Effects of Bug-in-Ear Technology on Specific Praise Statements Given by Paraeducators to Transition-Age Students with Autism

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Abstract

This investigation experimentally evaluated the effects of eCoaching with Bug-in-Ear (BIE) technology on the use of contingent specific praise in three paraeducators working in a special education transition classroom. A trained special education teacher provided performance-based feedback in real-time as paraeducators worked one-on-one with transition-age students with autism spectrum disorder (ASD) and comorbid intellectual disability (ID). As such, we used a multiple baseline research design to evaluate the effects of the independent variable (i.e., eCoaching). Results indicated that eCoaching using BIE technology increased the use of contingent specific praise given by paraeducators as they worked one-on-one with students. Increased rates of specific praise were observed during the fading condition, and all three paraeducators sustained high rates of specific praise. Our study demonstrates the efficacy of providing performance-based feedback by means of eCoaching with BIE technology, and recommendations for research and practical application are offered.

Research Questions

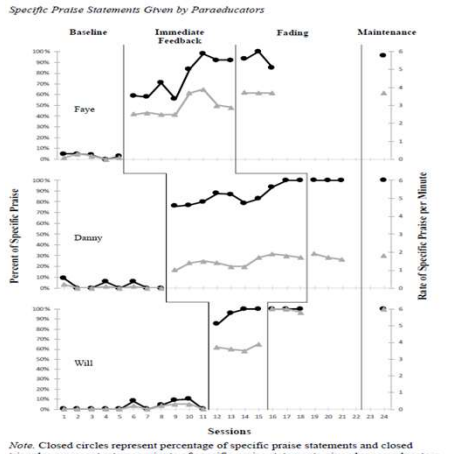
1. What is the functional relation between receiving immediate feedback delivered via BIE and use of contingent specific praise in a campus-based transition classroom?
2. What are the effects of a systematic, post-treatment, fading procedure on paraeducators' use of contingent specific praise?

Method

Participants:
Three paraeducators who were employed in a local urban school district participated in this study. They all worked in a campus-based transition classroom that served students with autism spectrum disorder.

Procedure:
- Paraeducators wore a Bluetooth earpiece (i.e., BIE technology) as they worked one-on-one with a student with ASD in a transition class. All sessions were streamed live through a private WebEx meeting, the special education teacher was connected virtually and provided performance-based feedback to the paraeducator as he/she was actively teaching.
- As each paraeducator reached criterion (i.e., 90% over three consecutive sessions), a **fading procedure** was implemented.
- Next, **maintenance** data were collected to measure the sustainability of specific praise offered by the paraeducator. Using interval recording, the percentage of contingent specific praise offered was calculated in addition to the rate per minute (see Figure 1).
- To ensure **reliability**, two trained graduate students independently coded recorded WebEx sessions. The primary observer coded 100% of the sessions across all conditions (i.e., baseline, intervention, fading, and maintenance), and the secondary observer coded 60% of sessions across the same conditions. **Interobserver agreement (IOA)** was calculated by dividing the total number of agreements by agreements plus disagreements, multiplied by 100 (Ledford & Gast, 2018).

Results



Note. Closed circles represent percentage of specific praise statements and closed triangles represent rate per minute of specific praise statements given by paraeducators.

Horn et al., in preparation

Implications for Practice

Implementation of eCoaching Procedures Requires:
- A camera positioned on a tripod within the instructional environment to stream training sessions in real-time.
- An eCoach who wears a headset with a built-in microphone, observes the instruction and provides discrete, on-the-spot feedback to the teacher.
- Whomever is receiving coaching wears a wireless Bluetooth earpiece (i.e., the BIE technology), which facilitates two-way communication with the coach.

Conclusion

*e*Coaching with BIE technology is an empirically-supported practice that has been shown to result desired behavior change in teachers and paraeducators (Horn et al., in preparation; Horn et al., 2020; Rock et al., 2014; Scheeler et al., 2018). *e*Coaching also offers a way to provide teachers with support in an unobtrusive fashion while bridging the research-to-practice gap (Horn et al., 2020; Rock et al., 2014). Providing high-quality, performance-based feedback in real-time with repeated implementation opportunities enables those being coached the ability to immediately shape the quality of their instruction while they are actively teaching.

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