Implementation of a Posted Schedule to Increase Class-Wide Interobserver Agreement Assessment

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Implementation of a Posted Schedule 
to Increase Class-Wide Interobserver Agreement Assessment

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The present study investigated the impact of an antecedent intervention in the form of a daily posted schedule on the interobserver agreement (IOA) assessment of educational goals implemented within a classroom at a private school serving individuals with disabilities. During baseline, the percentage of academic goals with interobserver agreement was low and stable ($M = 5\%$). Teacher performance improved during the intervention ($M = 92\%$). A reversal replicated this effect and performance maintained during 6-week, 6-month, and 1-year follow-up probes. Results suggest a daily posted schedule can effectively increase interobserver agreement assessment by direct-care teaching staff.

KEYWORDS interobserver agreement (IOA), performance management, antecedent intervention

Although performance management interventions have produced positive gains in employee performance (Schell, 1988), many fail to alter the antecedent conditions under which poor performance is exhibited. Instead, consequence-based approaches, either alone or as part of a treatment package, have been a focus of many research efforts including public posting (Greene, Willis, Levy, & Bailey, 1978), feedback (Codding, Feinberg, Dunn, & Pace, 2005; Reinke, Lewis-Palmer, & Martin, 2007), meeting...

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cancellation (DiGennaro, Martens, & Kleinmann, 2007), and others. Many of these approaches are implemented often to the exclusion of systematically examining antecedent interventions in isolation.

Slight modifications to the antecedent environment—and subsequently the discriminative stimuli—may produce substantial changes in employee behavior in desired ways. This preventive approach is appealing because it reduces the likelihood of poor employee performance (Luiselli, 2006) and the potential need for the delivery of programmed consequences by supervisors, which requires greater personnel resources. The examination of effective and efficient employee behavior change procedures, such as antecedent interventions, is an important area of focus, particularly in settings where resources are limited and accountability is high.

Performance management interventions in educational and clinical settings have influenced staff absenteeism (Luiselli et al., 2009), teacher treatment integrity (DiGennaro et al., 2007), supervision delivery (Reid, Parsons, Lattimore, Towery, & Reade, 2005), interactions with students/clients (Reinke et al., 2007), and other target areas. Surprisingly, identifying ways to promote consistent reliability assessment in educational settings is an area that has received little attention in the published literature. However, educators must demonstrate that the information being gathered has met standards of reliability to ensure decision-making is based on interpretable data. In the only study to date, Kleinmann et al. (2009) examined the implementation of a school-wide, all-day interobserver agreement assessment protocol for protective holding. Specifically, upon occurrence of a protective hold or escort, two of the classroom staff were expected to independently complete a short form detailing the type of procedure utilized, circumstances surrounding the hold, behavioral antecedents, and information regarding date/time/student and job title of respondent. Results revealed general adherence to the protocol and demonstrated that a program-wide system of interobserver agreement assessment may be feasibly implemented across an entire school day. Despite these findings, there is little research regarding how often teachers complete interobserver agreement assessment.

The purpose of the present study was to conduct an evaluation of a program designed to improve employee performance within a human service setting. Specifically, the effect of an antecedent intervention in the form of a daily posted schedule on the percentage of educational goals with interobserver agreement (IOA) assessment was examined.

METHOD

Participants

Four direct care employees—one male and three female (age range, 24 to 26 years)—of a private school for children and young adults with autism
participated in the study. All of the participants had obtained their bachelor’s degrees and had experience (range, 12–36 months) working with children with autism. One of the participants had also completed four master’s level courses in special education. The study was implemented as part of the typical supervisory responsibilities of the primary author.

Setting and Materials

The study took place within an 8.2 m by 5.2 m classroom serving six male students (age range, 12 to 16 years). Primary job responsibilities of participants in this setting included implementation of educational programs to teach new skills and behavior support plans designed to reduce challenging behavior of students. Additionally, participants were expected to collect daily performance data for every educational goal and conduct interobserver agreement assessment of student performance for all goals one time weekly for every student in the classroom.

Design and Measurement

An ABAB reversal design was used to evaluate the effects of an antecedent intervention on the percentage of educational goals with IOA assessment. IOA data were gathered through weekly examination of permanent products (i.e., corresponding completed data sheets); IOA was calculated by dividing the number of educational goals with weekly IOA by the total number of educational goals, multiplied by 100.

At the conclusion of the study, two of the study participants completed a 10-item social validity questionnaire to assess the acceptability of the posted schedule to improve IOA assessment. This tool was adapted from the Intervention Rating Profile-15 (IRP-15; Martens, Witt, Elliot, & Darveaux, 1985). Items were rated on a Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree) with higher scores representing intervention acceptability. Participants received the form 1 month following the completion of a 6-week follow-up probe; participants returned the questionnaire anonymously through office mail.

Procedure

Baseline (A)

A behavior analyst employed by the agency designed the educational goals in place for each student based upon individualized annual objectives approved by each student’s team. The number of goals requiring IOA assessment per student averaged 15 (range, 11–21), with a total weekly sum of 92 goal areas. Participants were trained to collect IOA data during their initial new employee orientation through didactic instruction, role
plays, and in vivo observation and measurement. In addition, participants were reminded of the agency standard (assessment of IOA one time weekly for every educational goal) via performance feedback provided monthly by their direct supervisor as part of the school’s supervision system. Annual employee evaluations and salary increases were dependent upon monthly performance summaries, which incorporated completion of IOA assessment as a responsibility of participants.

**Schedule (B)**

The purpose of this phase was to examine participants’ completion of IOA assessment following introduction of an antecedent intervention in the form of a daily posted schedule. At the start of this phase, participants were told that they would be assigned IOA assessment daily for specific student goals and would be informed of this via a posted schedule in a visible location within the classroom. The posted schedule was created on a dry erase board daily. Upon completion of IOA assessment, participants were expected to initial the schedule in the appropriate location. The posted schedule was modified daily to allow for IOA assessment one time weekly for every goal. Thus, the behaviors targeted for IOA assessment varied daily in order to meet the weekly goal of 92 educational goals with IOA. This antecedent intervention (i.e., posted schedule and initials upon completion) was implemented in addition to the agency-wide monthly feedback and annual evaluation procedure in place during baseline. Beyond the monthly feedback, programmed consequences were not delivered during this condition.

**RESULTS AND DISCUSSION**

Figure 1 depicts the weekly percentage of educational goals with IOA across all phases of the study. Results revealed that during intervention the percentage of goals with IOA ($M = 92\%$) was higher compared to baseline levels ($M = 5\%$). Performance decreased upon a return to the baseline condition ($M = 0.55\%$), but improved ($M = 97\%$) upon reintroduction of the intervention. That is, a higher percentage of goals had IOA assessment when a schedule was posted daily in the classroom followed by written notation (i.e., participant initials) upon completion of IOA. In addition, 6-week, 6-month, and 1-year follow-up probes demonstrated maintenance of high levels of performance at 100\%. The mean acceptability rating for the posted schedule was 5.05 on a scale of 1 (strongly disagree) to 6 (strongly agree). This finding suggests that participants found the posted schedule to be an acceptable intervention to address assessment of interobserver agreement.

These findings are the first to demonstrate that a class-wide antecedent intervention—in the form of a daily written schedule upon which
participants must write their initials upon completion of tasks—can successfully impact the degree to which teachers assess IOA for educational purposes. Thus, this study adds to the literature on supervision and staff training. Moreover, the intervention was successful over a one year period of time despite the absence of programmed consequences aside from those present within the supervision system adopted by the agency, which were in place during baseline and intervention conditions. The latter benefit is critical in service delivery settings where financial and personnel resources are limited. Thus, identifying resource-efficient interventions—such as the posted schedule in this study—that maximize performance of teaching staff is a priority in these settings.

Several limitations in this study exist, suggesting the need for future research. First, the extent to which participant behavior was impacted by the posted schedule itself or by virtue of participants being required to initial the schedule upon completion of IOA data collection is unclear. In addition, ambient consequences may have contributed to performance improvement. For example, participants may have provided each other social praise or other consequences for completion of IOA assessment. We did not explicitly request that participants refrain from discussing performance along these lines in their typical collegial interactions and conversations in clinic meetings; thus, we do not know whether these consequences were applied or if performance was impacted by their delivery. Moreover, the information from the IOA assessment might have provided participants with feedback.

FIGURE 1 Percentage of educational goals implemented weekly with interobserver agreement assessment.
that was useful in their daily interactions with students, thereby increasing the likelihood that IOA assessment would continue. Participants were clearly aware when the intervention was in place, which may have caused reactivity if they suspected performance was being monitored. However, participants in this setting were exposed to the supervision system adopted by the agency, which by its nature assumes performance monitoring. The study did not address the impact of IOA assessment on educational decision-making, which is an important area of investigation. Finally, all of the participants did not complete the treatment acceptability questionnaire because two of the participating teachers were no longer employed by the agency (one participant sustained an injury and was out of work for an extended period of time and the other moved out of state for personal reasons). These changes occurred between the 6-week and 6-month follow-up probes before the treatment acceptability questionnaire was disseminated. As a result, the obtained acceptability ratings may not be an accurate reflection of overall acceptability. Finally, we did not measure whether teachers’ performance in other areas changed as a function of time spent engaging in IOA assessment.

In sum, these findings show strong support for the use of a daily posted schedule—combined with initialing the schedule upon completion—to increase class-wide interobserver agreement assessment of educational programs.

REFERENCES


