Teaching Behavior Management Skills and Assessing Generalization to the Classroom Setting

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TEACHING BEHAVIOR MANAGEMENT SKILLS
AND ASSESSING GENERALIZATION TO THE
CLASSROOM SETTING

by

Kathleen A. Ratchford

A Project Report
Submitted to the
Faculty of the Graduate College
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TEACHING BEHAVIOR MANAGEMENT SKILLS
AND ASSESSING GENERALIZATION TO THE
CLASSROOM SETTING

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The present study investigated the effects of written rules and videotape discrimination training on the acquisition, generalization and maintenance of behavior management skills. Three classroom aides and one special education teacher in a classroom for severely mentally impaired students were required to attain 90% mastery on a set of written rules and videotape training episodes. Data on percent correct application of behavior management techniques in the classroom setting were collected prior to and immediately following videotape discrimination training. Results indicated an increase over pre-training levels in all subjects' correct application of behavior management techniques immediately following videotape discrimination training. A further increase occurred once feedback on classroom performance was introduced. Maintenance data collected six weeks after training showed a decrease in percent correct application of behavior management techniques. Although videotape discrimination training proved an effective method for quickly teaching behavior management techniques, further research is needed to determine how to maintain these skills in the natural setting.
ACKNOWLEDGEMENTS

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Kathleen A. Ratchford
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INTRODUCTION

Since the enactment of Public Law 94-142 (November 28, 1975) which entitles all persons between the ages of 3 through 21 years to be provided with a free, appropriate public education, there has been an increased demand for trained personnel to teach students with various handicapping conditions. Many handicapped students demonstrate not only learning but also behavior difficulties.

The growing body of literature supporting the effectiveness of behavior management techniques in the classroom (both general and special education classrooms) has prompted the need and demand for programs to train school personnel in the application of such techniques. The principles of behavior management have proven effective in improving attention and "on-task" behaviors (Burgio, Whitman and Johnson, 1980; Carnine, 1976; Thomas, 1976), increasing language development (Welch and Pear, 1980; Schreibman and Carr, 1978; Stokes, Baer and Jackson, 1974), strengthening academic skills (Ollendick, Matson, Esveldt and Shapiro, 1980; Ayllan and Roberts, 1974; Rosenbaum and Breiling, 1976), teaching community survival skills (vandenPol, Iwata, Ivancic, Page, Neef and Whitley, 1981; Neef, Iwata and Page, 1978; Yeaten and Bailey, 1978), decreasing disruptive behaviors (Bolstad and
Johnston, 1972) and a multitude of other skills. In addition, the effect of teacher behavior on student behavior is becoming increasingly clear (Halle, Baer, Spradlin, 1981; Loos, Williams and Bailey, 1977; Harris, Wolf and Baer, 1964).

Aside from being familiar with basic behavioral terminology, few special education teacher and classroom aides have had thorough training in the direct application of behavior management techniques. To compensate, school districts often provide "consultants*" for special education teachers to call on for assistance in dealing with behaviors and/or learning problems. Although the consultant may be of assistance in crisis situations, the consultant's immediate availability, time for direct observation and time for follow-up are often limited. In addition, specific suggestions and recommendations provided by the consultant tend to be limited to the immediate situation and do not generalize to new and novel situations.

Another common practice among school districts is providing "in-service training" and/or "workshops" designed to disseminate information and teach skills which

* Consultants--school psychologists, teacher consultants, behavior specialists, school social workers, etc.
will be helpful in dealing with problems that arise within the classroom setting. Although the information and skills covered by these "in-services" and "workshops" may be beneficial, application, generalization and maintenance of skills taught is questionable and in need of further investigation. The format typically used during "in-services" is lecture. Gardner (1972), in attempting to teach insitutional attendants behavior management techniques, found lectures effective in teaching behavior management principles but role-playing more effective in teaching direct application behavior management skills. In-services today do not tend to provide such active participation. Apking (Note 1) in two experiments with college students compared conventional lecture/discussion format to teach behavior management skills with written rules and a videotaped discrimination training program. In Experiment 1, Apking found subjects who underwent the videotape discrimination and rules training discriminated correct and incorrect uses of behavior management techniques shown on a test tape with greater accuracy than the lecture/discussion group. In Experiment 2, the lecture/discussion group and the group that underwent videotape discrimination training were compared in terms of their skills at applying behavior management techniques in role played situations. Again, he found the subjects in the
videotape discrimination training group were more effective at applying behavior management techniques than were subjects in the lecture/discussion group.

This research raises the question of the general overall effectiveness of the lecture format to teach skills that will generalize to the classroom setting.

Behavior analysts have also developed several training procedures in efforts to teach behavior management skills. Recent studies incorporate the videotape recorder as a teaching, feedback and evaluation tool with encouraging results. Gladstone and Sherman (1975) effectively used videotaped modeling, rehearsal, corrective feedback and praise to teach behavior modification to high school students working with retarded children. The students viewed a twenty-five minute videotape illustrating a model working with a retarded child, following which the students rehearsed giving instructions, prompts and consequences to a specified criteria and were then given corrective feedback and praise while working with a child. Results indicated that not only did the high school students effectively use the behavior modification skills, but also generalized the skills to a new child and new target behavior. Maintenance data were not obtained.
Gladstone and Sherman indicated the need to isolate components in terms of effectiveness in producing the desired result.

Koegel, Russo and Rincover (1977) using eleven teachers, empirically demonstrated that a combination of written materials, videotaped examples of correct and incorrect use of five teaching procedures, corrective feedback and modeling in a teaching situation resulted in the generalized use of behavior management skills with autistic children. Teachers read a training manual that described correct and incorrect use of five behavior management principles, viewed a videotape illustrating these principles and then attempted to teach a child a new target behavior. General feedback was given once every five minutes and if errors occurred, modeling of the correct use of the behavior management principle was provided. Specific feedback was given once every thirty minutes. Training lasted approximately twenty-five hours. Child performance was also measured. Results indicated that where the teacher showed a high percentage of correct use of behavior management techniques, the child's performance also showed improvement. In addition, the skills showed generality to new children and new target
behaviors. With two of eleven teachers, maintenance data were collected after two and four months. Koegel, et al (1977), reported that maintenance data were encouraging.

Koegel, Glahn and Nieminen (1978) in two experiments with parents showed that: Experiment 1: A brief demonstration of how to teach new behaviors was sufficient to teach parents how to teach those children those specific behaviors. However, generalization to new child-target behaviors did not occur. Experiment 2: A combination of written rules, videotapes (one focusing on antecedents and one on consequences) and the opportunity to model correct procedures were effective in teaching generalized behavior management skills to parents of autistic children. Also noted was an improvement in child performance as a function of improvement in adult correct use of behavior management principles. Interesting to note also, was that the subject's improvement in the use of behavior management skills was directly related to the videotape shown. Koegel and his colleagues reported that this final training program (Experiment 2) was a broad one involving: specific instructions in the five categories, an auditory and visual model of correct procedures, the use of correct and incorrect examples, and practice after observing the
videotapes. They were not able to specify which components were necessary to produce the desired effect. Maintenance data were not collected.

Horton (1975) trained elementary school teachers to discriminate specific and non-specific praise via instructions, videotape and audiotape discrimination training procedures. His subjects first read a definition of the target behavior (specific praise). Second, they participated in a videotape discrimination training sequence identifying instances and non-instances of specific praise. Third, they listened to audiotapes, identifying instances and non-instances of specific praise. This training procedure, coupled with instructions to increase specific praise and audiotape feedback of the teacher's classroom behavior, increased the rate of specific feedback. However, effects were limited to the subject-matter area in which the training took place and without the audiotape feedback the rate of specific praise decreased. Horton cautioned that when training teachers there is no guarantee that the target behavior(s) will generalize outside the training situation.

McCarthy (Note 5) developed a "skills package" incorporating written rules, demonstration, videotape discrimination training and feedback to train college students to apply behavior management principles in working with
retarded students. Subjects were first given written rules describing the delivery of instructions, use of physical prompts and use of consequences. Subjects were required to attain 80% mastery over the written rules. Subjects also had the opportunity to observe a demonstration of application of the rules. A videotape training program was then instituted which required the subjects to discriminate correct and incorrect usage of the components outlined in the written rules. They were given feedback on their responses. Subjects were also given feedback on their performance while working with students. His results suggested that rules alone did not generate consistently high performance. Videotape discrimination training increased all subjects' rate of correct responses with students. Generalization and maintenance to new students and new target behaviors were not obtained.

Schultz (Note 6), using college students, replicated and extended the findings of McCarthy and attempted to isolate subcomponents of the training package (e.g., instructions, prompts and consequences). Schultz assessed correct usage of instructions, prompts and consequences after rules training, after rules and videotape discrimination training and after a combination of rules, videotape discrimination training and feedback on performance with students. Rules training alone slightly increased
subjects correct responding (10% to 60% correct responding). Videotape discrimination training further increased responding (31% to 100%) and the feedback phase further increased correct use of instructions, prompts and consequences (50% to 100%).

Brewer (Note 3) using college students and the same set of videotapes and written rules as McCarthy and Schultz, investigated the effect of active-participation with feedback in a videotape discrimination training program. His subjects read and were tested over the written rules. Secondly, (passive participation) his subjects viewed videotapes and were instructed to attend to features of the model's behavior which they saw as effective and to features which they saw as ineffective. Subjects were not required to score the videotapes. No feedback was given. Subjects then engaged in a role play assessment with a trained staff member. Data were collected as to correct and incorrect use of instructions, prompts and consequences within the role play situation. His subjects then viewed the videotapes and scored the model's correct and incorrect use of the techniques of one-to-one instruction. Feedback was given on their scoring. The role play assessment was then conducted to determine percent correct use of instructions, prompts and consequences. No feedback was given on role plays.
Brewer's results indicated active participation with feedback improved subjects' use of instructional techniques during role plays. Passive participation without feedback resulted in little or no improvement in the use of instructional techniques. Again, generalization and maintenance data were not obtained.

Although all of the above studies resulted in some successful training in the use of behavior management techniques, they a) generally provided limited generalization and maintenance data, b) were lengthy and costly in terms of professional staff time, c) were generally limited to one-to-one teaching situations, d) did not look at continuous streams of behavior as seen in actual teaching situations, and e) are just beginning to isolate the components which resulted in the desired change.

In times of decreasing school budgets, time and cost efficiency need to be considered when attempting to train school personnel. Gladstone and Sherman (1975) suggest that a videotape discrimination training package alone might be sufficient to teach the desired behaviors. All of the research cited previously also incorporated some form of corrective feedback and praise in the training packages. Although this component was generally not isolated to determine its effect in producing the desired results, it does warrant further investigation.
Shook (Note 7), using a set of written rules designed to teach college students to discriminate appropriate, inappropriate and unacceptable child behavior and how to respond in five categories (vocalization, eye contact, facial expression, physical contact and back-up consequence) as a function of the child behavior and videotaped demonstrations, found that complex behavior observational skills do generalize to novel videotape demonstrations. His training package consisted of first, teaching a set of written rules to criterion; secondly, requiring subjects to score videotaped demonstrations of those rules coupled with feedback on their scoring and thirdly, assessing generalization of these behavioral skills to novel tapes without feedback. His findings were limited to observations of adult-child interactions as demonstrated on videotape and did not evaluate the behavior of his subjects in the actual classroom.

The purpose of the present study is not only to replicate the findings of Shook, but also to: a) assess time factors necessary to teach behavior management skills to subjects with no formal behavior management training, b) evaluate the effect the generalized observational skills have on the behavior of individuals in the classroom and c) if generalization does occur in the classroom, assess whether these skills maintain for any length of time.
METHOD

Subjects and Setting

Three classroom aides and one special education teacher assigned to a classroom for severely mentally impaired (S.M.I.) students served as subjects. The subjects ranged in age from 42 to 62 and had varying backgrounds. The three aides had several years experience (2-1/2 to 13 years) working with handicapped children and young adults. All aides had high school diplomas. The teacher had a Master's Degree in education and teacher certification in mental impairment. Prior to the 1981-1982 school year, the teacher had worked as a special education vocational consultant for thirteen years. He also had experience as a superintendent of a small school district and had taught in an educable mentally impaired classroom. None of the subjects had formal training in the use of behavior management techniques and all requested such training.

The study took place within the S.M.I. classroom (a one classroom building with separate office area). Behavior management training via rules and videotapes was conducted each morning from 8:00 a.m. to 9:00 a.m. prior to the arrival of the students. The effectiveness of the rules and videotape behavior management training was
assessed during morning sessions within the classroom while subjects worked with students. Thirteen S.M.I. students, with I.Q.'s of 30 or below, were enrolled in the class. The students ranged in age from 14 to 25 years and exhibited a wide variety of behavior problems including: aggression, non-compliance, self-stimulatory hand-waving, talking out, etc. All students were ambulatory, five were non-verbal and eight exhibited extremely limited verbal repertoires. These students were divided by skill and age level into four groups of one to five students per group. One subject was assigned to each group during the morning sessions.

Videotape equipment was set up in an unused corner of the room. The videotape equipment was set up in the classroom for two consecutive days prior to recording and data collection to allow time for subjects and students to adapt to its presence.

Materials

Apparatus

A Quasar half-inch videotape recorder and a Sony twelve inch television monitor were used in conjunction with a pre-recorded training and test tape. In addition,
a Sony camera was used in conjunction with the videotape recorder, in the recording of subject-student interactions within the actual classroom.

Scoring Rules and Test

A set of written rules which specifically defined three categories of child behavior (appropriate, inappropriate and unacceptable) and which defined correct and incorrect instances of five categories of adult behavior (vocalization, eye contact, facial expression, physical contact and back-up consequence) were used as guidelines for scoring the training and test tapes. These scoring rules were also used by the trainer in scoring subject-student interactions within the actual classroom. A sample of the written scoring rules may be found in Appendix A. In addition, a written test was given to check for mastery of the rules. A sample test may be found in Appendix B.

Scoring Sheets

Score sheets were provided during all phases of the videotape training. The score sheets consisted of five columns with each having a +, -, and 0 for appropriate, inappropriate and unacceptable child behavior and a + and - for each of the five categories of adult behavior.
These score sheets were also used by the trainer in scoring subject-student interactions within the actual classroom. A sample score sheet may be found in Appendix C.

**Video Training and Test Tape**

The video training tape consisted of twenty individual episodes with actors role-playing various adult-child interactions in home and school settings. Each episode was approximately fifteen to twenty seconds in length and contained examples of appropriate, inappropriate or unacceptable child behavior and examples of appropriate or inappropriate adult behavior in the five categories (vocalization, eye contact, facial expression, physical contact and back-up consequence). These twenty training episodes were divided into four sets (A, B, C, D) of five episodes per set. Sets were presented in a random order.

Ten novel episodes, similar to the training episodes, were used to test for generalization of behavior observational skills. These ten episodes were divided into two sets (E, F) of five episodes each.

**Procedure**

The present study consisted of two phases. Phase I involved the teaching of behavior management skills via
rules and videotape discrimination training and followed the procedure outlined by Shook (Note 7). Phase II assessed the effects this training had on subject-student interactions within the actual classroom setting.

Phase I

A multiple baseline across groups design (Baer, Wolf and Risley; 1968) was used during teaching of behavior management skills. Four subjects were divided into two groups of two subjects each. Training was conducted on alternate mornings; Group 1 running on Tuesday and Thursday and Group 2 running on Monday and Wednesday. Training sessions were forty-five to sixty minutes in length. Data were recorded as mean percent correct discrimination per videotape training set.

Pretest Probe

Prior to the training on the written scoring rules and videotape discrimination training, an initial pretest probe was conducted to establish the rate of correct responding prior to intervention. Subjects were told they would not receive feedback on their responses to the videotape episodes shown.

Subjects were shown a two minute videotaped introduction which described the training purpose of the tapes.
The subjects were not provided with definitions of correct nor incorrect adult or child behavior. Following the introduction, the subjects viewed two sets (ten episodes) and scored each episode. Between episodes, the videotape recorder was turned off to allow time for marking the score sheets. Sets A and B in alternating order were used during the pretest probes. Probe sessions were conducted for three consecutive days with all subjects together. The trainer frequently checked to insure all subjects were marking the score sheets correctly.

**Rules**

Following the pretest probe, each subject was given a copy of the written scoring rules. These rules defined and gave examples and non-examples of appropriate, inappropriate and unacceptable child behavior and also defined appropriate and inappropriate adult behavior in the five categories (vocalization, eye contact, facial expression, physical contact and back-up consequence) as a function of the child's behavior. Subjects were told that they would be given a written test over the rules and that each member of each group had to attain at least a 90% mastery level. Key phrases were underlined on the rules sheets. Subjects were also told that they could study the rules at home if they wished, but that they would be given study
time prior to the test. Subjects were given feedback on their performance on the written tests via copies of their scored tests.

**Baseline**

Baseline sessions followed rules testing and were conducted until the mean score for each group and for each individual subject was stable or descending. During baseline, all four sets (A, B, C, D) were used and order of presentation was randomized. Baseline sessions were conducted in the same fashion as pretest probe sessions, beginning with the two minute videotape introduction and review of how to mark the score sheets. The videotape recorder was turned off after each episode to allow time to mark the score sheets. Subjects were not permitted to refer to the written rules during baseline sessions. Subjects were told they would not receive feedback on their responses.

**Videotape Discrimination Training**

The two minute videotape introduction was discontinued during the videotape training on request of the subjects (they verbalized that they had seen it so many times during probe and baseline sessions that they "knew it by heart").
All four sets (A, B, C, D) were used during training and the order of set presentation was randomized. Sessions were conducted in the same fashion as during baseline sessions with the exception that feedback on responses was given after each episode. When all subjects had finished marking their score sheets, they were instructed to put their pencils down and pick up their red pen. The trainer then called on one of the subjects to verbalize how he/she had scored both the child and the five categories of adult behavior for that particular episode. Subjects were also instructed to state the rule that applied to that particular example. The trainer would immediately provide the correct answer and the reason for its correctness whenever an incorrect answer was given. Subjects were instructed to mark their incorrect answers using the red pen. Each episode was shown only once and subjects were not permitted to refer to written rules during scoring of the episode.

Videotape discrimination training was conducted until each group and each subject attained 90% correct responding two consecutive times per set.

**Generalization Test**

Once criterion was attained on the training tapes, ten novel episodes were presented to assess whether the
subjects could generalize those behavior observational skills mastered during training to novel situations. Generalization episodes were divided into two sets (E and F) of five episodes each. Each group was shown each test set twice. Group 1 viewed Set E followed by Set F. Group 2 viewed Set F followed by Set E. The generalization test was run immediately after training was completed. No feedback was given.

**Phase II**

The effects of the videotape discrimination training of behavior management skills on subject-student interactions in the actual classroom were the focus of Phase II. A multiple baseline across groups design (Baer, Wolf, Risley; 1968) was used with four subjects being divided into two groups of two subjects each. The groups remained the same as during videotape discrimination training. Data were collected as mean percent correct interactions per subject and the group mean was also calculated. The scoring rules used during Phase I (videotape discrimination training) were used in scoring the subjects' interactions with students in the classroom (see Appendix A). As the videotape discrimination training in Phase I was designed to teach the subjects to discriminate appropriate, inappropriate and unacceptable child behavior and to
discriminate adult responses in five categories (vocalization, eye contact, facial expression, physical contact and back-up consequence) as a function of child behavior; only those categories of adult interactions were measured. Use of instructions and prompts was not assessed. The following definition of interaction was used:

Adult Interaction—whenever an adult approaches and makes vocal, physical and/or eye contact with a student. Observer should note the child's behavior immediately prior to the adult's interaction. Child and adult behavior should be scored according to the scoring rules (see Appendix A). Do not score as an interaction when the adult is presenting and/or arranging instructional materials on the table or giving instructions on how to do a task. Consequational interactions are the interactions scored. If the adults' face is not clearly visible for the scoring of facial expression and eye contact, omit these particular items from that interaction and score the remainder. The category "back-up consequence" will not be scored as it is not always appropriate to deliver a back-up consequence during every interaction with a student and discrimination of appropriate and inappropriate delivery of back-up consequences would be extremely difficult in this circumstance. A new interaction is scored after at least a ten second pause between consequational interactions.

For inappropriate child behavior—If the child is behaving in an inappropriate manner in accordance with the scoring rules, score the adult's behavior only if the adult is within proximity of the child, approximately six feet. Inappropriate student behavior should not be scored unless the adult is within approximately six feet of the student.

Score ten consecutive subject-student interactions.
The videotape equipment was set up in an unused corner of the classroom. The equipment was set up for two consecutive days prior to data collection to allow the subjects and students to adapt to its presence.

**Pretraining Probe**

Prior to the videotape discrimination training and pretest probe of Phase I, all subjects were videotaped in the classroom while working with their respective group of students. Data were collected as mean percent correct subject-student interactions for ten consecutive subject-student interactions for two consecutive days for Group A and three consecutive days for Group B. Interactions were scored in accordance with the scoring rules in Appendix A and interaction definition. Subjects were not given feedback on their performance during this pretraining probe (a probe being defined as a periodic measurement of the target behavior(s) under study).

**Posttraining Probe**

Following videotape discrimination training of behavior management skills (Phase I), subjects were again videotaped in the classroom while working with their respective group of students. Subject-student interactions were scored in the same fashion as in the pretraining probe. Data on subject-student interactions
within the classroom were collected one, five, eleven and fifteen school days after training for Group 2 and one, five, eleven, fifteen and twenty-one school days after training for Group 1. Subjects were not given feedback on their performance during this posttraining probe. Data were recorded as mean percent correct subject-student interactions. Interactions were scored in the same fashion as during pretraining probes.

Feedback

Following stabilization of data on posttraining probes, feedback sessions were introduced. Feedback sessions consisted of allowing the subjects to view the previous sessions' videotape of their interaction with students in the classroom. During each feedback session, the trainer first asked each subject to comment on their own behavior by restating the scoring rules where appropriate. After the subjects had commented, the trainer went through the tape a second time and specifically praised correct interacting and gave suggestions on how to improve on incorrect interactions, using the scoring rules as guidelines.

These feedback sessions were conducted from 8:00 a.m. to 9:00 a.m. prior to arrival of the students. Group 1
received feedback on Monday and Wednesday; Group 2 re-
ceived feedback on Tuesday and Thursday.

Feedback sessions were conducted for five sessions. Data were recorded as percent correct subject-student interactions. Interactions were scored as during pre-
training probes.

**Maintenance Probe**

Two weeks and six weeks after completion of the feedback sessions maintenance checks were made via class-
room videotaping. Subject-student interactions were scored in the same fashion as during pre/postttraining and feedback sessions. No feedback was given to subjects on their performance.

**Reliability**

**Phase I**

The subjects' score sheets were checked at the end of each session and percent accuracy for each subject and the mean score for each group was recorded.

An independent observer compared subjects' score sheets to an answer key and calculated percent accuracy for each subject. Percent agreement was calculated using the following formula:

\[
\text{Percent Agreement} = \frac{\text{Agreements}}{\text{Agreements} + \text{Disagreements}} \times 100
\]
For Phase I, reliability was calculated for 50% of the sets. Reliability was 100% for those sets checked.

Phase II

One independent observer was used to score reliability on the videotapes taken in the actual classroom. The observer was trained on the written scoring rules and video training tapes and attained at least 90% mastery on both the scoring rules and training tapes. The observer was then given score sheets, the definition of an interaction and specification on when to begin recording interactions from the classroom tapes. The videotaping of subject-student interactions within the classroom provided a permanent product of the interactions and allowed for replaying of interactions if necessary to obtain more accurate scoring. The order in which the observer was given tapes to observe was randomized to control for "observer-drift" (Kardin, 1977).

The observer's score sheets were compared to the trainer's and percent agreement calculated in the same fashion as Phase I. Reliability was calculated on each subject once per experimental condition. Percentage of agreement ranged from 72% to 94%.
RESULTS

Phase I: Teaching Behavior Management Skills
Via Rules and Videotape Discrimination Training

Mean percent correct discriminations for subjects in Group A and Group B across all experimental conditions of videotape discrimination training are shown in Figure 1. Each data point represents the mean percent correct discriminations for subjects in a given group for one training set. Each training set consisted of five training episodes. Each episode depicted an example of appropriate, inappropriate or unacceptable child behavior and correct and incorrect adult behavior in five categories as a function of the child's behavior.

Pretest probe training sets were the same for Group A and Group B. Similar results were obtained for both groups. Mean percent correct discriminations for Group A was 50.9% and the mean percent correct discriminations for Group B was 51.7%. The range of set scores for Group A was 40% to 59% and for Group B, 47% to 55%.

Study time required to attain a 90% mastery criterion on the written rules varied greatly between the two groups. Prior to testing, subjects were given approximately thirty minutes to study the rules. They were also permitted to study the rules at home, if desired. Home
FIGURE 1: Mean Percent Correct Discriminations on Individual Sets for Subjects in Both Groups Across All Experimental Conditions of Videotape Discrimination Training
FIGURE 1: Mean Percent Correct Discriminations on Individual Sets for Subjects in Both Groups Across All Experimental Conditions of Videotape Discrimination Training
Study time was reported to the trainer by each subject. Study time for Group A was approximately four to six hours, whereas study time for Group B was approximately three to four hours. Subject 1 in Group A requested to take the last test orally as he indicated he had difficulty organizing the rules on paper. He was given the test orally. The trainer refrained from making any comments while he recited the rules. He obtained 90% mastery criterion during the orally given test. Individual scores on the written rules test are in Table 1.

Scores for both groups increased following rules training, although mean baseline scores differed approximately ten percentage points between Groups A and B. The mean score in the baseline condition for Group A was 71.8%, with a range in set scores from 60% to 80%. The mean score in the baseline condition for Group B was 81.2%, with range in set scores from 73% to 87%.

Videotape discrimination training with feedback increased group scores to the 90% mastery criterion level for both groups. It took Group A seventeen training set exposures to reach criterion and Group B eleven training set exposures to reach criterion. The mean score for Group A during videotape discrimination training was 87.1%, with range in set scores from 74% to 97%. The mean score for Group B during videotape discrimination
TABLE 1: Percent Correct for Individual Subjects on the Written Rules Test
TABLE 1

Percent Correct for Individual Subjects on the Written Rules Test

<table>
<thead>
<tr>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subject</td>
<td>Percent Correct</td>
</tr>
<tr>
<td>1</td>
<td>20.6</td>
</tr>
<tr>
<td></td>
<td>32.6</td>
</tr>
<tr>
<td></td>
<td>38.0</td>
</tr>
<tr>
<td></td>
<td>90.2</td>
</tr>
<tr>
<td>2</td>
<td>17.4</td>
</tr>
<tr>
<td></td>
<td>44.5</td>
</tr>
<tr>
<td></td>
<td>56.5</td>
</tr>
<tr>
<td></td>
<td>90.2</td>
</tr>
</tbody>
</table>
training was 91.0%, with range in set scores from 78% to 95%. In Group A, set scores remained at or above 90% accuracy after feedback on nine sets (with the exception of the thirteenth set, which fell to 89% accuracy). In Group B, set scores remained at or above 90% correct after feedback on only three sets. Subject 2's (Group A) inconsistent performance adversely affected data for that group. Individual subject scores per set are itemized in Table 2.

Mean percent correct discriminations for generalization sets showed a slight decrease over the videotape discrimination training condition, although scores remained considerably above baseline levels. The mean score for Group A was 85.3%, with range in set scores from 83% to 87%. The mean score for Group B was 88.1%, with range in set scores from 82% to 90%.

Mean percent correct discriminations for both groups per experimental condition of videotape discrimination training are itemized in Table 3. Individual subjects' mean percent correct discriminations per experimental condition of videotape discrimination training are itemized in Table 4.

Figures 2 and 3 depict individual subject performance across all experimental conditions of the videotape discrimination training phase.
TABLE 2: Individual Subject Scores Per Set During All Experimental Conditions of Videotape Discrimination Training
### GROUP A

<table>
<thead>
<tr>
<th>Subject</th>
<th>Probe</th>
<th>Baseline</th>
<th>Videotape Training</th>
<th>Generalization Tapes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50 48 47 52 53 48</td>
<td>77 67 87 66 67 72 83</td>
<td>83 77 83 87 93 86 87 86 90 93 93 90 93 97 97 93</td>
<td>83 90 77 93</td>
</tr>
<tr>
<td>2</td>
<td>30 69 43 59 57 55</td>
<td>67 53 57 66 83 80 70 76</td>
<td>73 70 73 87 83 76 87 76 77 97 93 100 87 93 93 90 90</td>
<td>83 83 93 80</td>
</tr>
</tbody>
</table>

SETS: A B A B A B C A D B A D C B D A C D B D A C B D A E F E F

### GROUP B

<table>
<thead>
<tr>
<th>Subject</th>
<th>Probe</th>
<th>Baseline</th>
<th>Videotape Training</th>
<th>Generalization Tapes</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>67 55 53 59 50 52</td>
<td>83 97 76 76 90 87 83 93 83 93</td>
<td>90 76 93 93 93 97 93 97 93 93 97</td>
<td>83 93 93 90</td>
</tr>
<tr>
<td>4</td>
<td>43 55 50 45 50 41</td>
<td>63 77 83 72 67 87 67 80 87 80</td>
<td>90 79 80 93 93 97 93 90 93 90 90</td>
<td>80 93 83 90</td>
</tr>
</tbody>
</table>

SETS: A B A B A B C B B C D A D D A C B C D A B D C B A C F E F E

Table 2: Individual Subject Scores Per Set During All Experimental Conditions of Videotape Discrimination Training
TABLE 3: Mean Scores in Percents for Both Groups for All Experimental Conditions of Videotape Discrimination Training

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### TABLE 3

Mean Scores in Percents for Both Groups for All Experimental Conditions of Videotape Discrimination Training

<table>
<thead>
<tr>
<th></th>
<th>Probe</th>
<th>Baseline</th>
<th>Videotape Training</th>
<th>Generalization Tapes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>50.9</td>
<td>71.8</td>
<td>87.1</td>
<td>85.3</td>
</tr>
<tr>
<td>Group B</td>
<td>51.7</td>
<td>81.2</td>
<td>91.0</td>
<td>88.1</td>
</tr>
</tbody>
</table>

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**TABLE 4:** Mean Percents for Individual Subjects for All Experimental Conditions of Videotape Discrimination Training
### TABLE 4

Mean Percents for Individual Subjects for All Experimental Conditions of Videotape Discrimination Training

<table>
<thead>
<tr>
<th>Subject</th>
<th>Probe</th>
<th>Baseline</th>
<th>Videotape Training</th>
<th>Generalization Tapes</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROUP A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>49.7</td>
<td>74.5</td>
<td>89.1</td>
<td>85.8</td>
</tr>
<tr>
<td>2</td>
<td>52.2</td>
<td>69.0</td>
<td>85.0</td>
<td>84.8</td>
</tr>
<tr>
<td>GROUP B</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>56</td>
<td>86.1</td>
<td>92.3</td>
<td>89.8</td>
</tr>
<tr>
<td>4</td>
<td>47.3</td>
<td>76.3</td>
<td>89.8</td>
<td>86.5</td>
</tr>
</tbody>
</table>
FIGURE 2: Mean Percent Correct Discriminations on Individual Sets for Subjects in Group A Across All Experimental Conditions of Videotape Discrimination Training.
FIGURE 2: Mean Percent Correct Discriminations on Individual Sets for Subjects in Group A Across All Experimental Conditions of Videotape Discrimination Training.
FIGURE 3: Mean Percent Correct Discriminations on Individual Sets for Subjects in Group B Across All Experimental Conditions of Videotape Discrimination Training

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FIGURE 3: Mean Percent Correct Discriminations on Individual Sets for Subjects in Group B Across All Experimental Conditions of Videotape Discrimination Training.
Videotape discrimination training took approximately seven to eight hours for Group A and approximately five to six hours for Group B.

Phase II: The Effects of Written Rules and Videotape Discrimination Training on Application of Behavior Management Skills in the Classroom Setting

Mean percent correct classroom interactions for subjects in Group A and Group B across all experimental conditions of Phase II are shown in Figure 4. Each data point represents the mean percent correct classroom interactions for ten consecutive interactions. Each interaction was scored in four categories (vocalization, eye contact, facial expression and physical contact). The fifth category, back-up consequences, was not used in scoring interactions, as it is not always appropriate to deliver a back-up consequence when interacting with a student and discrimination of appropriate and inappropriate delivery would be extremely difficult in this circumstance.

A pretraining probe was conducted prior to rules and videotape discrimination training. All subjects exhibited a low percentage of correct interactions during the pretraining probe. Pretraining probe data were similar for Groups A and B. The mean percent correct classroom interactions for Group A was 32.5%, with scores ranging
FIGURE 4: Mean Percent Correct Classroom Interactions in Four Categories for Subjects in Both Groups for All Experimental Conditions
FIGURE 4: Mean Percent Correct Classroom Interactions in Four Categories for Subjects in Both Groups for All Experimental Conditions.
from 29.8% to 34.1%. The mean percent correct classroom interactions for Group B was 38.5%, with scores ranging from 24.5% to 46.5%.

Following written rules and videotape discrimination training, all subjects showed an increase in their correct use of behavior management techniques (classroom interactions). The mean percent correct classroom interactions following rules and videotape discrimination training for Group A was 51.3%, with scores ranging from 46.9% to 54.4%. The mean percent correct classroom interactions for Group B was 62.5%, with scores ranging from 48.8% to 78.8%. These data indicate an 18.8 percentage point increase for Group A and a 24.3 percentage point increase for Group B over pretraining levels.

Further increases in correct classroom responding occurred following introduction of specific feedback on classroom performance. The mean percent correct classroom interactions for Group A was 67.2%, with scores ranging from 58.8% to 73.4%. The mean percent correct classroom interactions for Group B was 78.7%, with scores ranging from 76.1% to 86.8%. These data indicate an increase of 14.5 percentage points over posttraining levels for Group A and a 16.2 percentage point increase over posttraining levels for Group B.
Maintenance data were collected two weeks and six weeks after feedback training. Data for Group A are incomplete as Subject 1 was taken ill prior to the six week maintenance probe and was therefore not included in that six week probe. Data obtained on Subject 2 of Group A showed a return to pretraining levels after two weeks without feedback, 30% correct classroom interactions. Two week maintenance data collected on Subject 1 showed a decrease in percent correct subject-student interactions, 59% correct classroom interactions. Although a decrease in percent correct classroom interactions was noted for Group B, the mean decrease was not as substantial as with Group A. During the maintenance probes, the mean percent correct responding for Group B was 72.8%, with scores ranging from 63% to 80%.

Mean percent correct classroom interactions for both groups per experimental condition of classroom assessment are itemized in Table 6. Individual subjects' mean percent correct classroom interaction per experimental condition of classroom assessment are itemized in Table 7.

Also worthy of note is the fact that after an initial decrease in mean percent correct classroom
TABLE 5: Mean Percent Correct Classroom Interactions for Both Groups During All Experimental Conditions
### TABLE 5

Mean Percent Correct Classroom Interactions for Both Groups During All Experimental Conditions

<table>
<thead>
<tr>
<th></th>
<th>Pretraining Probe</th>
<th>Posttraining Probe</th>
<th>Feedback</th>
<th>Maintenance Probe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>32.5</td>
<td>51.3</td>
<td>67.2</td>
<td></td>
</tr>
<tr>
<td>Group B</td>
<td>38.2</td>
<td>62.5</td>
<td>78.7</td>
<td>72.8</td>
</tr>
</tbody>
</table>
TABLE 6: Mean Percent Correct Classroom Interactions for Individual Subjects for All Experimental Conditions
### TABLE 6

**Mean Percent Correct Classroom Interactions**  
**for Individual Subjects**  
**for All Experimental Conditions**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Pretraining Probe</th>
<th>Posttraining Probe</th>
<th>Feedback</th>
<th>Maintenance Probe</th>
</tr>
</thead>
<tbody>
<tr>
<td>GROUP A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>33.0</td>
<td>48.4</td>
<td>69.6</td>
<td>----</td>
</tr>
<tr>
<td>2</td>
<td>32.0</td>
<td>54.2</td>
<td>64.6</td>
<td>30.0</td>
</tr>
<tr>
<td>GROUP B</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>30.3</td>
<td>56.9</td>
<td>74.5</td>
<td>68.5</td>
</tr>
<tr>
<td>4</td>
<td>46.0</td>
<td>68.1</td>
<td>82.8</td>
<td>77.0</td>
</tr>
</tbody>
</table>
interactions (the second week probe), mean percent correct classroom interactions were increasing on the six week maintenance probe for both subjects in Group B.

Table 7 itemizes individual subject percent correct classroom interactions for all experimental conditions in Phase II.

Figures 5 and 6 depict individual subject performance across all experimental conditions of classroom assessment.

S-2, S-3 and S-4 showed the greatest percentage increase in correct use of behavior management techniques following written rules and videotape discrimination training (22 to 26.6 percentage point increase) with lesser percentage increase after feedback training (7.7 to 17.6 percentage point increase). S-1 showed a greater increase after feedback training (21.2 percentage point increase) and a lesser increase after written rules and videotape discrimination training (15 percentage points).

Five hours of feedback were given per group to raise mean percent correct interactions to the levels shown in Figure 4.
TABLE 7: Individual Subject Scores During All Experimental Conditions of Classroom Assessment
### TABLE 5: Individual Subject Scores During All Experimental Conditions of Classroom Assessment

**GROUP A**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Pretraining Probe</th>
<th>Posttraining Probe</th>
<th>Feedback</th>
<th>Maintenance Probe</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>26 40</td>
<td>63 41 50 40 49</td>
<td>43 76 85 72 73</td>
<td>59 --</td>
</tr>
<tr>
<td>2</td>
<td>44 20</td>
<td>41 68 50 54 58</td>
<td>81 42 74 63 63</td>
<td>30 30</td>
</tr>
</tbody>
</table>

**GROUP B**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Pretraining Probe</th>
<th>Posttraining Probe</th>
<th>Feedback</th>
<th>Maintenance Probe</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>29 16 46</td>
<td>75 53 50 50</td>
<td>72 75 69 80 77</td>
<td>63 74</td>
</tr>
<tr>
<td>4</td>
<td>58 33 47</td>
<td>82 45 73 73</td>
<td>83 78 85 72 97</td>
<td>74 80</td>
</tr>
</tbody>
</table>
FIGURE 5: Mean Percent Correct Classroom Interactions in Four Categories for Individual Subjects in Group A During All Experimental Conditions
FIGURE 5: Mean Percent Correct Classroom Interactions in Four Categories for Group A During All Experimental Conditions
FIGURE 6: Mean Percent Correct Classroom Interactions in
Four Categories for Individual Subjects in
Group B During All Experimental Conditions
FIGURE 6: Mean Percent Correct Classroom Interactions in Four Categories for Group B During All Experimental Conditions
DISCUSSION

The present study successfully replicated the findings of Shook (Note 7), demonstrating that a combination of written rules and videotape discrimination training was effective in teaching generalized behavior observational skills. In addition, the present study extended Shook's findings and demonstrated that behavior management skills taught via rules and videotape training did generalize to the actual classroom setting. Data obtained clearly indicate an increase over pretraining levels in all subjects' correct use of behavior management techniques (Figure 4). This initial increase in percent correct responding was noted immediately after videotape training in spite of the fact that subjects were not given specific feedback on their performance in the classroom. A further increase in percent correct application of behavior management techniques occurred after subjects were given specific feedback on their performance.

Phase I

As demonstrated by Shook, prior to the introduction of the written rules, all subjects' exhibited initial low percentages of correct discriminations to the videotape
episodes. Rules testing resulted in all individual mean scores increasing well above pretest probe levels. Mean scores showed further increase during videotape discrimination training. Generalization testing resulted in a slight decrease in mean scores, although mean scores remained above baseline levels.

Pretest probe data were extended beyond the single set used by Shook to determine if subjects would learn as a function of repeated showings. Only Subject 2 showed a continual increase in percent correct responding to only Set A. Given the decrease noted in Set A during the baseline condition, it appears learning as a function of repeated showings was not occurring.

Subjects in Group B responded consistently at 90% accuracy or greater following feedback on three training sets; whereas Group A required feedback on ten sets before consistently attaining 90% accuracy. A possible explanation is the grouping of subjects. Subjects in Group A did not tend to reinforce each other's successes. Subject 1 verbalized great dissatisfaction with his assignment within the S.M.I. classroom (prior to the 1981-82 school year, he was a special education vocational consultant and due to fiscal difficulties, he was reassigned to the S.M.I. classroom) and continually questioned if the S.M.I. students could "learn anything". 

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Subject 2 frequently verbalized her difficulty remembering the rules. It appears she needed an increased number of corrected repetitions to apply the rules to the videotape episodes. Minimal interaction was noted between Subjects 1 and 2 (Group A). Subjects 3 and 4 (Group B) verbalized enjoying the tapes and were continually verbalizing how they could apply episodes to their teaching situation. They also praised each other's successes.

During the generalization test for behavior observational skills, Shook's subjects (college students), although demonstrating a slight decrease in percent correct discriminations, did remain at approximately 90% accuracy. Percent correct discriminations for subjects in the present study fell to slightly below 90% accuracy. Several factors may account for this lower percentage during the generalization test: a) subjects in the present study were not college students nor had they been in a learning setting for well over twenty years, b) subjects also had no formal training in the use of behavior management techniques and all had long histories of incorrect use of such techniques and c) the trainer's limited control of contingencies. Regardless, subjects
did generalize the behavior observational skills acquired through rules and videotape discrimination training to novel videotape episodes.

Warranting further data analysis is the pattern of learning demonstrated by subjects undergoing videotape discrimination training. Videotapes used in the present study required six discriminative responses per videotape episode; one response to identify the child's behavior as appropriate, inappropriate or unacceptable and five responses related to the adults' behavior (e.g., correct versus incorrect vocalizations, eye contact, facial expression, physical contact and back-up consequence as a function of the child's behavior). It would be interesting to note if a learning pattern did exist. For example, did the subjects learn to correctly identify the child's behavior before the adult's? For the five categories of adult behavior, which was learned first? This information could prove useful in designing and implementing training programs and analyzing strengths and weaknesses of the present program.

Phase II

All subjects demonstrated an increase in their percent correct use of behavior management techniques in the classroom as a function of the rules and videotape
discrimination training. Prior to training, all subjects exhibited extremely low percentages of correct use of behavior management techniques (16% to 58%). Following videotape training, their performance increased (40% to 83%). Specific feedback further increased correct responding (42% to 97%). Although these percentages fall short of the generally accepted 90% mastery criterion, they do represent a considerable increase over pre-training levels. Lack of contingency control and individual subject's long conditioning histories of incorrect application of behavior management techniques may well account for slower acquisition and generalization. Another possible explanation is the increased number of behavioral discriminations that are required when working with more than one student and along with difficulty defining discrete trials. Subjects in the present study were responding to continuous streams of behavior with small groups of students. A higher degree of sophistication is required to make behavioral discriminations under these circumstances. Videotapes used during training presented only discrete trials. It is noteworthy that subjects generalized skills learned in the highly defined and controlled situation (the videotape training sessions) to the more complex less defined situation (the classroom).
In the present study, individual subject behavior in the classroom was not recorded during rules and videotape discrimination training (only pre and posttraining data were collected). It would be interesting to note which phase of the rules and videotape training resulted in the greatest change in subject behavior. Schultz (Note 6) suggested that rules alone were not enough to generate consistently high performance. He theorized that rules alone may lack sufficient detail to control appropriate subject performance. His subjects' percentage of correct responding increased to acceptable levels following the introduction of videotape training episodes, which, he indicates, may have provided the necessary detail to control responding. Based on Schultz's data, it appears that the greatest change would have occurred after videotape training. Schultz suggested a few possible alternative training procedures. One of which was rules alone with feedback on performance while working with students. While there is a good possibility this procedure may be effective in producing a change in subjects' behavior, the aversive nature of learning the rules (the present study and Shook noted several negative comments regarding the rules alone) may be counterproductive in applied situations. Viewing and scoring of the videotape appeared a more reinforcing activity. It
is not being suggested that rules be completely eliminated as they do provide a base for teaching behavioral discriminations and provide a common vocabulary to use when giving feedback to subjects and describing behavior.

Although improvement in student behavior as a function of individual subject's correct use of behavior management techniques was not measured, prior research (Koegel, et al, 1977) supports the notion that where teachers show a high percentage of correct use of behavior management techniques, the child's performance also shows improvement. In addition, anecdotal comments made by subjects in the present study suggested improved student performance. Subjects also verbalized "feeling more comfortable" dealing with student behavior after the rules and videotape training.

In spite of the initial successes demonstrated by this training procedure, maintenance data collected two weeks and six weeks after feedback training showed a substantial decrease in percent correct classroom interactions for Subject 2, in Group A, and a slight decrease in mean percent correct classroom interactions for Subjects 3 and 4 (Group B).

Maintenance of skills is a critical factor in designing and implementing a behavior management or any other training program. Unless programs can be designed
that not only teach specific principles, but also result in generalization and maintenance, efforts are futile.

Gladstone and Sherman (1975) trained high school students to criterion on use of instructions, prompts and consequences. They report generalization to new students and new target behaviors, but fail to include maintenance data.

Few studies which train teachers, parents and/or classroom aides to use behavior management techniques report maintenance data. Koegel, et al (1977), reports encouraging maintenance data after two and four months on two of his eleven teachers, although failure to analyze his training components makes it difficult to determine what resulted in skill maintenance.

Procedures by which to increase the maintenance of skills warrant investigation. Could maintenance be facilitated by training subjects to a specified criterion during the feedback conditions? Would subjects' prior knowledge of that criterion have any affect?

Hosner (Note 4) in training paraprofessional aides to teach beginning reading suggests that intermittent monitoring and feedback appears as effective as continuous monitoring and feedback in maintaining near 90%
level of tutor accuracy. Intermittent feedback to facilitate maintenance of behavior management skills needs further investigation.

Time and cost efficiency are also factors which need to be considered when training staff. Shook reports that his subjects completed, with 95% mastery, the rules and videotape training in five and one-half to six and one-half hours. Subjects in the present study completed the rules and videotape discrimination training in eight to fourteen hours. With an additional two and one-half hours per subject for feedback, entire training time increased to ten and one-half to sixteen and one-half hours. This represents a considerable decrease in training time from Koegel, et al (1977) who invested twenty-five hours to train teachers. Schultz also stated a decrease in training time from Koegel, although does not give that specific time.

With the present study, training time could possibly have been decreased if specific feedback had been given to the subjects on an ongoing basis instead of waiting until the end of the study, although this needs to be evaluated empirically.

Current advances in technology, particularly the videotape recorder, are making possible time and cost efficient teacher training packages. The present study
successfully incorporated such a training package and demonstrated that skills learned via rules and videotape training do generalize to the classroom situation. Further research needs to be conducted to continue to isolate those variables which result in the greatest and most efficient learning of targeted skills. In addition, research needs to be conducted to determine which, if any, portions of such a videotape training package could be automated so that subjects could independently pace themselves through the training material. A consultant may then only be needed to provide direct feedback during classroom implementation.

Some form of basic behavior management rules, a visual demonstration of those rules (e.g., videotape examples, modeling, role playing, etc.) and feedback in some combination are common factors cited in those teacher training packages which have proven effective. The question now seems to be can those packages be streamlined so that they become more time and cost efficient and also result in some maintenance of skills.

Structured peer feedback sessions may be utilized as a built-in maintenance tool. If, after training, teachers/aides could videotape their teaching sessions and provide feedback to each other, it may be possible to
program for maintenance. This peer feedback could allow for less frequent maintenance checks by consultant staff.

Methods of giving feedback to subjects also needs further investigation. Subjects in the present study viewed videotapes of themselves working with students and identified the appropriateness and/or inappropriateness of their behavior according to the rules they had learned with the trainer commenting further if needed. Would viewing tapes of themselves or written feedback or verbal instructions or direct intervention or a combination of be most effective? Also, how often should feedback sessions be scheduled to insure maintenance of skills learned? In the present study, feedback on classroom performance was given through having the subjects view videotapes of their previous days' performance. Feedback was therefore not immediate. Did the delay in feedback until the next day adversely affect maintenance data? Would skills have maintained longer if feedback was given as subjects were interacting with their respective groups of students?

In summation, this research supports the notion that persons trained via rules and videotape to make complex discriminations do make complex discriminations in the
natural environment. Future research needs to be conducted to determine most effective methods of insuring maintenance of these skills.
REFERENCE NOTES


APPENDIX A
SAMPLE SCORING RULES

SCORING RULES: BEHAVIOR MANAGEMENT VIDEOTAPE TRAINING

INTRODUCTION:

These instructions are designed to teach you how to recognize three types of child behavior and how to correctly consequate each type. At the end of each episode score the type of child behavior as well as all five categories of adult behavior. A category should be scored as correct only if all criteria within the category are attained during the entire episode. For example, in scoring facial expression (after an appropriate (+) child behavior) if the adult smiles, then 5" later frowns, score facial expression as incorrect for that episode. Be alert to token delivery (poker chip given to child or dropped in can). Also note that during some school episodes student has assigned work on his/her desk.

<table>
<thead>
<tr>
<th>CHILD BEHAVIOR</th>
<th>ADULT BEHAVIOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>(+) appropriate</td>
<td>reinforcement</td>
</tr>
<tr>
<td>(0) inappropriate</td>
<td>no reinforcement</td>
</tr>
<tr>
<td>(-) unacceptable</td>
<td>punish</td>
</tr>
</tbody>
</table>
Child's Behavior

(+) 1. Appropriate: For a child, appropriate behavior includes behavior that is helpful to others or the child, as well as behaviors that are not unacceptable or inappropriate.

Example: Mom tells Tommy to close the door. He closes the door.
Example: Barry is working at his desk.
Example: Sally draws a picture during art class.
Example: Cindy closes the door within 5" of mom's instructions.
Example: Molly sits in a chair after a hard ball game.

Non-Example: Tommy whines for a toy.
Non-Example: Mike stares out the window during music class.
Non-Example: Mary takes Susie's toy.

Adult's Behavior

1. Vocalization

   A. Score "+" if vocalization is:
      - descriptive praise without criticism,
      - enthusiastic (no monotone; volume above other adult vocals in the episode). Don't use this subrule if there are no other vocals in episode to compare with,
      - immediate; vocal behavior should occur within 1" of termination of behavior (or during behavior if behavior is ongoing).

   B. Score "-" if any of the above rules are violated.

2. Eye Contact = Looking at face

   A. Score "+" if 3" or more of eye contact occurs.

   B. Score "-" if less than 3" of eye contact occurs.
3. Facial Expression
   A. Score "+" if smile occurs (no frown).
   B. Score "-" if no smile occurs or if frown occurs.

4. Physical Contact
   A. Score "+" if only pleasant physical contact occurs.
   B. Score "-" if any unpleasant physical contact occurs.
   C. Score "-" if no physical contact occurs.

5. Back-Up Consequence
   A. Score "+" if listed back-up is presented within 3" of termination of behavior or during behavior.
   B. Score "-" if listed back-up is presented more than 3" after termination.
   C. Score "-" if no listed back-up is presented.

Child's Behavior

(0) 1. Inappropriate: For a child inappropriate behavior is that behavior that is mildly unpleasant to others but can be ignored. Inappropriate behavior is not "good" but it is not as "bad" as unacceptable behavior.

Example: Ellen drops pieces of paper (non-breakable items) on the floor.
Example: Tommy is whining.
Example: Sonny is picking his nose.
Example: During math class, Tim is looking out the window.

Non-Example: Tommy throws a dish.
Non-Example: Sonny is sitting in a chair.
Non-Example: Johnny refuses to come in when called.
Adult's Behavior

1. **Vocalization**
   A. Score "+" if none occurs.
   B. Score "-" if any vocalization occurs (including sighs, hisses, squeals, etc.).

2. **Eye Contact** = Looking at face
   A. Score "+" if none occurs.
   B. Score "-" if any contact occurs.

3. **Facial Expression**
   A. Score "+" if no change in facial expression occurs (e.g., no smile or frown occur).
   B. Score "-" if change occurs (e.g., smile or frown occur).

4. **Physical Contact**
   A. Score "+" if no physical contact occurs.
   B. Score "-" if any physical contact occurs.

5. **Back-Up Consequence**
   A. Score "+" if no listed back-up is presented.
   B. Score "-" if any listed back-up is presented.

Child's Behavior

(-) 1. **Unacceptable:** For a child, unacceptable behavior is that behavior that is:
   A. dangerous to the child or others,
   B. destructive to property,
   C. harmful to others,
D. non-compliant: when a child does not begin to follow adult's understandable instruction within 5" of the instruction. Behavior that is simply annoying is not unacceptable.

Example: running into a busy street
Example: throwing rocks at a window
Example: screaming while baby is sleeping

Non-Example: running in back yard
Non-Example: coming in when called, but complaining
Non-Example: screaming when run scored at baseball game

Adult's Behavior

1. Vocalization
   A. Score "+" if vocalization is:
      - descriptive of misbehavior (or correct behavior without personal derogatory statements),
      - immediate: vocal should occur within 1" or less of termination of behavior (or during behavior if behavior is ongoing),
      - brief: no more than five words
   
   B. Score "-" if any of the above rules are violated.

2. Eye Contact = Looking at face
   A. Score "+" if less than 3" of eye contact occurs.
   
   B. Score "-" if 3" or more of eye contact occurs.

3. Facial Expression
   A. Score "+" if no smile occurs.
   
   B. Score "-" if smile occurs.

4. Physical Contact
   A. Score "+" if only abrupt or firm physical contact occurs.
B. Score "-" if any pleasant physical contact occurs.

C. Score "+" if no physical contact occurs.

EXCEPTION: If the unacceptable behavior is non-compliance:

1. Score "+" if physically guided compliance occurs during the non-compliance.

2. Score "-" if physically guided compliance does not occur.

5. Back-Up Consequence

A. Score "+" if listed back-up is presented within 3" of termination or during the behavior.

B. Score "-" if listed back-up is presented more than 3" of termination of the behavior. Also score "-" if listed back-up for appropriate behavior is presented.

C. Score "-" if no listed back-up is presented.

BACK-UP CONSEQUENCES

<table>
<thead>
<tr>
<th>For Appropriate Behavior</th>
<th>For Unacceptable Behavior</th>
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<tr>
<td>edible</td>
<td>time-out</td>
</tr>
<tr>
<td>toy</td>
<td>over-correction</td>
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<tr>
<td>privilege</td>
<td>privilege loss</td>
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<tr>
<td></td>
<td>hand slap</td>
</tr>
<tr>
<td></td>
<td>spanking</td>
</tr>
<tr>
<td></td>
<td>toy loss</td>
</tr>
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</table>

NOTE: If a hand slap, physically guided over-correction or spanking occurs, score as back-up consequence, not physical contact. If any other physical contact occurs during the same episode, score that other physical as physical contact.
APPENDIX B
SAMPLE RULES TEST

NAME:
DATE:
TEST #:

VTR RULES TESTS

List the three types of child behavior with a description of each. Under each type of child behavior list the five categories of adult behavior (with sub-categories if appropriate) and the rule for scoring + or - for each. On the back of the page, list the Back-Up Consequences for the two types of behavior. Be sure to list "Exceptions".
APPENDIX C
SAMPLE SCORE SHEET

NAME: 
DATE: 
SESSION: 
SET: 

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KEY: ADULT BEHAVIOR
+ = CORRECT
- = INCORRECT
BIBLIOGRAPHY


