Joel Hundert is currently a consulting psychologist at the Sir James Whitney School for hearing-impaired children in Belleville, Ontario. He is primarly interested in training generalized behavior modification skills to teachers and staff, instructional programming, and systems management. He has published research in the areas of self-management, reading, and classroom token programs.

David Batstone is currently completing his doctoral dissertation in the Department of Psychology at the University of Western Ontario. His interests include language training of nonverbal children, self-management, and intervention techniques with adolescents.

Teaching critical treatment-related skills to behavior change agents is an important task. One such treatment-related skill would seem to be the ability to observe and specifically describe ongoing appropriate and inappropriate behaviors. In this study, the effectiveness of a training "package" in teaching behavior specificity was demonstrated in two experiments. The package involved written instructions, practice in describing videotaped interactions, skill rehearsals, and detailed positive and corrective feedback. Multiple baseline designs were employed to experimentally evaluate the effects of training on objective measures designed to reflect the degree of behavioral specificity of trainee descriptions. These objective measures were subsequently found to correlate highly with subjective ratings of the descriptions by child care workers and professional training and research personnel, thus providing evidence of the validity of the objective measures. The research suggests that important behavioral treatment skills can be identified, measured, trained, and validated.

The Training and Validation of Behavior Observation and Description Skills

DANIEL D. DANCER
CURTIS J. BRAUKMANN
JEAN B. SCHUMAKER
KATHRYN A. KIRIGIN
ALAN G. WILLNER
MONTROSE M. WOLF
University of Kansas

The quality of behavioral approaches to treatment is largely dependent upon the skills of the treatment provider. Important

AUTHORS' NOTE: This research was based upon a thesis submitted by the senior author to the Department of Human Development at the University of Kansas in partial fulfillment of the requirements of the Master of Arts Degree. The research was supported by grants MH13644, MH20030, and MH3881 from the National Institute of Mental Health (Center for Studies of Crime and Delinquency) to the Bureau of Child Research and the Department of Human Development at the University of Kansas. The authors wish to thank Steve Fawcett for his suggestions concerning the training and Denise Beverlyn, Mark Mathews, Patrizia

BEHAVIOR MODIFICATION, Vol. 2 No. 1, January 1978

skills for treatment providers include, for example, those involved in developing and maintaining mutually rewarding relationships with individuals in treatment, systematic shaping and teaching, and establishing and maintaining effective motivating contingencies (Bandura, 1969). One skill generally presumed to be of some importance, and which is perhaps basic to other skills, is the ability accurately to observe ongoing behavior. A direct focus on observable behavior, as well as on external situational determinants, has been described as an essential element of behavioral approaches to assessment and treatment (Kazdin, 1975).

Related to the skill of accurate observation of behavior is the ability to describe behavior verbally. Precise descriptions of behavior can, along with demonstrations, facilitate such treatment-related activities as instruction in new skills, feedback on performance, the setting of behavioral objectives, and communication with other professionals concerning the behavior in question. Behaviorally specific instruction and feedback have been found to be more effective in changing behavior (Braukmann, Maloney, Fixsen, Phillips, & Wolf, 1974; Fueyo, Saudargas, & Bushell, 1975) and more preferred by treatment participants (Jacobs, Jacobs, Cavior, & Burke, 1975; Willner, Braukmann, Kirigin, Fixsen, Phillips, & Wolf, 1977) than nonspecific instruction and feedback. In addition, the usefulness of precise behavioral descriptions in setting behavior change objectives has been emphasized by a number of authors (Gallegos & Phelan, 1974; Mager, 1975; Vance, 1973).

The education of treatment providers in the use of behavior change skills (such as the observation and description of behavior) is currently receiving the attention of applied behavior analysts. Kazdin and Moyer (1975) and Kirigin, Ayala, Brown, Braukmann, Minkin, Phillips, Fixsen, and Wolf (1975) in their discussions of behavioral training programs have noted that (1) there is a growing need for training programs to produce effective

Braukmann, Marty Bedlington, and Mitchell Taubman for their suggestions and assistance in the conduct of this research, as well as Gail Munde and Stephanie Mathews for their assistance in preparing the manuscript.

agents of behavior change, (2) training programs should focus on the development of specific skills involved in applying behavioral treatment procedures, and (3) training programs should be evaluated systematically in order to establish the most effective and efficient training procedures.

The current research concerned an evaluation of the effectiveness of a training package, a component of a larger training program, in enhancing some specific skills in behavior observation and description. This paper will describe the elements of that training package, as well as the measurement, design, and results of research conducted to measure and validate the effects of the training.

Study 1: Effects of Training

General Method

Subjects. Twenty-eight trainees attending Teaching-Parent Training Workshops at the University of Kansas participated as subjects. The trainees were married couples who planned to implement the Teaching-Family Model of group home treatment for delinquent youths. The 14 female trainees ranged in age from 23-32, and had a mean age of 25. The male trainees' ages ranged from 23-35, with a mean age of 26. Fifty-five percent of the female trainees and 58% of the male trainees had a Bachelor's Degree, and 90% of both groups had some college credit.

The 28 trainees participated in one of four workshops. Eight participated in the first workshop (Workshop A), seven in the second workshop (B), eight in the third workshop (C), and five in the fourth workshop (D). Participation in the research was voluntary, and each trainee gave his or her written consent prior to participating in the study.

Setting and Apparatus. The research was conducted during 6-day, 50-hour workshops at the University of Kansas. The workshops provided preliminary training in the skills relevant

to the implementation and direction of a community group home facility, and were the first step in a year-long series of training events designed to terminate with the certification of the couples as teaching-parents (see Braukmann, Fixsen, Kirigin, Phillips, Phillips, & Wolf, 1975). One workshop session (two hours) was devoted to behavior observation and description. The trainees sat at tables in a conference room. A Sony 3600 video-tape recorder and monitor were used in the presentation of training and testing tapes.

Training Procedures. A number of techniques were used in training treatment-related skills in the various workshop sections. These included lectures, discussions, modeling, the use of video-tapes, behavior rehearsal to criterion, and constructive feedback. Prior to the workshop, trainees read and completed comprehensive study guides over the *Teaching-Family Handbook* (Phillips, Phillips, Fixsen, & Wolf, 1974). Training in behavior observation and description skills began with the trainees reading written materials prior to that workshop section. These materials were part of a training package, "Behavioral Specification: An Instructional Package" (Dancer, Schumaker, Eck, & Braukmann, 1977), that also included video-tape and behavior rehearsal materials. The written materials discussed the importance of observing and describing behavior as a prerequisite skill for several other skills integral to the Teaching-Family Model, including the teaching of social, academic, and self-care skills, providing feedback to the youths regarding their behavior, and working with teachers and parents. Some specific examples and guidelines were given on how to observe and describe behavior in specific terms. For example, the trainees were instructed to attend to various aspects of ongoing behavior which would help them to pinpoint the relevant components of a behavioral event. These aspects were grouped into three question areas: (1) What is the person doing? [suggestions: (a) listen to what the person says, (b) watch the person's facial expressions, (c) watch the person's body, (d) note the intensity of these behaviors]; (2) What are the circumstances surrounding the behavior? [suggestions: (a) note the activity the person is involved in, (b) note when the behavior occurred, (c) note where the behavior occurred, (d) note the conditions immediately preceding the behavior]; (3) What is the outcome of the behavior? [suggestions: (a) note how the youth's behavior affected others around him, (b) note the final physical conditions of the situation, (c) if relevant, note whether the task was completed]. The above-mentioned cues were elaborated and discussed in some detail and study questions were presented at the end of each section in order for the trainees to review the skills being taught.

After the trainees read the materials and answered the study guide questions, they attended a two-hour training session. The trainer began the session by reviewing the written materials with the trainees. Then he provided rationales and examples to illustrate further the various points of the materials and answered any questions. The trainees then viewed six video-taped, simulated situations of youths engaging in various social behaviors (e.g., arguing with peers, accepting criticism from group-home parents), self- and family-care behaviors (e.g., brushing teeth, sweeping floor), and academic behaviors (e.g., being tutored). These situations were selected as similar to those typical of group homes. In all the situations, behaviors likely to be judged by trainees as both appropriate and inappropriate to the group-home treatment environment were portrayed. The trainees were asked to describe as specifically as possible, in written form, the inappropriate and appropriate behaviors they observed on the video-taped situations. Each trainee then received detailed individual positive and corrective feedback on his or her description from one of several members of the training staff. Prior to the feedback sessions, the trainers had each received written materials and instruction concerning both the procedures to be used in giving feedback and the specific behavioral events portrayed in the video sequences. The trainers helped shape the specificity of the trainees' descriptions by noting the events

they missed in the tape and by discussing ways in which to cue in on such behaviors. The trainers also noted the manner in which the observed events were described. In all cases, the trainers instructed the trainees to (a) provide descriptions they would judge likely to permit another party to substantially replicate the observed events, and (b) eliminate all adjectives and adverbs which did not add to the behavioral specificity of the description.

Measurement Procedures. Prior to and following the training session, the trainees were instructed to write separate descriptions of the appropriate and inappropriate behaviors they witnessed in several video-taped situations similar to, but different from, those used in training. Each trainee viewed eight interactions in all: some of the eight before and some after training. These video-taped interactions ranged in length from 25 to 80 seconds, with a mean length of 42 seconds. Following each video sequence, trainees were given two and one-half minutes to write their descriptions.

The written descriptions provided by the trainees were analyzed to assess individual abilities in describing behavior. In order reliably to measure trainee behavior, three measurement steps were employed. First, each description was broken down into discrete statements. This was done according to a set of rules which specified where divisions should occur, such as after conjunctions, after a period mark, and when a new topic was mentioned. Next, each discrete statement was categorized as to the type of behavior described: (a) verbal behavior, (b) voice tone or manner of speaking, or (c) other behavior, usually action behavior (i.e., running, fighting, brushing, and so on). Finally, each statement was given a numerical point score of from one to four depending on the quality of its behavioral description. The points were awarded according to preestablished guidelines for each category. In the verbal category, for example, a statement could be scored as a "1" if it described what a youth had said but did so in general terms (e.g., "What he said was inappropriate"). Such a nonspecific description was judged to be less useful in, for example, teaching and providing feedback than a description that specified actual behaviors. Descriptions that did specify behavior were scored from two to four points, depending on degree of specificity. For example, a statement in the verbal category was given a "2" if it summarized what was said (e.g., "Dale told Steve he was going to hit him"); a "3" if it was a quote of what was said (e.g., "Dale said to Steve, "I'm going to hit you if you don't shut up"); and a "4" if the statement included a qualifier with the quote of what was said (e.g., "Dale said with fists clenched, 'Steve, I'm going to hit you if you don't shut up' "). Categories of voice tone and action behavior were scored in a similar manner. In this way the most points were awarded to the most descriptive statements, those statements thought to be most useful in teaching and giving feedback.

When all the statements contained in a given description were scored, the points for each statement were totaled to provide a total raw score for that description. These raw scores were then converted to percentage scores. This conversion was necessary since each video sequence varied in length and contained a varying number of relevant behaviors to be described. For example, a score of 25 might represent a very thorough description of one situation but a very cursory description of another, more complex one. In standardizing scores across video sequences, the highest scores achieved by any of the trainees in describing a given video situation determined the "maximum score" against which other trainee scores of that situation were judged. (In all cases, the "maximum score" was achieved after training.) Percentage scores were then calculated by dividing each total raw score by the corresponding maximum score and multiplying the quotient by 100. For example, if the maximum score (highest score) for a video situation was 44 points, then a given trainee who scored 22 on his description of that situation would receive a percentage score of 50% (22/44 X 100).

Interrater Agreement. The level of interrater agreement (Baer, Wolf, & Risley, 1968) was assessed for each of the three steps involved in the measurement system: (1) the division of the descriptions into discrete statements, (2) the categorization of statements as to type of behavior described, and (3) the quality scoring of each statement.

In order to assess the level of interrater agreement on the first two steps (the division of descriptions into discrete statements and the categorization of statements), 20 descriptions of video sequences were randomly selected from 224 descriptions written during the workshops. Two independent observers' records of their scoring on these 20 descriptions were compared to determine their level of agreement in both dividing descriptions into discrete statements and in assigning them to categories. To assess interrater agreement on the third measurement step, the point scoring of each discrete statement, one randomly selected description from each of the video sequences in each workshop was scored. The scoring records of two independent observers were compared to determine their agreement on the number of points awarded to each statement of each description. As in the previous two measures, agreements were only counted when the observers' scores for a statement were identical.

In assessing the interrater agreement for each of the three measurement steps, the total number of agreements was divided by the total number of agreements plus disagreements, and the quotient was multiplied by 100. The percentage of interrater agreements on dividing descriptions into discrete statements was 91%, on categorizing the statements 99%, and on scoring the individual statements 82%.

Experiment I

Experimental Conditions and Design. At the beginning and conclusion of Workshops A, B, and C, the trainees were tested on video-taped situations portraying a variety of teaching-parent

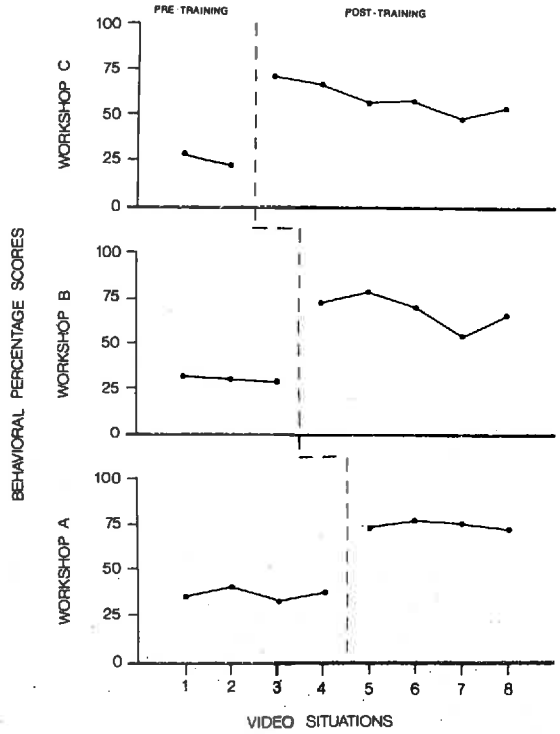

Figure 1: Effects of Training on Observation and Description Behavior

The average percentage scores (see ordinate) obtained both before and after training by participants in each of three training workshops. Workshops are designated A, B, and C and occurred temporally in that order. Each member of each workshop group participated in eight measurement sessions, in each of which he or she described, in writing, behavior observed as occurring in one of eight video-taped interaction situations (see abscissa). Each description by each participant was analyzed and given a behavioral percentage score according to pre-specified criteria. The design was a multiple baseline across groups. Subjects in Workshop C (N = 8) participated in two, subjects in workshop B (N = 7) in three, and subjects in Workshop C (N = 8) in four pre-training sessions.

and youth interactions. Prior to both the pretest and the posttest sessions, the trainees were given written instructions which asked them to describe, on the score sheet provided, the appropriate and inappropriate behaviors of the youth(s) in each video sequence. The eight video situations were randomly ordered in

the first workshop and then counterbalanced across the other two workshops so that some of the situations appearing in the pretest for participants in the first workshop appeared as posttests for participants in the later workshops. The trainees who participated in Workshop A were given four pretest and four posttest video situations; in Workshop B, three pretest and five posttest video situations; and in Workshop C, two pretest and six posttest situations. This arrangement formed a multiple baseline design across groups (i.e., workshops).

Results and Discussion. The results of Experiment I are displayed in Figure 1. In each of the three workshops, the trainees increased their average scores subsequent to training by over 100%. The average score for Group C before training was 27% and after training was 58%. Group B's pretraining average was 29% and posttraining average was 63%. With training, Group A's average increased from 37% to 77%. The mean baseline scores for the combined groups was 21%, and the corresponding mean posttest score was 66%. All trainees in each group had higher average posttraining scores than pretraining scores.

The results indicate that the introduction of the training procedures had clear and consistent effects on the description producing behavior of the trainees. These results suggest that the training improved the trainees' observation and description skills, at least in regard to behavior presented via videotape.

Experiment II

Experimental Conditions and Design. A second experiment was carried out both to replicate with additional trainees the behavior changes found in Experiment I, and to determine if the behavior changes associated with the training package might be merely a function of more fully informing trainees as to the desired terminal behavior, rather than a function of the

complete skill training procedures. During baseline in this experiment, trainees participating in a fourth workshop (Workshop D) were first given the written instructions that had been used in the pre- and posttraining tests in Experiment I. These instructions were general, merely asking the trainees to write down the appropriate and inappropriate behaviors they observed in the video sequences. Then, after the trainees had provided several descriptions under these original instructions, they were given a more detailed set of instructions describing the characteristics of desired descriptions, and they were asked to provide descriptions of additional video sequences. The new, more specific set of written instructions asked the trainees to describe in thorough and specific detail the appropriate and inappropriate behaviors of the youths; use accurate and behaviorally specific terms, so that someone who had not seen the video situations would know what they were describing; and avoid using nonbehavioral adjectives such as good, bad, negative, or appropriate. Trainees were provided with the rationale that "the identification and specification of youth behavior is likely to facilitate your attempts to correct behavior problems." As in Experiment I, the trainees were requested to keep these written instructions within view as they wrote their descriptions.

The workshop participants were divided into two groups. Group D1 (N = 2) was asked to describe three video situations during the baseline condition and two more situations after they had received the new instructions. Group D2 (N = 3) described two sequences in baseline and then two more situations after the more specific instructions were introduced.

After completing the sequences in which the more detailed instructions were employed, the trainees in each group received training in the same manner as in Experiment I. After this training, Group 1 described four video situations, and Group 2 described three, thus completing the multiple baseline across groups design for this experiment.

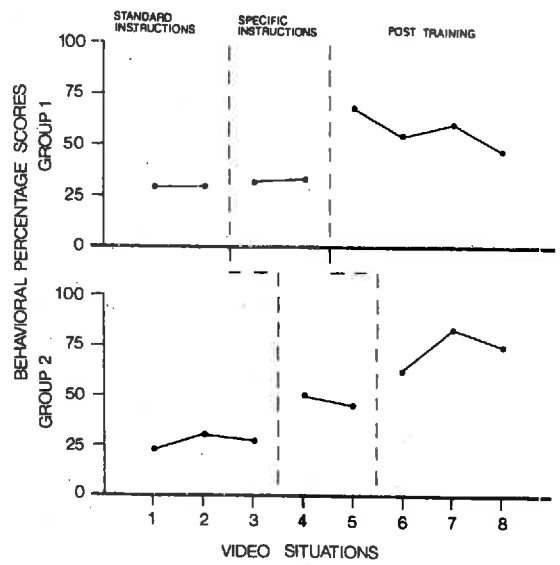

Figure 2: Effects of Specific Instructions and of Training on Observation and Description Behavior.

The average percentage scores (see ordinate) obtained by two groups of trainees under three conditions: (1) a "standard instructions" (baseline) condition (2) a condition characterized by more specific instructions, and (3) a post-training condition. The latter followed the application of the complete training package. The two groups (1 and 2) both participated in the same workshop (D). In a multiple-baseline fashion, trainees in Group 1 (N = 2) participated in two sessions in the first condition, two in the second, and four in the third; whereas the trainees in group 2 (N = 3) participated in three sessions, two sessions, and three sessions respectively across conditions.

Results and Discussion. The results of Experiment II are presented in Figure 2. During the baseline or "general instructions" condition, the average score for Group D1 was 28% and for Group D2 was 25%. With the introduction of more detailed instructions in the second condition, Group D1's average score increased by 2% (to 30%), whereas Group D2's average score increased by 22% (to 47%). Each of the members of Group D1 and Group D2 had a higher average score in this condition than in the first condition. With the introduction of the training package in the third condition, Group D1's average score

increased by 29% over the specific instructions condition (to 59%), and Group D2's average increased by 25% (to 72%). All trainees in each group showed considerable increases following introduction of the training package.

The results indicate that the more specific, detailed instructions did have an effect on the pretraining levels of trainee performance. However, these increases were of lesser magnitude than those found as a result of training of other groups in Experiment I, and training produced additional changes with both groups in this experiment. These results suggest that specific instructions alone were not the most important factor in producing the changes that were found to occur with training.

Study 2: Validation

In order to determine if the "objective" measures that were employed to measure descriptions in the two experiments of Study 1 correspond to "subjective" judgments of the adequacy of descriptions, two validation assessments were carried out in Study 2. Additionally, a survey was carried out to assess the importance of behavior observation and specification skills as viewed by treatment providers.

General Methods

Judges. A number of individuals with experience in behavior change procedures, 14 certified teaching-parents and 12 staff members of Achievement Place Research Project, were asked to judge various descriptions. The teaching-parents had been through the year-long training sequence and were highly evaluated by their programs' consumers (youths, parents, teachers, court personnel, and so on). Of the 12 staff members on the project, six were Ph.D.s and six were graduate students.

TABLE 1
The Correlations Between Staff Ratings and Rankings and the Corresponding Scores of Descriptions as Determined by the Measurement System

	Replicability		Feedback	
	rate	rank	rate	rank
situation 1	.83*	.92*	.80	.92*
situation 2	.42	.81	.43	.81

Significance Level
* = .05 (.82)
** = .01 (.94)

Validity Assessment I

Procedures. Following the first of the four workshops, two of the eight video situations used in testing the trainees were selected at random. Six trainee descriptions were selected for each of the two video situations. These six descriptions were selected so as to represent the complete range of scores for that particular situation. The descriptions were then randomly ordered in a questionnaire format. After viewing each of the two video situations, eight research staff members were asked to rank and rate each description as to (a) how convinced they were that the description was both a complete description of what had happened and replicable (i.e., could be reenacted by someone who had not originally observed the behavior), and (B) how useful as feedback the description would be to a person who had engaged in the behavior. For the rankings, the judges ranked each description as first, second, third, and so on in order to indicate both how complete and how useful the description was. For the ratings, a seven-point Likert-type scale was

used in which 7 represented "completely convinced" and 1 represented "completely unconvinced." A Spearman rank-order correlation test was used to compare the judges' ratings and rankings of each descripton with the more objective scores obtained in Study 1.

Results and Discussion. Table 1 provides the correlation coefficients obtained through rank order correlations performed between the objective measurement scores obtained in Experiments I and II, on the one hand, and the judges' ratings and rankings of those descriptions along the two dimensions of "completeness" and "usefulness as feedback," on the other hand. Three of the eight correlations were statistically significant ($p \leqslant .05$), and three others approached significance ($p \leqslant .06$). All eight correlation coefficients were positive and ranged from .43 to .92.

The results of this first evaluation assessment indicate that subjective judgments by trained change agents as to the quality of written descriptions were generally consistent with the more objective measures, although only significantly so in three of the eight cases.

Validity Assessment II

Procedures. Following the completion of the third of the four workshops, another validation questionnaire was prepared to see if the correlations obtained in the first validity assessment could be replicated and improved. As before, two of the eight video situations were picked at random. For those two situations all the scored descriptions from workshops A, B, and C were divided into six equal groups according to level of score (i.e., low score in one group, next lowest in another, highest in another, and so on). One description from each group was then randomly selected to give a stratified sample of the descriptions for each situation. The descriptions were then randomly arranged in a questionnaire format and distributed to 14 certi-

TABLE 2
The Correlations Between Staff and Teaching-Parent Ratings and Rankings and the Corresponding Scores of Descriptions as Determined by the Measurement System

	Replicability		Feedback	
	rate	rank	rate	rank
staff	.98**	.89*	.64	.89*
Teaching Parents	.80	.89*	.72	.86*
staff	.98**	.98**	.98**	1.00**
Teaching Parents	.94**	.60	.94**	.60

Significance Level
* = .05 (.82)
** = .01 (.94)

fied teaching-parents and the 12 staff members. In this instance, a detailed script for each video situation was substituted for the video presentation and was included with the questionnaire. The raters were asked to rate and rank each description on the same dimensions of replicability and completeness as in the previous questionnaire. Again, a Spearman rank-order correlation test was carried out to compare the judges' ratings and rankings with the scores determined by the measurement system.

Results and Discussion

Table 2 displays the results of 16 correlational comparisons of the rated and ranked descriptions of two situations (3 and 4), each by two groups (teaching-parents and research staff) along two dimensions (replicability of behavior based on the description, and usefulness of description in providing feedback). As shown in Table 2, the correlations between judges' ratings and rankings and the scores determined by the measurement system were statistically significant ($p \leqslant .05$) for 11 of the 16 comparisons, and was approaching significance ($p \leqslant .06$) on a twelfth. All correlations were positive and ranged from .60 to .98. For situation 3, five of the eight correlations were significant, for situation 4, six of the eight. For teaching-parents, four of the eight correlations were significant; for research staff, seven of the eight. The results indicated that subjective judgments as to the quality of the written descriptions were consistently positively correlated, usually to a statistically significant degree, with the objective measures. These results are supportive of the first validation assessment and, as a whole, lend credence to the general concordance of the objective and subjective measures.

Validity Assessment III

While the first two assessments were concerned with the validity of the measurement system, a third assessment was conducted to validate the importance of the skills involved in observing and describing behavior.

Procedures. Eight certified teaching-parents received a questionnaire and were asked to rank the importance of seven personal and treatment-related attributes and activities. These attributes and activities included the ability to observe and describe behavior, the ability to give youths rationales as to why they should change a given behavior, the ability to encourage youth participation, the ability to display a "good attitude," the ability to present a good appearance, the ability to give feedback to youths on their behavior, and the importance of having the youths practice skills they are being taught. These attributes were ranked as to their importance in three areas: teaching the youths new skills, counseling with the youths, and providing effective treatment for the youths.

TABLE 3
The Mean Rankings of Teaching-Parent Attributes Across Three Components of the Teaching-Family Model

Teaching the youth new skills	being able to observe and specify behavior 2	Being able to give rationales 1	Having the youths practice 3	giving feedback 4	having a good attitude 6	encourage youths' participation 5	presenting a good appearance 7
Counseling with the youths	2	4	6	5	3	1	7
Providing the youths with effective treatment	1	2	5	6	4	3	7

Results and Discussion. As shown in Table 3, the ability to observe and describe behavior was, on the average, ranked by experienced teaching-parents as either first or second in importance in each of the three areas. These results provide support for the importance of behavioral observation and description skills in a variety of treatment-related activities.

General Discussion

The results of this research indicate that a training package designed to improve behavior observation and description skills was effective in teaching the trainees to be more specific in their descriptions of behavior presented to them in unique trial blocks via video-tape. The results of Experiment II demonstrated that more specific instructions alone were insufficient to account for the degree of effect found with use of the complete package

(written materials, observing and describing video-taped interactions, and immediate feedback). To validate the measurement system, two stratified samples of pre- and posttest descriptions by trainees were rated and ranked by individuals trained in behavior change. The highest scored descriptions were generally rated and ranked as the most complete and replicable and most useful as feedback. Experienced group-home personnel also reported that the ability to accurately observe and describe behavior was an important component in a number of treatment-related procedures.

While the current research is suggestive, additional research needs to be conducted in a number of areas. For example, it should be seen whether or not, and under what conditions, the training package could be replicated by others. Relatedly, the kind of training or instructions subsequent trainers would need in order to effectively implement the package needs to be investigated (cf. Braukmann, Maloney, Fixsen, Phillips, & Wolf, 1974). A critical area for future research would be how well trainees subsequently observe and describe behaviors occurring in the natural environment: a different task than observing behaviors occurring on video-tape. Also, while it would seem logical that skills involved in observing behavior would facilitate the timing and effectiveness of treatment activities, relevant research in this area is lacking. Thus, it would be important in future research to directly document the relationship between behavioral specificity in observing and describing behavior and subsquent effectiveness in teaching clients new skills, correcting inappropriate behavior, and providing feedback. In initial steps in this direction, measures have been collected on the effectiveness of behaviorally specific descriptions and feedback combined with other teaching interaction components (e.g., rationales and practice), in teaching youths how to take feedback (Timbers, Timbers, Fixsen, Phillips, & Wolf, 1973), and in teaching youths to engage in a variety of social and maintenance skills (Ford, Christophersen, Fixsen, Phillips, & Wolf, 1973).

There is a need for an ongoing emphasis on training treatment providers in the important skills involved in making complex treatment discriminations and in engaging in complex treatment activities. However, the task of teaching treatment-related problem solving skills to personnel in clinical settings is a difficult one. The present research represents a preliminary effort to identify an important class of treatment skills, measure them, validate them, and develop effective procedures for training them for use by prospective treatment providers.

REFERENCES

Baer, D., Wolf, M., Risley, T. Some current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis,* 1968, 1, 91-97.

Bandura, A. *Principals of behavior modificaton.* New York: Holt, Rinehart, & Winston, Inc., 1969.

Braukmann, C. J., Maloney, D. M., Fixsen, D. L., Phillips, E. L., and Wolf, M. M. An analysis of a selection interview training package for pre-delinquent youths at Achievement Place. *Criminal Justice and Behavior,* 1974, 1, 30-42.

Braukmann, C. J., Fixsen, D. L., Kirigin, K. A., Phillips, E. L., Phillips, E. A., and Wolf, M. M. Achievement Place: The training and certification of teaching-parents. In W. S. Wood (Ed.), *Issues in evaluating behavior modification.* Champaign, Ill.: Research Press, 1975.

Dancer, D. D., Schumaker, J., Eck, S., & Braukmann, C. J. Behavioral specification: An instructional package. Unpublished manuscript, 1977.

Ford, D., Christophersen, E., Fixsen, D., Phillips, E., and Wolf, M. Parent-child interaction in a token economy. Unpublished manuscript, 1973.

Fueyo, V., Saudargas, R. A., & Bushell, D. Two types of feedback in teaching swimming skills to handicapped children. *Perceptual and Motor Skills,* 1975, 40, 963-966.

Gallegos, R. C., & Phelan, J. G. Using behavioral objectives in industrial training. *Training and Development Journal,* 1974, 28, 42-48.

Jacobs, A., Jacobs, M., Cavior, N., & Burke, J. Anonymous feedback: Credibility and desirability of structured emotional and behavioral feedback delivered in groups. *Journal of Consulting and Clinical Psychology,* 1975, 40, 244-253.

Kazdin, A. E., & Moyer, W. Training teachers to use behavior modification. In S. Yen (Ed.), *Training behavior modifiers.* Kalamazoo, Mich.: Behaviordelia, 1975.

Kirigin, K. A., Ayala, H. E., Brown, W. G., Braukmann, C. J., Minkin, N., Phillips, E. L., Fixsen, D. L., & Wolf, M. M. Training teaching-parents: An evaluation and analysis of workshop training procedures. In E. A. Ramp & G. Semb (Eds.), *Behavior analysis: Areas of research and application.* Englewood Cliffs, N.J.: Prentice-Hall, 1975.

Mager, R. F. *Preparing instructional objectives.* Belmont, Cal.: Fearon Publishers, 1975.

Phillips, E. L., Phillips, E. A., Fixsen, D. L., & Wolf, M. M. *The teaching-family handbook.* Lawrence: University of Kansas Printing Service, 1974.

Timbers, G. D., Timbers, B. J., Fixsen, D. L., Phillips, E. L., & Wolf, M. M. *Achievement Place for pre-delinquent girls: Modification of inappropriate emotional behaviors with token reinforcement and instructional procedures.* Paper presented at the American Psychological Association, Montreal, Canada, 1973.

Vance, B. *Teaching the pre-kindergarten child: Instructional design and curriculum.* Wadsworth Publishing Company, 1973.

Willner, A. G., Braukmann, C. J., Kirigin, K. A., Fixsen, D. L., Phillips, E. L., & Wolf, M. M. The training and validation of youth-preferred social behaviors of child-care personnel. *Journal of Applied Behavior Analysis,* 1977, 10, 219-230.

Daniel D. Dancer is a researcher and doctoral student in Human Development at the University of Kansas. His varied research interests include training procedures for youth care workers, the applied importance of humor, measuring and increasing happiness, and environmental planning.

Curtis J. Braukmann is Co-Director of the Achievement Place Research Project and is a Research Associate with the Bureau of Child Research at the University of Kansas. His primary interests are in the development and evaluation of procedures and programs for the treatment of juvenile offenders and for the education of treatment personnel. His research is primarily in the areas of youth treatment skills, social skills training, and social validation.

Jean B. Schumaker is a Research Associate with the Bureau of Child Research at the University of Kansas. Her research interests include such topic areas as academic remediation, teaching-parent training, teaching-parent job satisfaction and tenure, and juvenile probation techniques.

Kathryn A. Kirigin is a Research Associate with the Bureau of Child Research and Co-Director of the Achievement Place Research Project at the University of Kansas. Her primary interests are the development and application of systematic and practical procedures for effectively evaluating social service programs for children, adolescents, and adults. Additional research areas include training of group home child-care staff, with emphasis on relationship development between youths and child-care personnel.

Alan G. Willner is Associate Director of Training for the Achievement Place Research Project and a Research Associate with the Bureau of Child Research at the University of Kansas. Primary interests include the development and treatment assessment of youth care programs for juvenile offenders and the training of professionals in the delivery of youth-care services. Specific areas of current

research include social skills training, social validation, treatment personnel employment recruitment, job satisfaction, and employment tenure research.

Montrose M. Wolf is Professor of Human Development and Co-Director of the Achievement Place Research Project at the University of Kansas. His primary research interests are behavior modification with children and application of behavioral strategies to quality of life issues.

BOOK REVIEWS

Franks, C. M., & Wilson, G. T. (Eds.) *Annual review of behavior therapy: Theory and practice* (fourth edition). New York: Brunner/Mazel, 1976, xviii + 914 pp. $27.50.

My congratulations to Doctors Franks and Wilson for their superb editorial work in the latest edition of *Annual Review of Behavior Therapy*. This latest volume is a remarkably good overview. While one may quibble over certain selections, in general I found their selections to be of fine quality and reasonably good sampling. I found the editors' commentary to be an informative, well integrated, and timely discussion of many new important issues facing behavior therapy.

I found their discussion of cognitive behavior therapy to be enlightening, and agree with their comment that the rediscovery of cognitive psychology by behaviorists leads one to surmise that "there is little that is new under the sun." I feel, however, that they should have chided those behaviorists who are in the area of cognitive-behavior therapy to pay attention to the vast literature in cognitive experimental psychology or else they are in danger of rediscovering the wheel. The editors' discussion of "hyperactivity" was especially well done, as well as their rebuttal of some of the problems presented by Levine and Fasnacht with respect to token economies. Also to be applauded is their even-handed discussion of the relative merits of behavior therapy and other forms of psychotherapy. I feel their interjection of data from clinical outcome studies in their presentation debunking "old myths" about behavior therapy was an especially telling tactic. I wholeheartedly agree with the point the editors make that behavior therapy is an approach rather than a series of techniques.

The editors' discussion of the relative assets and deficits of single subject methodology and between-group designs, although succinct, was a highly informative and intelligent discourse on that subject. Likewise, I found their discussion of other methodological problems, such as expectancy factors, highly provocative. One problem which I feel that they did not come completely to grips with was the question of a "true" placebo control. It has always troubled me that in order to create a "true" placebo, one must devise a treatment program that is believable to both therapist and client. It seems to me to be extremely difficult to devise such a believable placebo and have it remain basically

BEHAVIOR MODIFICATION, Vol. 2 No. 1, January 1978