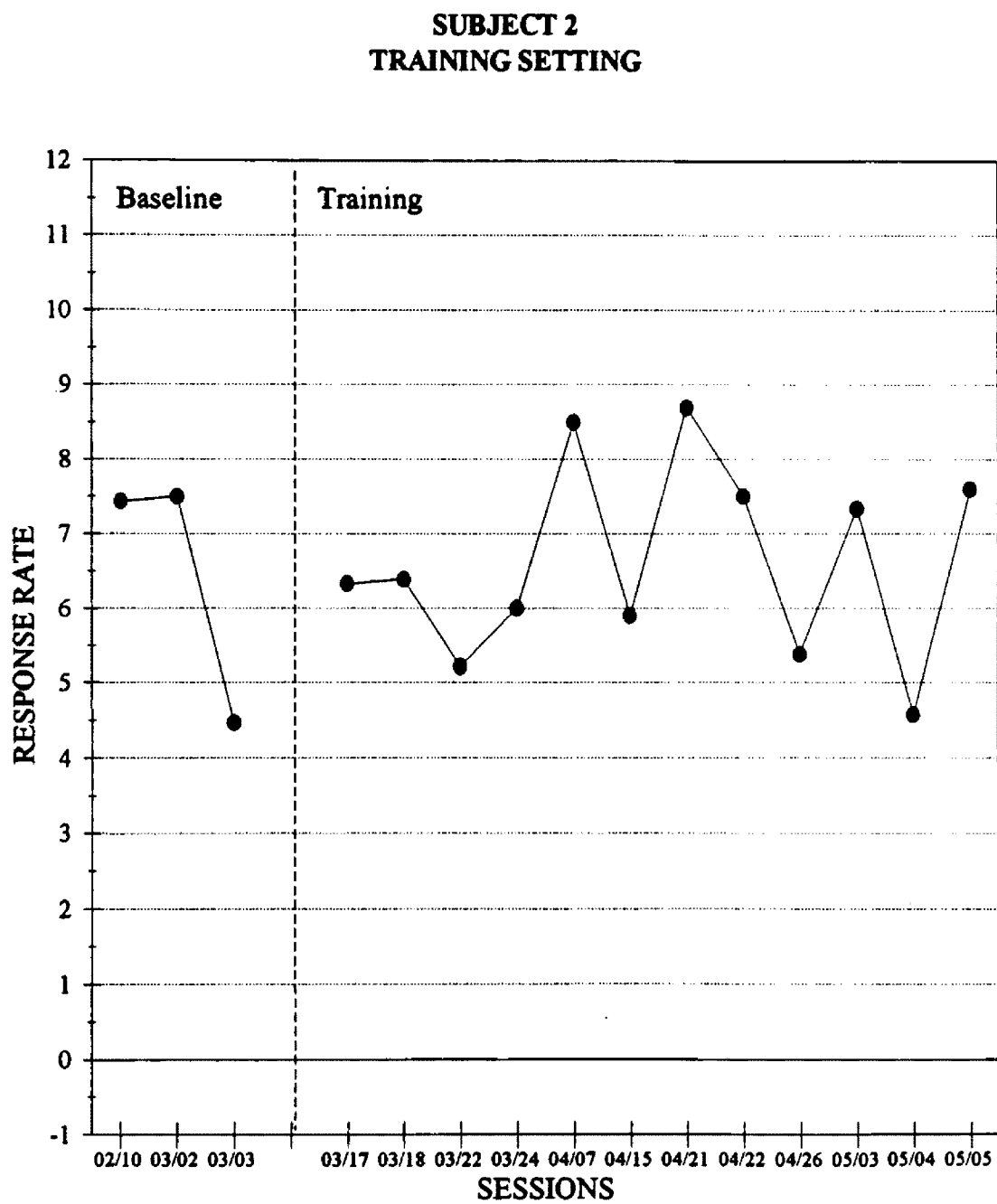
Figure 6.

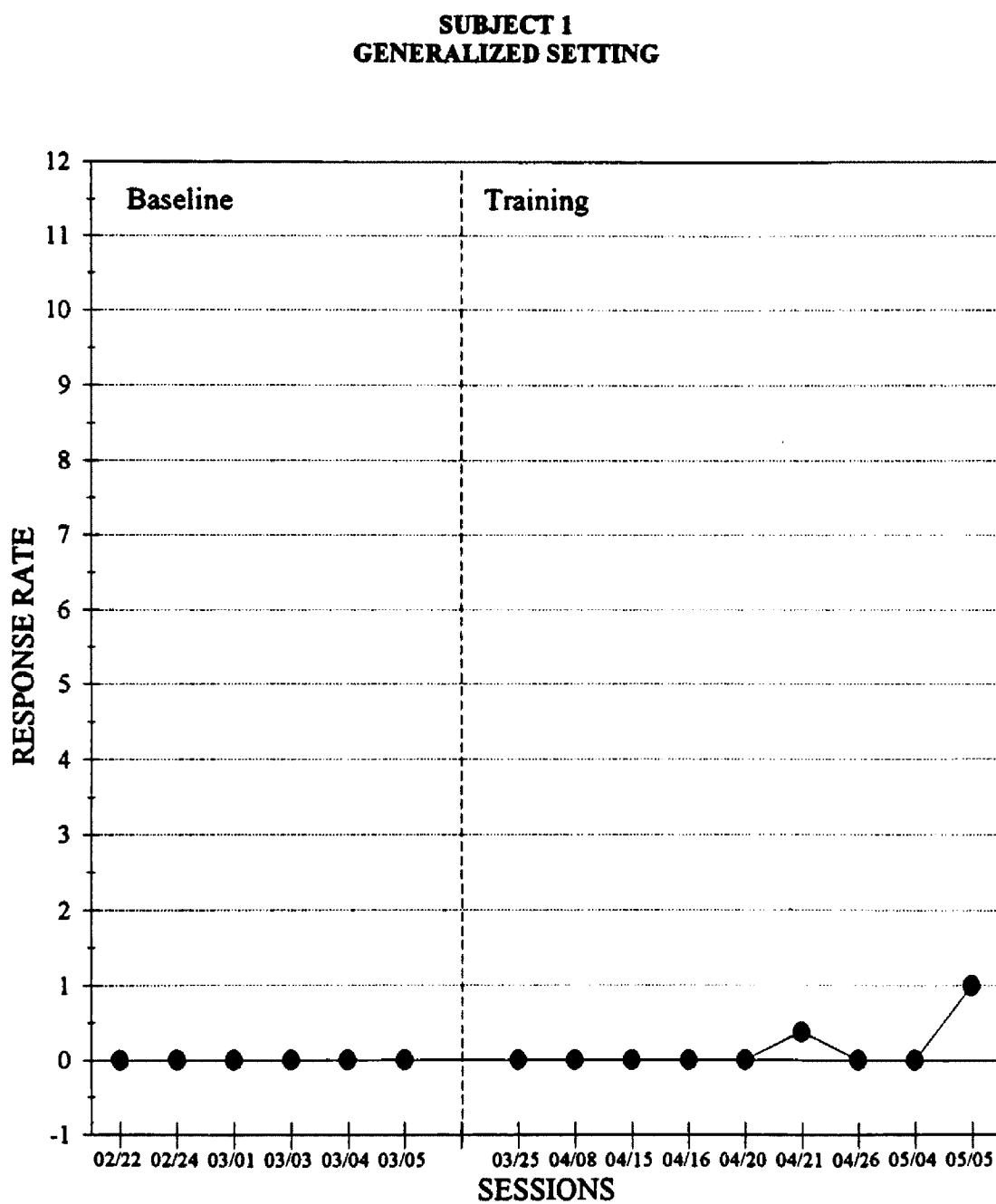Response rate of Subject 2's volunteers per 10 minute interval in generalized setting.

SUBJECT 2
GENERALIZED SETTING

Figure 7.

Response rate of Subject 3's volunteers per 10 minute interval in training setting.

SUBJECT 3
TRAINING SETTING
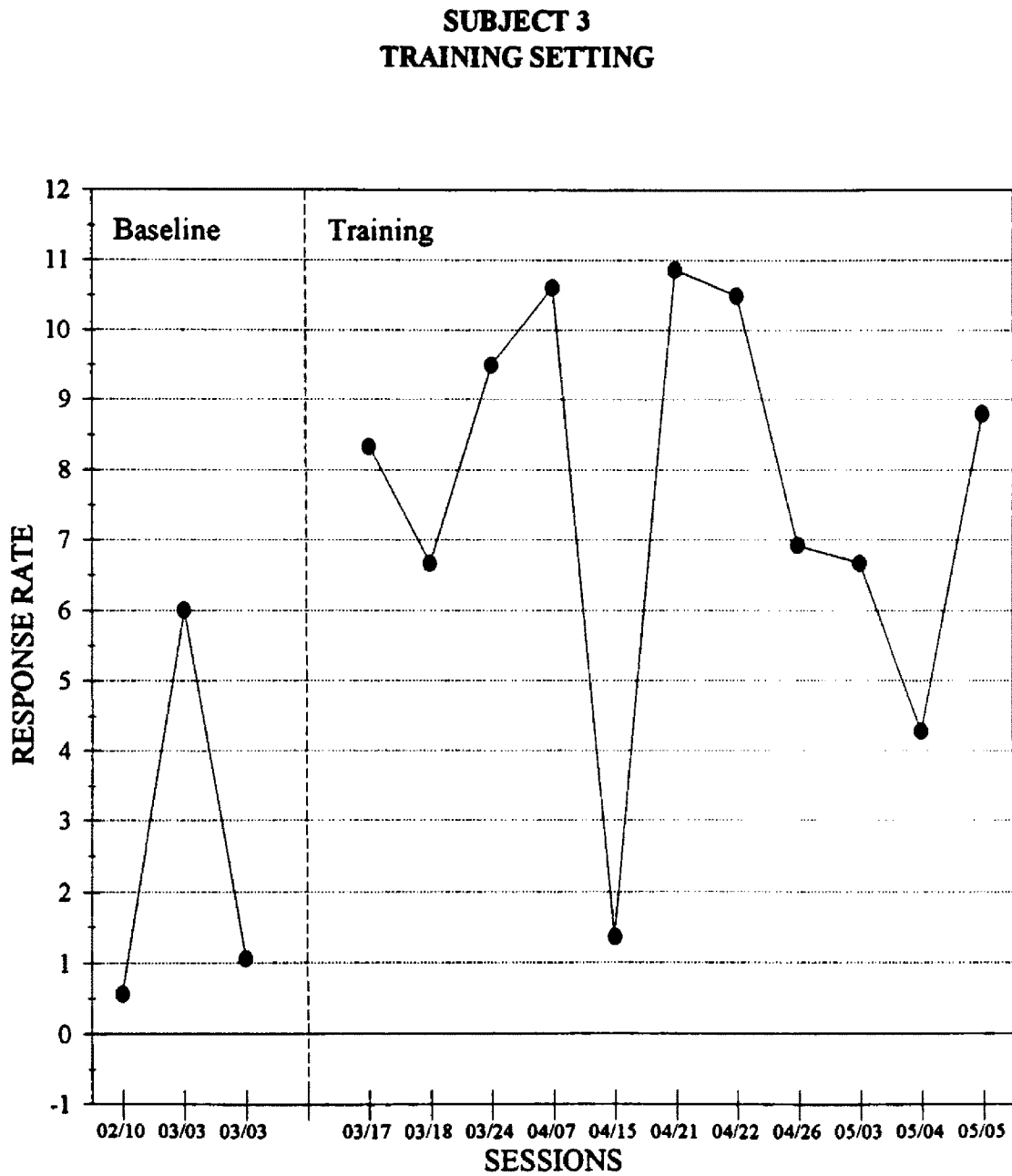
Figure 8.

Response rate of Subject 3's volunteers per 10 minute interval in generalized setting.

SUBJECT 3
GENERALIZED SETTING

Figure 9.

Response rate of Subject 4's volunteers per 10 minute interval in training setting.

SUBJECT 4
TRAINING SETTING

Figure 10.

Response rate of Subject 4's volunteers per 10 minute interval in generalized setting.

SUBJECT 4
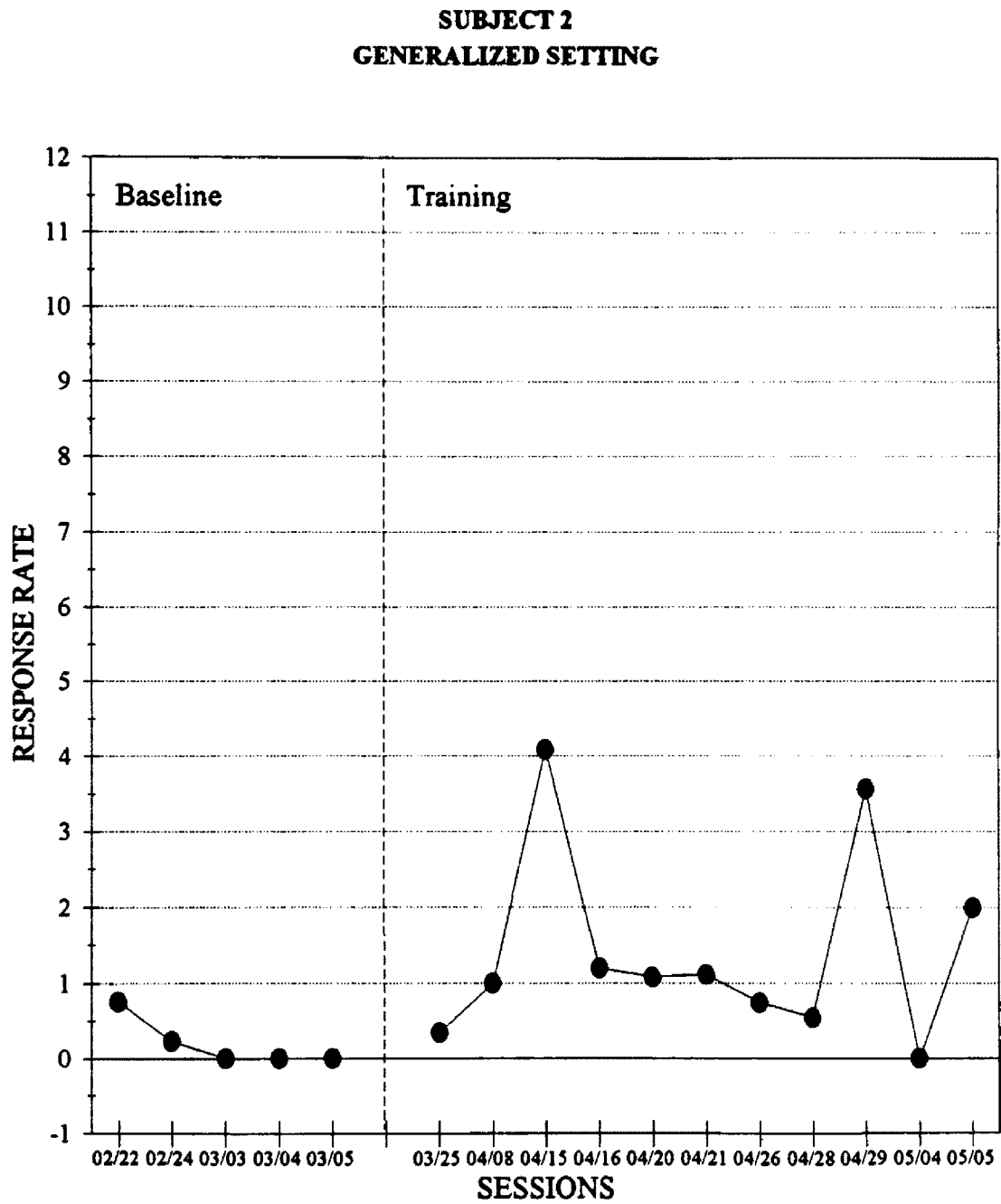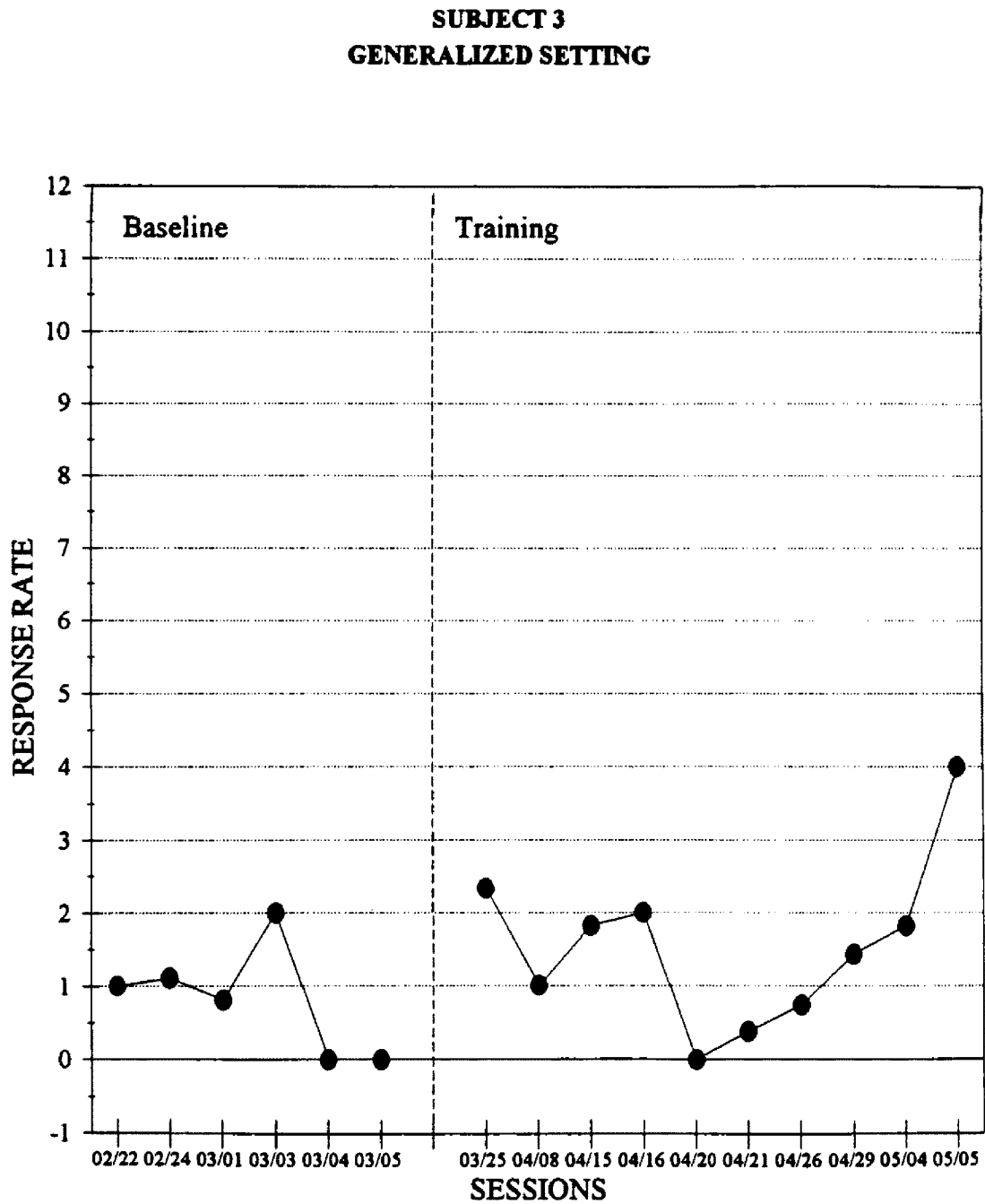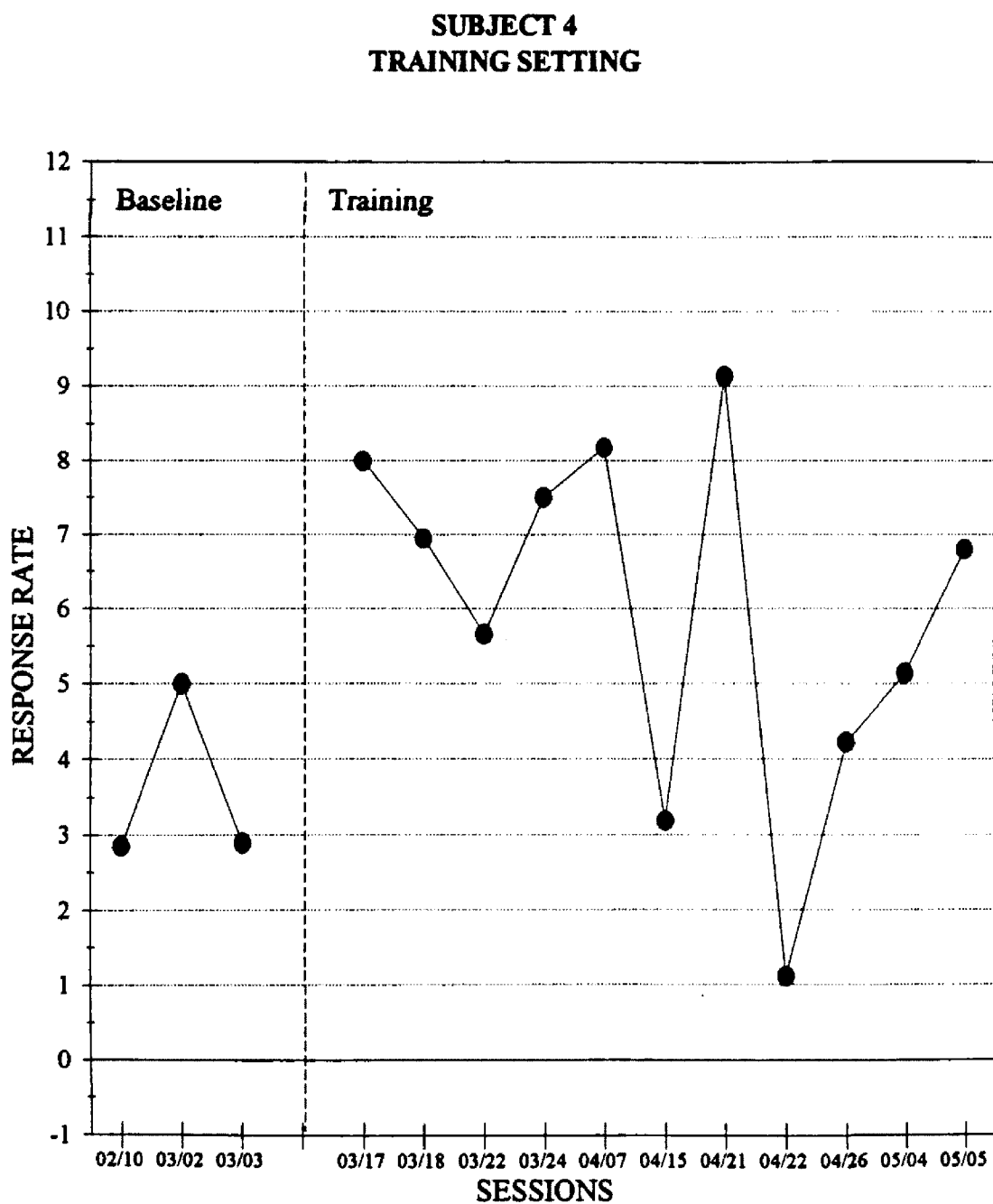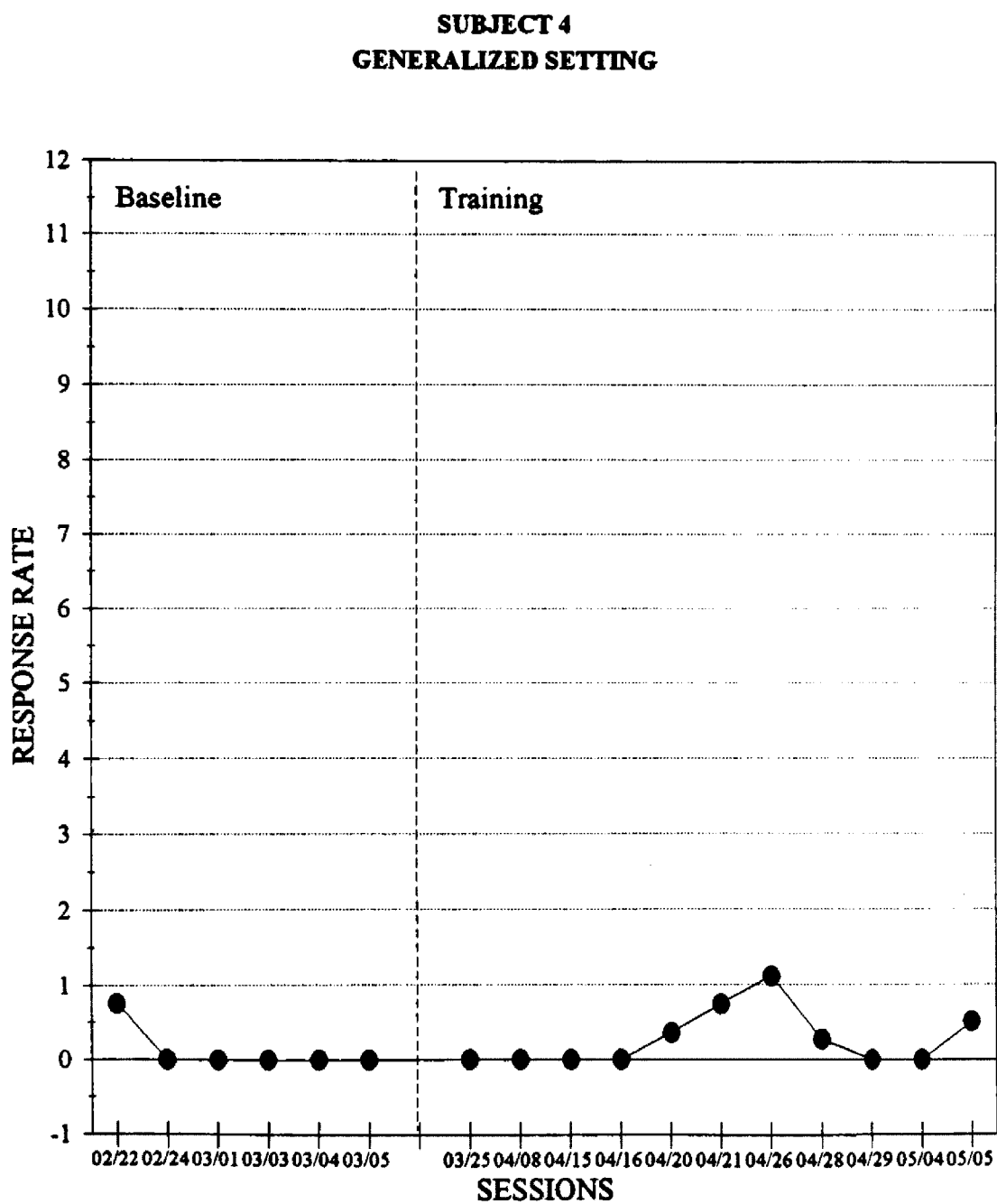**GENERALIZED SETTING**

CHAPTER 5

DISCUSSION

The results of this study indicated that in the training setting (e.g., self-contained physical science) there were clear effects due to the training of the classroom skill of contributing to classroom discussions in three of the four subjects studied. In the generalization setting (e.g., mainstream social studies class), the results indicated that there were two subjects who showed a clear progression in this skill and one subject who showed slight improvements.

By the end of this study all subjects were volunteering in the self-contained special education physical science class at a maximum level expected by the teacher. The one subject who did not show significant improvement in this setting was performing at an acceptable level during baseline and maintained the behavior throughout the study. These results show that the implementation of a structured learning approach (e.g., modeling, role-playing, performance feedback and transfer of learning) along with peer role models and an effective reinforcement strategy can produce desired changes in behavior in classroom discussion in the training setting. The atmosphere in the educational environment was greatly enhanced when such a high level of participation was achieved by the students.

It is unreasonable to expect the same dramatic effects in the generalization environment due to the differences in class size. The training setting supported five

32

students in the physical science class, whereas, there were 30 students in the main-stream social studies class (generalization setting). Other factors may weigh into the subjects' choice to volunteer such as shyness, classroom distractions, peer pressure and fear of failure.

Despite this, the training in a self-contained classroom did generalize to the mainstream environment for some of the subjects. Subject 2 showed a high level of the skill of volunteering and contributing to class discussions in the self-contained classroom prior to training as well as during training. The training provided him with the practice and motivation to generalize this learned behavior at a significant level to a new environment. This indicates that Subject 2 knew how to use the skill, he needed prompting and practice in knowing when to use it.

Subject 1 and subject 4 showed that this type of training can change behavior and increase ones' participation in classroom discussions. In a larger group setting the behavior did not generalize significantly, however, it is felt that with continued practice and over time with encouragement in the mainstream environments, that this behavior may improve.

Subject 3 improved his rate of volunteering in the training setting significantly. In the generalization setting, he doubled his rate during training. This subject, as indicated on the Vineland Adaptive Behavior Scales, has a socialization standard score of 93, which is average. Subject 3, in his awareness of his environment, was able to maintain a level of performance relative to the peers in that environment.

As a result of this training program the two male subjects surpassed the level

of the typical male peer in the normative sample. Their level of participation in the mainstream class allowed them to become active learners and improved their level of integration in that educational environment.

Trends in special education are moving towards more and more inclusion of students with varying levels of disabilities. As these inclusionary practices become more prevalent, it is going to be extremely important to teach these students the coping skills necessary to be successful in these new environments. Regular education teachers are, by necessity, going to have to become collaborative with special education teachers in providing the appropriate reinforcement to motivate these students to generalize their skills to mainstream environments.

Future Research

Future research needs to focus on the most efficient means by which generalization of classroom and social skills can be accomplished. It would be interesting to ascertain the level of generalization students could achieve in all mainstream classes as well as the level of maintenance the students could achieve.

Perhaps the early and continued mainstreaming in classes like social studies with specific objectives for equal participation by all students will help in attaining the goal of full inclusion.

APPENDIX

CLASSROOM SOCIAL SKILLS: CONTRIBUTING TO CLASS DISCUSSION

OBSERVER: _____

DATE: _____

LOCATION: _____

START TIME: _____

STOP TIME: _____

TOTAL TIME: _____

BEHAVIOR / EVENT	SUBJECTS / NUMBER OF EVENTS PER OBSERVATION											
	#1	Total	#2	Total	#3	Total	#4	Total	#5	Total	#6	Total
Called On By Teacher												
Contributes to Discussion When Called On - One Word Response												
Contributes to Discussion When Called On - Two or More Word Response												
Raises Hand - Volunteers												
Volunteers and Contributes to Discussion - One Word Response												
Volunteers and Contributes to Discussion - Two or More Word Response												

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