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The effects of behavioral skills training on instructor and learner behavior across responses and skill sets

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ABSTRACT

Behavioral skills training (BST) is effective to train staff to provide intervention to people with developmental disabilities. The purpose of this study was to assess whether: (a) prior studies demonstrating the effectiveness of BST could be systematically replicated while teaching multiple teaching instructors to implement discrete trial teaching, incidental teaching and activity schedules; (b) instructional skills that staff acquired during training on one response generalized to a variety of instructional programs, (c) positive changes in staff performance produced positive behavior change in learners; and (d) positive changes in learner behavior generalized to novel programs. BST resulted in positive behavior change across staff, learners, instructional programs, and various teaching skills. Further, staff generalized teaching skills to novel responses and learners displayed increases in correct responding for all three instructional procedures. Social validity data indicated they these staff training procedures were highly acceptable and effective. Thus, BST is an effective and acceptable staff training procedure.

Behavioral skills training (BST) consists of written instructions, verbal feedback, modeling, and skill rehearsal. It is robustly effective for training staff and parents adults to teach learners with developmental disabilities and results in improved learner performance and may reduce maladaptive behavior (Dib and Sturmey, 2007; Lafasakis and Sturmey, 2007; Ryan, Hemmes, Sturmey, Jacobs, & Grommet, 2007; Sarokoff and Sturmey, 2004; Seiverling, Pantelides, Ruiz, & Sturmey, 2010). Effective adults instructors, however, must acquire a skill sets, or a group of teaching responses that share a single task analysis. For example, one skill set includes teaching responses for training learners to imitate motor movements using DTT and another skill set includes teaching responses for training learners to respond to incidental teaching procedures. Although several studies document generalization of teaching responses to novel learners and teaching tasks (Lafasakis and Sturmey, 2007; Sarokoff and Sturmey, 2007; Ward-Horner and Sturmey, 2008) in each of these studies, experimenters assessed generalization of adult teaching responses only to responses within a single skill set, and to programs in which learner responses shared a similar topography. For example, Lafasakis and Sturmey (2007) trained parents to teach gross motor imitation skills and assessed generalization to teaching child verbal imitation skills; however, they did not assess generalization of adult instructional skills to teaching child responses that did not require an imitative response, such as following one-step directions.

Although prior studies have replicated the effects of BST for training various skill sets, (Lafasakis and Sturmey, 2007; Ryan et al., 2007; Seiverling et al., 2010), no replication studies have demonstrated that the effects of BST on adult acquisition, learner acquisition, and learner disruptive behavior generalize from trained responses to dissimilar responses that share a

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single skill set. Determining whether BST can have a positive effect on three dependent variables and whether these effects generalized to untrained responses would provide further evidence that BST is a robust staff training procedure. Further, previous studies have not assessed the effects of BST on the more complex skill set for teaching activity schedule following. Therefore, the current study used both systematic and direct replication of Sarokoff and Sturmey (2004) to assess whether: (a) previous research demonstrating the effectiveness of BST could be replicated across staff, learners, and instructional programs in three different skill sets, (b) staff teaching responses acquired during training on one child response generalized to teaching novel child responses within a skill set; (c) positive changes in staff performance produced increases in correct responding and decreases in disruptive behavior emitted by the learners during programs for which instructors received BST; and (d) positive changes in learner behavior generalized to programs for which instructors were not trained.

1. General method

The experimenter used multiple probe designs for all three experiments in this study. She trained instructors to use DTT, incidental teaching and activity schedules in these three experiments. BST procedures were similar across experiments; however, the skill sets in each experiment were different. Each experiment had baseline, BST, and post-training phases. During all baselines, the experimenter gave the instructor a task analysis of the teaching components and their operational definitions, read them aloud, answered any questions, and then directed the instructor to work with the learner. During BST, the experimenter gave the instructor the same task analysis and provided feedback, rehearsal, and modeling to the instructor for one response. The post-training condition was identical to baseline. Copies of all task analyses of instructor teaching methods for each experiment are available from the first author.

1.1. Participants and setting

The experimenter conducted all experiments at a full-day private school for learners with developmental disabilities. All adult participants were instructors at the school. Each had a minimum of a bachelor's degree in education, psychology, or a related field and all had training by service providers other than the experimenter before this study. Learners were aged of 3–12 years and had attended the school for approximately 6–60 months. An independent neurologist or developmental psychologist diagnosed each learner with a developmental disability prior to the study. The experimenter paired instructors with learners based on their daily schedules. The experimenter conducted daily sessions in two small classrooms, the kitchen, and a large bathroom in the learners' school.

1.2. Materials

There were token boards, reinforcers (e.g., preferred toys and snacks), data sheets, pencils, timers, and instructional materials as described in the individual Method sections below.

1.3. Dependent variables

There were three dependent variables: (1) instructor percentage correct use of teaching components (2) learner percentage of correct responses; and (3) learner disruptive behavior. The dependent variables were further divided into trained responses and untrained responses. A trained response was a response for which the instructor received BST. Untrained responses were responses for which the instructor received no training to assess generalization from trained to novel responses. For example, during DTT, a trained response included the skill set for teaching identification of community helpers, while an untrained response included the skill set for teaching number to object correspondence.

Percentage correct use of teaching components by instructors. The experimenter scored a teaching component correct if the instructor implemented each component according to its operational definition.

Percentage of correct responses by learners. The experimenter scored a learner response correct if the learner emitted an independent correct response as defined in the individual's program.

Percentage of intervals scored for disruptive behavior by learners. Disruptive behavior was any sound or movement unrelated to the ongoing activity or that occurred in the absence of an instruction, any repetitive movements, any verbal or physical resistance to prompting, or any refusals. The experimenter used 10 s momentary time sampling (MTS) to score occurrence or nonoccurrence of disruptive behavior.

1.4. Measurement procedures and scoring

During baseline and post-training phases, the experimenter collected data on all dependent variables for the all responses. During intervention, the experimenter provided BST. At the end of BST, the experimenter observed as the instructor completed a session for the trained response. The experimenter provided no feedback during this session and collected data on all dependent variables for the trained response only. Criterion for completion of training was 90% or greater accuracy for the trained response during three consecutive sessions.