Teaching Practitioners to Conduct Behavioral Skills Training: A Pyramidal Approach for Training Multiple Human Service Staff

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PRACTICE POINTS

- Behavioral skills training (BST) is a well-researched, performance- and competency-based means of training job skills to human service staff.

- Pyramidal training, through which a senior trainer (e.g., behavior analyst) trains staff to train other staff, represents a means of reducing the amount of time for the senior trainer to use BST to train multiple staff.

- In this investigation, pyramidal training was used to train (using BST) staff in an adult education program for people with disabilities to use BST to train other staff in the agency. The pyramidal training was accompanied by staff acquisition of BST skills and effective use of BST to train desired job skills to other staff within the regular work setting.

- Behavioral skills training within a pyramidal format is likely to be most beneficial when behavior analysts are expected to train large numbers of staff or staff in different geographical locations.

A job responsibility of many behavior analysts that can involve significant amounts of time is training human service staff in behavior-change and related procedures. We evaluated a pyramidal approach using behavioral skills training (BST) for a trainer to train multiple staff. The BST skills of 10 practitioners in a human service setting were assessed as they trained a staff person in simulation before and after being trained (with BST) to conduct BST. Results indicated all participants improved their use of BST during the assessments following training and demonstrated proficient application of BST while training a staff person in the regular work setting. Acceptability measures suggested the training process was well received by the participants. Results are discussed regarding practical considerations with BST-based pyramidal training, including the conditions in which this training approach may be most advantageous.

An important skill set for many behavior analysts is how to conduct behavioral skills training (BST). Behavioral skills training is an evidence-based approach for training human service personnel to implement behavior change and related procedures (Parsons, Rollyson, & Reid, 2012). Numerous work skills have been trained to staff in the human services through BST including how to teach consumers with disabilities (Sarokoff & Sturmey, 2004) and implement procedures to reduce problem behavior (Miles & Wilder, 2009). The significance of behavior analysts being skilled in BST is highlighted by demonstrations that without such skills, staff training is not likely to be consistently effective even if the staff trainer (e.g., behavior analyst) is skilled in implementing the behavior-change procedure that is being trained to staff (McGimsey, Greene, & Lutzker, 1995; Parsons & Reid, 1995). In short, being skilled in applying a behavior-change strategy with consumers is not sufficient for training others to apply the strategy—one must also be skilled in training performance skills to staff (Parsons et al.).

Two key features of BST are performance—and competency-based training components (Parsons et al., 2012). The performance component involves the trainer and trainees demonstrating the skills of concern. The competency component pertains to continuing the training until trainees perform the target skills competently. For example, when training staff to implement a teaching procedure with a student, the training would not be considered complete until each staff person was observed to carry out the procedure at a designated level of competency. These features differentiate BST from more traditional approaches to staff training in human service agencies that emphasize verbal teaching strategies such as vocal and written instructions (Parsons et al.). In contrast to the noted effectiveness of BST (see Reid, O'Kane, & Macurik, 2011, for a review), investigations have repeatedly demonstrated the lack of effectiveness of the latter approaches for training staff to perform target skills (Alavosius & Sulzer-Azaroff, 1990; Gardner, 1972; Petscher & Bailey, 2006).

Despite the effectiveness of BST, a practical concern with this training approach is the amount of trainer time required (Parsons et al., 2012). Because BST involves performance—and competency-based components in addition to vocal and written instructions usually constituting traditional training approaches, BST often requires more time for the staff trainer. The increased time requirement is one explanation regarding why verbal-based training strategies are more prevalent in human service agencies than BST (Reid, 2004). The time-efficiency concern can be especially relevant for

behavior analysts when responsible for training large numbers of staff and staff in different locations (e.g., staff in a consumer's group home and day program).

One approach for implementing BST that can reduce the amount of time for a behavior analyst to train multiple staff is *pyramidal training* (Pence, St. Peter, & Tetreault, 2012). Pyramidal training generally involves a senior trainer (e.g., a behavior analyst) training a small group of staff (e.g., supervisors) who in turn train other staff. Pyramidal training, alternatively referred to as *peer training* (Finn & Sturmey, 2009), does not necessarily reduce the total amount of time for training all staff of concern but can reduce the amount of time for the senior trainer (again for example, a behavior analyst). Additionally, a reported advantage of pyramidal training is that by training selected personnel who are indigenous to an agency to train other agency staff, the continued presence of the staff trainers in the trainees' worksite may enhance maintenance of the trainees' newly acquired work skills (Demchak, Kontos, & Neisworth, 1992). This can be especially advantageous for behavior analysts who have an intermittent consultant relationship with an agency or are otherwise not continuously present in the staff work environment. A related advantage of pyramidal training is that it can enhance maintenance of the target job skills of the agency personnel who are training the skills to other staff (van den Pol, Reid, & Fuqua, 1983).

In typical investigations with pyramidal training a specific behavior-change skill has been trained to a small group of personnel who were then directed to train the specified skill to other individuals (Demchak et al., 1992; Green & Reid, 1994; Haberlin, Beauhamp, Agnew, & O'Brien, 2012; Kuhn, Lerman, & Vorndran, 2003; Neef, 1995; Page, Iwata, & Reid, 1982; Pence et al., 2012). However, because this approach focuses on trainer and staff use of a specific behavior-change skill, questions have been raised regarding the degree to which the staff trainers would be able to train other important skills to staff beyond the specific behavior-change skill that was the focus of the trainers' own training (Demchak & Browder, 1990; Finn & Sturmey, 2009). Such a concern is highlighted when considering that investigations on pyramidal training generally pro-

vide data that the staff trainers were competent in applying the behavior-change skill but not data regarding the trainers' implementation of the constituent steps of BST when training the skill to other staff (Demchak & Browder, 1990; Demchak et al., 1992; Haberlin et al., 2012; Jones, Fremouw, & Carples, 1977; Neef, 1995; Pence et al.; Shore, Iwata, Vollmer, Lerman, & Zarcone, 1995). The lack of documentation that the staff trainers accurately implemented the staff training procedures is a likely explanation of why pyramidal training can result in the staff trainees being less proficient in performing the target behavior-change skill than their trainers who were trained to perform the skill by the senior trainer (Demchak et al.). Consequently, it would seem desirable to demonstrate a means of training staff trainers specifically in a BST skill repertoire for effectively training other agency staff.

The purpose of this investigation was to demonstrate a means of training human service practitioners to use BST for training staff. Initially, the BST skills of practitioners were assessed as they trained three behavior-change procedures to a staff person in a simulated situation. Next, the practitioners were trained (with BST) to use BST to train two other behavioral procedures and their BST skills were subsequently reassessed as during the pretraining situation. The BST skills of the practitioners were then assessed as they trained a selected skill to a staff person within the routine work environment. Practical considerations associated with use of pyramidal training also are provided for behavior analysts who may be involved in training multiple staff.

Method

Setting and Participants

The setting was an adult education program for individuals with severe intellectual disabilities and autism. The program provided teaching services as well as supported and contract work. The investigation was conducted in the student library that also served as a staff meeting location (in which initial assessments and training occurred) and student classrooms (for participant on-the-job assessments). The participants were 10 staff in the adult education program, including seven

teachers, one teacher assistant, and two technicians who worked in a staff development department. Seven of the participants were women. Ages ranged from 31 to 57 years (M = 46 years) and years of experience ranged from 2 to 31 (M = 16 years). Each teacher was responsible for services in a given classroom and the teacher assistant worked in one of the classrooms. All teachers were licensed in special education, with four possessing a bachelor's degree and three a master's degree. The teacher assistant and two technicians had high school degrees. These staff were selected for the investigation for the following reasons. First, the supervisors of the participants expressed that it would be useful for the staff to acquire the BST skills for training other staff (e.g., teacher assistants in the teachers' classrooms). Second, the teachers represented all the teachers in the adult education program (the teacher assistant was working on a teaching degree with the intent he would be promoted to a teaching position). Third, although the job responsibilities of the staff development technicians included staff training duties, they had never been formally trained in BST.

Behavior Definitions and Observation Systems

The primary target behaviors were participant implementation of the steps of BST while training an individual staff person. Six steps were drawn directly from previous research using BST (Parsons et al., 2012). An additional step was added that involved providing a rationale to the trainees (i.e., whom the participants would be training) regarding why the target skill would be trained. Providing a rationale is a recommended step when training staff (Fleming, Oliver, & Bolton, 1996; Willner et al., 1977) though it is not always specifically included in descriptions of BST (Miles & Wilder, 2009; Nigro-Bruzzi & Sturmey, 2010; Sarokoff & Sturmey, 2004). Also, one more step was added to clearly specify that the trainer should maintain a written record of each trainee's level of performance while practicing performing the skill being trained. Pilot work had indicated that trainers frequently omitted this step unless it was clearly specified.

The eight steps of BST and the accompanying behavior definitions are provided in Table 1. For a step

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Table 1. Steps and Behavior Definitions for Behavioral Skills Training

Step	Definition
1	Provide rationale for the target skill being trained.
2	Vocally describe steps of the target skill.
3	Provide trainee with written summary of target skill steps.
4	Demonstrate the target skill.
5	Have trainee practice performing the target skill.
6	Observe and record trainee correct vs. incorrect performance of target skill.
7	Provide supportive and corrective feedback (the latter if applicable).
8	Repeat Steps 5, 6, and 7 until trainee correctly performs target skill.

to be scored as correct, all components of the step had to be completed by a participant. A step was scored as incorrect if a participant did not perform the step or left out a component (e.g., for Step 6, Observe/Record, the participant watched a trainee practice the skill being trained but did not write down the trainee's correct vs. incorrect performance of the skill). Any additional procedures carried out by a participant did not enter into the scoring (e.g., a participant discussing a skill related to the target skill being trained). If a step was not applicable (i.e., Step 8 if the trainee did not make any error on the first attempt of performing the target skill), then that step was not included in the determination of correct versus incorrect steps.

Participant implementation of the eight steps of BST was observed individually during baseline and post-training on a step-by-step basis. Interobserver agreement checks were conducted during 83% of all assessments, including for each participant in both experimental conditions. Interobserver agreement was calculated on a step-by-step basis using the formula of agreements divided by agreements plus disagreements, multiplied by 100%. Overall agreement averaged 99% (range, 75% to 100%), occurrence agreement regarding correct implementation of BST steps averaged 97% (range, 67% to 100%), and nonoccurrence averaged 91% (range, 0% to 100%). The 0% agreement on nonoccurrence occurred on only one occasion across all interobserver checks (total of 57) and involved a small number of disagreements (2).

Experimental Conditions

The experimental design was a multiple probe design across the three groups of participants. This design was selected because it involves taking probes or data samples of the target behaviors in contrast to continuous measurement such as with a multiple baseline design, thereby reducing the amount of required observation time (Bailey & Burch, 2002, Chapter 7). The analysis included two phases: baseline and post-training (and feedback). In addition, participant performance was evaluated in an on-the-job assessment during a routine job situation. The latter analysis included measurement

of participant accuracy in implementing BST as well as trainee performance of the skill targeted for training.

Baseline. Baseline or pre-training sessions were conducted by an experimenter with individual participants in a simulated fashion. Another experimenter role-played the part of a staff member whom the participant was instructed to train, and an assistant role-played the part of a consumer with a disability with whom the "staff member" was working. The participant was instructed by an experimenter to show how s/he would train one of three preselected skill sets to the "staff member," The three skill sets were: (1) providing descriptive, behavior-specific praise (cf. Polick, Carr, & Hanney, 2012) to the "consumer" following the "consumer's" appropriate activation of a pressure plate switch to turn on a CD player, (2) teaching the "consumer" how to press the switch using a least-to-most prompting strategy (Libby, Weiss, Bancroft, & Ahearn, 2008), and (3) providing a two-item choice opportunity to the "consumer" (Reid, Parsons, Rotholz, & Braswell, 2007, Chapter 8). Each participant was familiar with performing each of the skill sets him/herself as part of routine work performance and previous training. The participant was instructed to train the "staff member" to perform the respective skill set in the manner the participant would perform the set. The experimenter playing the role of the staff member to be trained and the assistant playing the role of the consumer each followed established scripts. The scripts followed by the "staff member" involved doing everything instructed by the participant with the exception of omitting one specific behavior that the participant had instructed (e.g., for providing descriptive praise, the "staff member" provided a praise statement to the "consumer" but did not specify the "consumer's" behavior that was being praised). In this manner, the "staff member's" performance provided an opportunity for the participant to correct the former's performance (Steps 7 and 8 of BST). The scripts followed by the "consumer" required the "consumer" to do only what the "staff person" instructed with two exceptions. First, when being prompted in the least-to-most assistive manner the "consumer" was instructed to respond only to the third prompt pro-

vided. Second, when being provided a two-item choice, the "consumer" was instructed to choose an item only after the "staff member" had provided an opportunity for the "consumer" to engage briefly with each item. If more than three baseline sessions were conducted with a participant, then the three skills taught—one per session—were repeated in the same sequence across successive baseline sessions. An experimenter recorded the participant's performance of the BST steps as described previously. No feedback was provided to the participant, although the participant was thanked for his/her participation.

Training. Training was provided in a group format by two instructors (experimenters), with each group involving 3 or 4 participants (total of three groups). Two training sessions were conducted with each group, encompassing a maximum of 1 hour per session. Training sessions were limited to 1 hour to avoid disruptions in the participants' regular job duties. In the first training session, participants were trained how to train staff with BST to use an embedded teaching strategy with consumers. The embedded teaching strategy involved a four-step procedure (see Parsons, Reid, & Lattimore, 2009, for elaboration). In the second session, participants were trained how to train staff with BST to conduct a brief preference assessment with a consumer using a 13-step, multiple-stimulus-without-replacement format (Reid et al., 2007).

Each training session involved using the eight steps of BST to train the participants to in turn use BST to train staff in the target skill (embedded teaching or conducting a preference assessment). Initially, a rationale was provided (Step 1 of BST) to the group of participants regarding the importance of using a BST approach for training staff with whom they work, with a focus on ensuring staff would acquire the skills that the participants wanted them to learn how to perform. Next, the steps of BST were explained by an instructor (Step 2) while participants were provided with a written summary (Step 3) of the steps. Additionally, the steps constituting the skill that participants were expected to train (again, embedded teaching or conducting a preference assessment) were described vocally and provided

in writing. An instructor then demonstrated the steps of BST (Step 4) while training the other instructor (role playing a staff member) to perform the target skill. A participant was asked to role play the part of a consumer whom the "staff member" was working with and to do what the former person instructed. For the session with the target skill of embedded teaching, the "consumer" behaviors of concern were brief in nature and represented activities that would be desirable for staff to teach to a consumer in situ in contrast to performing the activities for the consumer, such as throwing a piece of trash away and putting an item in a cabinet (again, see Parsons et al., 2009, for elaboration). For the session involving the target skill of conducting a preference assessment, three items were provided for assessing the "consumer's" preference (e.g., CD player, magazine, sketch pad). The demonstration also included the instructor recording the performance of the "staff member" being trained. The next component of the training session involved each participant taking a turn practicing the steps of BST to train the target skill (Step 5). One participant practiced BST with another participant playing the role of the staff member to be trained and another participant playing the role of the consumer with whom the "staff member" was working. The instructors observed and recorded each participant's practice performance (Step 6) and then provided supportive and corrective feedback based on each participant's observed performance (Step 7). Finally, the three preceding steps were repeated as necessary until each participant demonstrated correct implementation of each step of BST (Step 8).

Post-training (and feedback). During the post-training sessions, the procedures were the same as during baseline sessions with one exception. The exception was that an experimenter provided supportive and corrective feedback following completion of each participant's demonstration of BST. The feedback was presented using a set format (Parsons & Reid, 1995) that involved beginning the feedback with a positive or empathetic statement, specifying what the participant performed correctly, what the participant did not perform correctly (if applicable), how to correct the incor-

rect performance (again if applicable), prompting questions or clarification from the participant, informing the participant if future sessions would be conducted, and ending the feedback with an overall positive statement.

On-the-job assessments. Because the baseline and post-training assessments involved simulated situations with the participants, on-the-job assessments were conducted to evaluate the degree to which the participants correctly implemented BST while training a staff member during the routine job situation. The latter assessments also allowed for an evaluation of whether the BST conducted by the participants resulted in their staff trainees acquiring the skills that were targeted to be trained with BST. An on-the-job assessment was conducted with 9 of the participants (logistical considerations prohibited completion of an assessment with 1 participant).

Following the last post-training assessment, each participant was informed that s/he would be observed using BST to train a job skill to a staff member. The participant was asked to identify a staff member to train as well as a skill that the participant desired the staff member to acquire, and to inform the instructor when s/he was ready to be observed training the skill to the staff member. At the scheduled time for the training to occur, the instructor arrived at the workplace of the participant and asked the participant to describe the steps of the skill that would be trained to the staff member. The skills selected to be trained by the participants were deemed relevant by their supervisors for application in the adult education program and included such job duties as using manual signs, various prompting strategies to use while teaching students, and making jewelry (a skill that a respective staff member would later train to a student). A complete listing of the skills participants taught to staff with BST is provided in Table 3.

The on-the-job assessment occurred individually with each participant (and the staff member being trained by the participant) involving the following process. First, the staff member whom the participant would train was asked to perform the skill to be trained to assess the staff member's pretraining performance of the target skill. Second, the participant then conducted BST with the staff member. Third, the staff member's performance of the target skill was observed upon completion of BST (post-training assessment of the staff member's performance of the target skill). Observations of the participant's use of BST were conducted as described previously. Interobserver agreement checks were conducted during 67% of the on-the-job sessions, with only one disagreement regarding the occurrence of a correct step of BST across all observations.

Observations of the staff trainee's performance of the target skill being trained by a participant were conducted in a step-by-step manner and scored as correct or incorrect based on the description of the target steps provided previously by the participant. Interobserver agreement checks regarding the staff trainee's performance of the target skill were conducted during 67% of the observations, including during pre- and post-BST training by participants. Overall agreement regarding the staff trainees' performance of the target skill averaged 96% (range, 80% to 100%), occurrence of correctly performed steps of the target skill averaged 91% (range, 50% to 100%), and nonoccurrence averaged 80% (0% to 100%).

Acceptability Measures

To assess participant acceptance of the training-to-train process, an acceptability survey was provided to the participants following completion of the on-the-job assessment. Participants completed the survey without putting their name on the survey form and placed the form in a folder on a secretary's desk to ensure anonymity. There were three questions on the survey to be answered on a 7-point Likert scale, with "4" representing the neutral point. The first question asked "How useful or nonuseful was the training for learning information and skills relevant to your job and profession?" (1 = extremely nonuseful and 7 = extremely useful). The second question asked "How practical or impractical was the training in terms of amount of your time and effort to participate?" (1 = extremely impractical and 7 = extremely practical) and the third question asked "How enjoyable or not enjoyable was the training process (1 = extremely not enjoyable and 7 = extremely enjoyable).

A fourth question asked if the participant would recommend the training to his/her colleagues ("yes" or "no" response option).

Results

As indicated in Figure 1, each group of participants improved their implementation of BST following participation in the training program. During baseline, the percentage of correctly implemented BST steps was low for each group, averaging 36% (range, 32% to 44%) for Group 1, 26% (range, 25% to 29%) for Group 2, and 29% (range, 25% to 33%) for Group 3. The vast majority of BST steps that were not correctly implemented consisted of omission of a respective step, with the remaining consisting of implementation of only a part of a step. Following training, respective averages for each group increased to 90% (range, 82% to 100%), 85% (range, 67% to 92%), and 95% (range, 92% to 100%). As indicated in Table 2, the performance of individual participants coincided with the group averages in that all participants increased their correct implementation of BST from baseline to the post-training condition.

Results of the on-the-job assessments (also in Table 2) indicated all but 2 participants (of the 9 for whom on-the-job assessments were conducted) correctly implemented 100% of the BST steps while training a staff member in the routine environment of the participants and staff members. Two participants correctly implemented 88% of the BST steps during the on-the-job assessments. Regarding the performance of the staff trained by the participants on the job (Table 3), all improved their performance of the target skills be-

Table 2. Average Percentage (and Range) of BST Skills Performed Correctly by Individual Participants During Baseline, Post-Training, and the On-The-Job Assessment

Participant	Baseline	Post-training	On-the-Job
Carol	28 (25–38)	92 (75–100)	100
Sue	35 (13–38)	92 (75–100)	100
Mary	25 (13–38)	92 (75–100)	88
Roger	38 (25–50)	92 (75–100)	100
Keri	17 (13–25)	71 (50–88)	100
Marcia	46 (38–50)	92 (75–100)	88
Pam	38 (–)	96 (88–100)	100
Karla	42 (–)	86 (71–100)	100
Ben	42 (38–50)	83 (75–100)	100
Rick	25 (–)	100 (–)	

Table 3. Percentage of Steps of Target Skills Trained by Participants That Staff Trainees Performed Correctly During Pre- and Post-BST On-The-Job Assessments

Participant	Staff trainee	Target Skill	Pre-BST	Post-BST
Carol	Carl	most-to-least prompting	0	100
Sue	Alice	backward chaining	40	100
Mary	Lois	most-to-least prompting	50	100
Roger	Cyndi	producing manual signs	0	100
Keri	Doris	graduated physical guidance	17	100
Marcia	Miriam	giving feedback	25	88
Pam	Lisa	least-to-most prompting	20	100
Karla	Alice	making jewelr	0	100
Ben	Teri	producing manual signs	20	100

ing trained from the pre- to post-training assessments. All staff increased their percentage of target skill steps completed correctly by at least 50 percentage points from the pre- to post-training assessments, with eight staff performing 100% of the steps correctly on the post-training assessment (no staff member completed more than 50% of the steps correctly on the pretraining assessment).

Results of the acceptability survey suggested participants found the training process acceptable. The average rating on the Likert-scale question regarding how useful the training was for the participants was 6.3 (between "extremely useful" and "very useful," range 5–7). The average rating regarding the practicality of the training was 5.8 (between "mostly practical" and "very practical," range 5–7). Regarding how enjoyable the training was, the average rating was 5.7 (between "mostly enjoyable" and "very enjoyable," range 5–7). No participant rated any question below "mostly." All participants also indicated they would recommend the training to their colleagues.

Discussion and Implications for Practitioners

Results indicated all participants improved their BST implementation from pre- to post-training assessments. All 9 participants who subsequently trained a work skill to other staff in the regular work setting also demonstrated 100% or near 100% proficiency in using BST during their on-the-job training. Validation of the proficiency of the participants' on-the-job use of BST stems from results pertaining to the staff whom the participants trained. All staff improved their performance of the target skills trained by the participants following the latters' implementation of BST, with eight of the nine staff demonstrating 100% correct implementation of the steps of the target skills trained.

The results just summarized add to the existing body of research on pyramidal training with human service staff in several ways. First, the investigation demonstrates a specific means (i.e., BST) of training practitioners to train other staff. A number of previous

investigations on pyramidal training did not specify how the practitioners were trained to train others beyond essentially being instructed to use the same procedures to train staff that were used to train them (Demchak & Browder, 1990; Green & Reid, 1994; Shore et al., 1995; van den Pol et al., 1983) or simply being directed to train their newly acquired skills to other staff (Demchak et al., 1992; Haberlin et al., 2012). Second, the results demonstrate a means of documenting a BST skill repertoire among practitioners who function as staff trainers. As indicated earlier, a number of previous investigations with pyramidal training did not report the degree to which practitioners implemented the constituent steps of the training process while training other staff (e.g., Demchak & Browder; Demchak et al.; Haberlin et al.; Jones et al., 1977; Neef, 1995; Pence et al., 2012; Shore et al.). Third, whereas in a number of previous investigations trainers trained other staff only on a specific skill set on which the trainers recently had been trained (Demchak et al.; Green & Reid; Haberlin et al.; Page et al., 1982; Pence et al.), in the current investigation the trainers trained target skills that were not the focus of their own training. That is, the participants initially were assessed while they trained three specific skills to a staff person in simulation (behavior-specific praise, least-to-most prompting, providing a two-item choice) but trained to train using two other skills (embedded teaching, conducting a preference assessment). Participants were also assessed on-the-job while they trained other skills they selected as relevant to staff with whom they worked.

The features of the BST pyramidal training approach just summarized would seem to offer a practical benefit for behavior analysts when faced with training multiple staff in an agency. Once a behavior analyst trains a small group of practitioners to use BST then those practitioners could effectively train a number of other staff (after the behavior analyst trained the former group in a skill set if necessary to be trained to the other staff). This would relieve the behavior analyst of having to train all staff him/herself in the target skill set. Additionally, when another staff training need arises, such as having to train staff in a new behavior support plan or teaching procedure with a consumer, the practitioners who were

trained to conduct BST would be in a position to help train staff once trained themselves in the target skill set. As noted earlier, the availability of practitioners skilled in BST to help with staff training responsibilities could be particularly advantageous from a practical perspective when behavior analysts are faced with training large numbers of agency staff or staff in different settings.

Results of the acceptability measures suggested the participants were generally accepting of the manner in which they were trained to train others. However, given that participant acceptance was based on verbal reports (i.e., the Likert scales), the acceptability results should be viewed with some caution. Verbal measures of acceptability, though relatively common in research on staff performance, do not always coincide with more behavioral measures (see Parsons, 1998, for a discussion). To illustrate, although participants in one pyramidal training program rated the procedures as acceptable, some chose not to continue to function as staff trainers when provided a choice (van den Pol et al., 1983). Van den Pol et al. reported that several participants chose not to function as staff trainers due to time and scheduling difficulties with their existing job duties. Informal discussions with the participants in the current investigation also indicated concerns with the amount of time and effort associated with BST.

The latter results warrant attention by behavior analysts when considering pyramidal training using BST to fulfill their staff training responsibilities. It is recommended that prior to initiating a pyramidal training approach, attention be directed to whether practitioners who will function as staff trainers have sufficient time within their existing work schedules to train other staff. For example, arrangements may need to be established with management personnel to ensure that selected staff are supported in arranging their work schedule to have the necessary time to carry out BST with other staff. It may also be advantageous to query potential staff regarding whether they would be amenable to functioning in a staff- or peer-training capacity prior to initiating pyramidal training (Reid, Parsons, & Green, 2012, Chapter 4). The intent would be to limit potential staff trainers where possible to those personnel who do not express reservations about having the responsibil-

Figure 1. Average (mean) percentage of BST steps completed correctly for each group of participants for each assessment during each experimental condition.
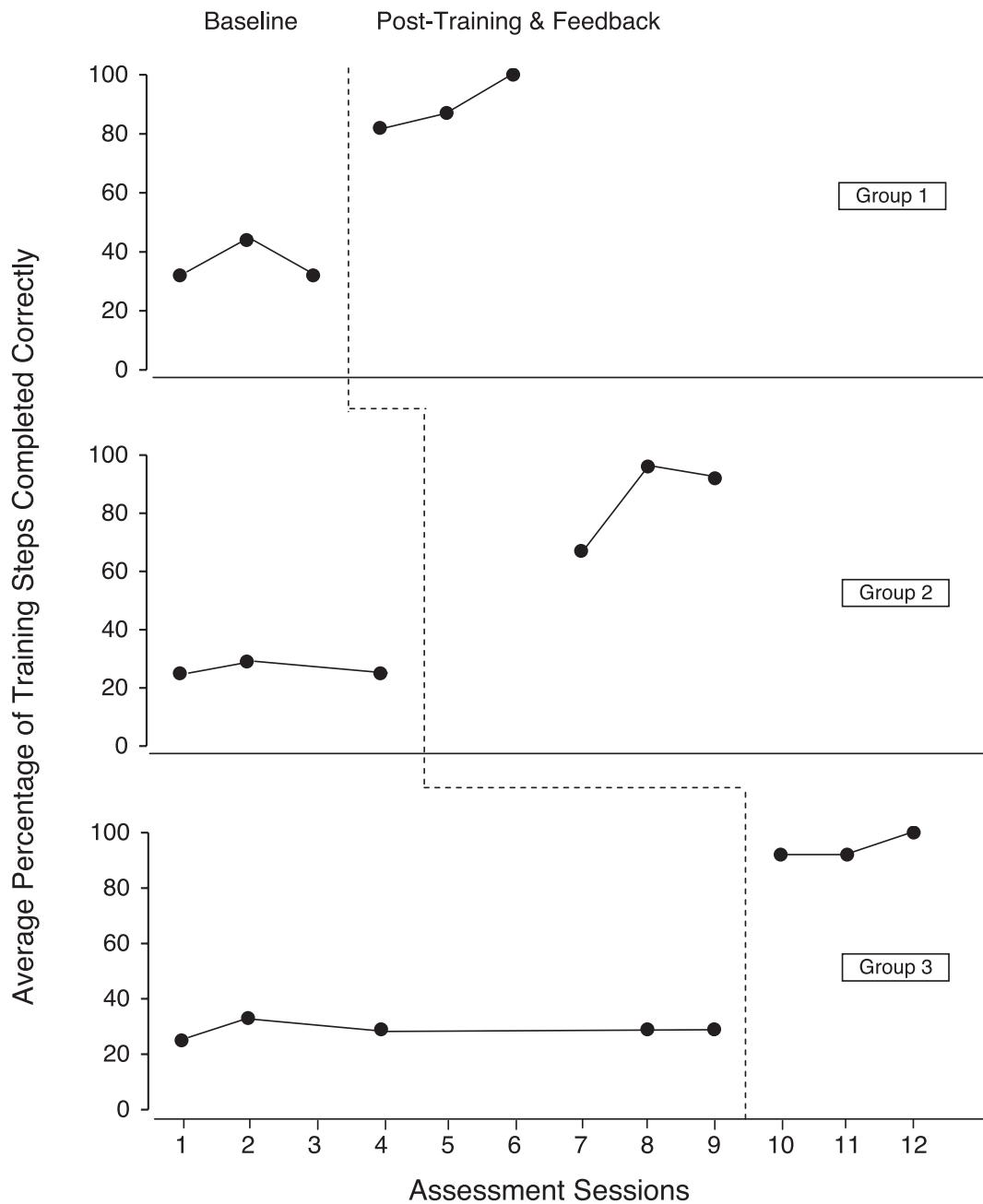
ity of training their peers or other agency staff. In this regard, future research would seem desirable to better delineate the conditions that facilitate practitioner use of BST once trained in lieu of practitioners using more traditional but frequently ineffective procedures when training staff (Reid et al., 2011).

Another qualification with the current results

pertains to a relatively small amount of observational data regarding the participants' skills in carrying out the steps of BST. Only three to five baseline assessments and three post-training assessments were conducted with the participants. Although consistent improvement was apparent with each group of participants (Figure 1) from baseline to post-training (as well as with the individual

participant results—Table 2), the amount of assessment data is somewhat less than what often occurs in behavioral research. The validity of the behavior change that was observed with the participants however would seem to be strengthened by the on-the-job observations that reflected competent use of BST to train staff following their participation in the training program.

In summary, use of pyramidal training based on BST represents one means for behavior analysts to fulfill their staff training duties. By training other practitioners to use BST, this approach can reduce the amount of time required of behavior analysts to conduct staff training and especially in certain situations as noted earlier. Increased reliance on BST-based pyramidal training also could potentially facilitate increased dissemination of behavioral technologies in general by behavior analysts within human service agencies (cf. Lerman, 2009).

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