JOURNAL OF APPLIED BEHAVIOR ANALYSIS 2003, **36,** 133–136 NUMBER 1 (SPRING 2003)

EFFECTS OF TEACHER-DIRECTED VERSUS STUDENT-DIRECTED INSTRUCTION ON SELF-MANAGEMENT OF YOUNG CHILDREN WITH DISABILITIES

DEIRDRE K. MITHAUG AND DENNIS E. MITHAUG

TEACHERS COLLEGE, COLUMBIA UNIVERSITY

In this study, students worked independently by setting goals, selecting assignments, and recording and evaluating their results after receiving one of two different types of self-management training. During teacher-directed training, the teacher set goals, assigned work, and recorded and evaluated results for students. During student-directed training, students performed those tasks themselves. The results indicated that students engaged in the self-management behaviors more frequently during independent work following student-directed instruction than following teacher-directed instruction.

DESCRIPTORS: teacher- versus student-directed instruction, self-management

Instructing students to set goals, self-monitor, self-evaluate and self-reinforce has improved behavior and academic performance in a wide range of treatment and educational situations. Several studies have shown that these improvements also are maintained and generalized. For example, Stevenson and Fantuzzo (1984, 1986) reported that when the four self-management behaviors were included in the same instructional intervention, improvements in academic performance generalized across behavior, subjects, settings, and time. One reason for these robust effects may be that the training and independent performance situations were similar in that both were student directed. During training and performance situations, for example, students chose the goal they expected to meet and then wrote it down independently. Students also decided when to record a behavior and then recorded it independently. During self-evaluation, they decided whether a behavior met a standard and then recorded their evaluation independently, and during self-reinforcement, students determined whether their behavior met a standard and then selected reinforcers independently. The current study evaluated the importance of the student-directed component of self-management training by determining whether independent goal setting, self-monitoring, and self-evaluation were higher after student-directed instruction than after teacher-directed instruction.

This research was part of a dissertation submitted by the first author in partial fulfillment of requirements for the PhD degree from Columbia University.

Address correspondence to Deirdre K. Mithaug, Division of Human Services and Counseling, St. John's University, 8000 Utopia Parkway, Jamaica, New York 11439 (e-mail: Mithaugd@stjohns.edu).

METHOD

Participants and Setting

Alice, a 5-year-old girl, and Bob, a 6-year-old boy, had been diagnosed with autism spectrum disorders. Carter, a 6-year-old boy, had been diagnosed with attention deficit hyperactivity disorder, and Edward, a 6-year-old boy, had been diagnosed with emotional disturbance. They were enrolled in a school for young children with severe learning and behavior problems. Alice and Bob could identify a few words and count to five; Carter and Edward could read and count at a kindergarten level. At the time of the study, none of the students worked independently during unsupervised periods.

Materials and Response Measurement

Materials included a self-record card and five color-coded folders, each with two worksheets in math, reading, science, social studies, and writing. On the four-column self-record card, students circled pictures of subject areas to work in the "Subjects to Work" column, wrote the number of worksheets to be completed in the "What I Will Do" column, and recorded the number completed in the "What I Did" column. When the number in the "What I Will Do" column matched the number in the "What I Did" column for the circled subject, students circled a "Yes" in the "Completed Assignments" column. A correct self-management response was scored by a teacher assistant when (a) the number of completed worksheets recorded in the "What I Did" column matched the number assigned in the "What I Will Do" column, (b) the number of assignments in the "What I Did" column matched the number completed, and (c) the "Yes" or "No" circled in the "Completed Assignments" column was consistent with the numbers recorded in the previous columns. Therefore, a "Yes" was correct when there was a 0 for number completed and a 0 for the number assigned, and a "No" was correct when there was a 1 for the number completed but a 0 for the number assigned. A total of five correct responses were possible for each session, given that there were five subject assignments per card and one card used per session. A second teacher assistant independently recorded the number of correct responses during 50% of sessions. Percentage agreement was calculated by dividing the number of agreements for each correct response on the self-record card by the number of agreements plus disagreements and multiplying to 100%. The average agreement was 98% across training and independent work sessions.

Procedure

Teacher- or student-directed instructional sessions were conducted daily each morning in the classroom, and independent work sessions were conducted in the same location 2 hr later. The type of instruction (i.e., teacher- vs. student-directed instruction) was the independent variable. The self-management behavior that occurred during the subsequent independent work session was the dependent variable. During teacher-directed instruction, the teacher demonstrated the self-management skills to the student by setting goals, assigning work, and recording and evaluating results on the self-record card for the student. During student-directed instruction, the teacher prompted the student to set goals, assign work, and record and evaluate results on the card. In both conditions, students selected an item from the prize box for each correct "Yes" response circled on the card. Prize items included pencils, posters, stickers, buttons, stamps, bookmarks, and mazes. During baseline, students received no instructions, feedback, or reinforcers. During independent work sessions, students worked alone and did not receive any prompts, feedback, or reinforcers. The folders containing the self-record card and worksheets were available during all instructional and independent work sessions. To control for possible preference effects, each student's folder contained only two sheets per subject for a total of 10 sheets per session. A multiple baseline and reversal design was used to compare the effects of student- and teacher-directed instruction on self-management behavior during independent work sessions. The order of instruction was counterbalanced across participants.

RESULTS AND DISCUSSION

The number of correct self-management responses during independent work was higher following student-directed instruction

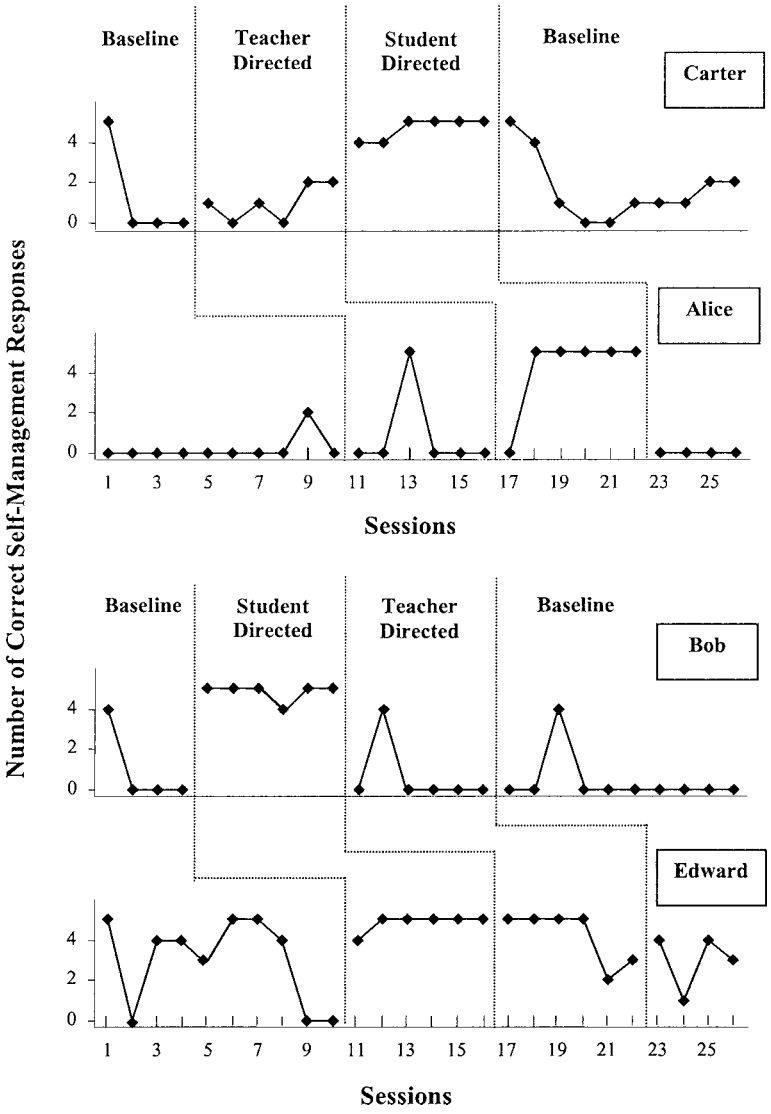

Figure 1. Number of correct self-management responses during independent work following student-directed instruction and teacher-directed instruction for all participants.

than following teacher-directed instruction for all students (see Figure 1). This finding suggests that students are more likely to exhibit independent self-management in nontraining situations when teachers use a student-directed approach to self-management training. One possible explanation for this outcome was the degree of similarity between student-directed instruction and independent work. In both conditions, students were required to choose a goal and a behavior to monitor and evaluate and then to respond to those choices independently.

Another possible explanation is that self-management responses were more reinforcing under student-directed instruction than under teacher-directed instruction because students had more opportunities to make choices under student-directed instruction. Choice opportunities alone have been found to increase responding in some situations (Fisher, Thompson, Piazza, Crosland, & Got-

jen, 1997). It is unlikely, however, that the findings were due to greater access to reinforcers or preferred work assignments under student-directed instruction because the number of reinforcers earned and assignments completed were similar under the two conditions.

Assignment completion rates during independent work also were compared across the two training conditions, but the results were inconclusive, perhaps because the students were limited to two assignments per subject. Another limitation of the study is that self-management behavior was not maintained when instruction was discontinued in the final baseline phase. The sequence of instructional conditions also may have influenced self-management behavior during independent work. Research on these effects is needed to evaluate further the results of this study.

REFERENCES

Fisher, W. W., Thompson, R. H., Piazza, C. C., Crosland, K., & Gotjen, D. (1997). On the relative reinforcing effects of choice and differential consequences. *Journal of Applied Behavior Analysis, 30,* 423–438.

Stevenson, H. C., & Fantuzzo, J. W. (1984). Application of the "generalization map" to a self-control intervention with school-aged children. *Journal of Applied Behavior Analysis, 17,* 203–212.

Stevenson, H. C., & Fantuzzo, J. W. (1986). The generality of social validity of a competency-based self-control training intervention for underachieving students. *Journal of Applied Behavior Analysis, 19,* 269–276.

Received November 2, 2001
Final acceptance November 5, 2002
Action Editor, Dorothea Lerman