

Arco, L. (1997). Improving Program Outcome with Process-Based Performance Feedback. *Journal of Organizational Behavior Management*, 17, 1, 37-61.

Background: In behaviour development and management programs, training instructors and caregivers to carry out programs and tasks effectively is an essential component. Given the large number of instructors (parents, educators, and tutors) needed to provide intensive intervention, such as discrete-trials teaching for children with autism, it is important to investigate efficient alternatives for training instructors. One possibility is the use of process-based performance feedback. Arco (1997) defines feedback as providing quantitative or qualitative information on their past performance for the purpose of changing or maintaining performance. Process-based performance feedback involves emphasizing a recipient's individual performance. Examples of this include giving instructions, providing prompts, and delivering consequences following a behaviour. Given the high demand for instructors and educators to work with children with a developmental disability such as autism, and given the effectiveness of behaviour-based teaching strategies, studies have sought to examine various methods for training individuals. Arco examines a process-based feedback method to improve the outcomes of programs implemented with children with autism.

Purpose: The purpose of this study was to evaluate a training package to train 8 instructors to work with a child with autism. Arco conducted two experiments to examine the effects of process-based feedback. The "process" component, or performance specific feedback was manipulated to examine its effects.

Participants and Setting: Participants included 8 instructors at a university-based early intervention preschool program for children with autism. All of the instructors were full time university undergraduate students majoring in psychology. The instructors had been working in the program for approximately 6 months at the time of the study. A 5 year old boy with autism also participated in this study. This child had been involved in the preschool program for 2 years at the time of the study and had basic skills including attending to instructors, following simple instructions, copying/tracing shapes, matching pictures to objects, and imitating simple actions.

Method: In experiment 1, they examined components of feedback in a one-to-one teaching session involving the instructors and the child with autism. The performance of individual instructors were examined and measured in a multiple baseline design across participants. Following a baseline, the training consisted of verbal and written information on the instructor's performance (process-based) and the child's performance (outcome). Following written and verbal feedback, instructors were provided with a feedback docket, definitions of target behaviours, modeling, a plot of the child's behaviour on a graph, and any difficult areas were discussed. Performance was evaluated based on the instructor's ability to exhibit the following target behaviours: giving the correct verbal instruction, providing correct prompts, providing a positive consequence when appropriate, and providing a negative consequence when appropriate. Each instructor was observed 3 times per week for 16 weeks, totalling 33 sessions. Experiment 2 was added to replicate the findings of experiment 1 and to examine the effects of verbal process performance feedback alone. The original experiment was modified such that only verbal feedback and praise were provided. Feedback dockets, graphs, and references to child behaviour were removed.

Conclusions: In experiment 1, results showed that a combination of process and outcome feedback improved performance of instructors significantly and improved teaching performance was functionally related to improvements in the child's performance. In experiment 2, the results showed that process feedback alone improved the instructor's performance and increased the child's performance level in terms of correct responding. In both studies, process feedback increased correct verbal instructions by the instructors, increased the accuracy of prompts and the accurate and appropriate delivery of consequences.