

## Think Before You Speak: Increasing a Student's Appropriate Verbal Responses During Classroom Instruction

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**Abstract:** This study compared the effects of two intervention packages on increasing the appropriate verbal responses of a 7<sup>th</sup>-grade student. The interventions were determined by the results of a functional assessment of behavior. An alternating interventions design was used. Both intervention packages were successful in increasing the target behavior.

Disruptive verbal behaviors, such as calling out and making noises, impede learning and infringe on valuable classroom instructional time. These behaviors create unnecessary distractions for students and teachers and often lead to other off-task behaviors (Shapiro & Kratochill, 2000). Interrupting classroom instruction to redirect such behaviors is time-consuming and energy-depleting for teachers and offending students. Consequently, daily routines and learning outcomes are greatly compromised. Disruptive behaviors that continue without intervention can lead to poor academic performance (National Center for Education Statistics, 1997). As such, it is critical to identify the function of the behaviors and intervene with an appropriate intervention.

The purpose of the study was to compare the effects of self-monitoring and journaling versus the effects of self-monitoring and tactile stimulation on increasing the appropriate verbal responses of a 7<sup>th</sup>-grade student in a language arts classroom. Specifically, the study addressed the question: How does the combination of self-monitoring and journaling versus self-monitoring and tactile stimulation affect the number of appropriate verbal responses exhibited by a disruptive student during language arts instruction? The study also provided an opportunity to compare the effects of two intervention packages versus two single interventions.

### Review of the Literature

Inappropriate verbal responses are characterized by impulsive behaviors, which include premature responding, motor impulsivity, and response inhibition. Students who exhibit such behavior often react without deliberation and verbalize answers that are erroneous (De Pascalis, Arwari, D'Antuono, & Cacace, 2009). In order to understand the function of such behavior, professionals may conduct a functional assessment of behavior (FAB). A FAB allows professionals to make direct observations and formulate a hypothesis regarding the functional relationship between the problematic behavior and its consequence. Once professionals understand the function of the behavior, they can proceed with a suitable intervention. A decrease in the target behavior implies that the function of the behavior was accurately identified (Richards, Taylor, Ramasamy, & Richards, 1999). In 2001, Dixon, Benedict, and Larson, performed a functional analysis of the inappropriate verbal responses exhibited by an adult male. The results of the functional analysis suggested that the participant's inappropriate verbal responses were maintained by his need to seek attention. The intervention consisted of differential reinforcement of alternative behavior (DRA). The intervention was delivered across four conditions in a multi-element design. As part of the DRA, adults responded only to the positive statements made by the participant. The results indicated a decrease in the participant's

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inappropriate verbal responses, confirming researchers' accurate identification of the function of the behavior.

Self-monitoring strategies are effective interventions for increasing desirable behaviors (Wood, Murdock, Cronin, Dawson, & Kirby, 1998). Self-monitoring strategies require the use of metacognitive functions to self-regulate and self-evaluate (Pintrich & DeGroot, 1990). Pintrich and DeGroot (1990) found a positive correlation between high levels of self-regulation and high levels of metacognitive strategies. Their study consisted of a sample of 173 eighth-grade students who answered self-report questionnaires. The results indicated that students who engaged in metacognitive strategies were more likely to remain engaged in a task and persist through its completion. Students who engaged in self-regulation strategies placed value on their class work and demonstrated a willingness to comply with classroom norms. Amato-Zech, Hoff, and Doepke (2006) reported an increase in on-task behavior after implementing a self-monitoring strategy. Three students in a special education classroom demonstrated 35% gains in on-task behavior after the implementation of a self-monitoring electronic beeper, the *MotivAider*. Wood et al. (1998) also concluded that students who self-monitor their behavior can learn to manage and increase the time they spend on task. In addition to increasing on-task behavior, students in the study showed gains in academic achievement.

Liaupsin, Umbreit, Ferro, Urso, and Upreti (2006) reported positive effects on behavior as a result of implementing communication response strategies and self-monitoring strategies. Their research focused on a 14-year-old female student who was at risk of academic failure. The student's behavior was assessed using a multistep process, consisting of teacher interviews, student interviews, and observations. The student's on-task behavior increased in all of her classes and was maintained at a high level of stability. Lambert, Cartledge, Heward, and Lo (2006) further illustrated the benefits of teaching communication strategies to at-risk students. The researchers implemented the use of response cards in two 4<sup>th</sup>-grade classrooms. Disruptive students were instructed to provide written responses to teacher-posed questions during classroom instruction. The number of students' disruptive verbal responses served as the baseline. The treatment phase consisted of having students provide written responses on cards. The researchers utilized an A-B-A-B reversal design consisting of a baseline phase (A), a treatment phase (B), withdrawal of the treatment (A) and a return to the treatment. The results indicated a considerable decrease in problematic behaviors such as calling out, laughing during instructional time, making noises, and throwing objects.

Tactile stimulation is an effective intervention in reducing disruptive behavior (Grskovic et al., 2004; Kercood, Grskovic, Lee, & Emmert, 2007; Stalvey & Brassill, 2006). Tactile stimulation of a manipulation object results in a reduction of off-task behaviors; it helps students increase their focus on a given task by increasing the frequency of on-task behaviors during direct and independent practice.

### **Single-Subject Design Method**

#### *Participant*

Jay (a pseudonym) was a 12-year-old Hispanic male student enrolled in an advanced 7<sup>th</sup>-grade language arts class. He scored a 4 on both the Mathematics and Reading subtests of the Florida Comprehensive Achievement Test (FCAT). During language arts class, Jay called out answers, spoke out of turn, interrupted his teacher and classmates while they were speaking, and hummed. Jay's math, science, and social studies teachers also reported that his inappropriate verbalizations were problematic in their classrooms. Jay, the youngest of three brothers, was described by his parents as impatient and impulsive around adults and peers. His older brother,

the middle child of the family, was diagnosed with Autism Spectrum Disorder. Jay and his parents agreed that his older brother had special needs and required a significant amount of the family's attention. The results of Jay's FAB indicated that his inappropriate verbal responses were maintained by the attention he received from his teachers and classmates.

#### *Setting*

The study took place in a 7<sup>th</sup>-grade advanced language arts classroom located in a suburban middle school. Jay attended this class every other day with 24 other students. Jay sat in the first seat of the fourth row, facing both the white board and teacher's podium.

#### *Materials*

Two different self-monitoring sheets were used. The first sheet, used in Intervention I, included blank lines for a journal entry and a chart for recording verbal responses. The second self-monitoring sheet, used in Intervention II, consisted of a chart for recording verbal responses. One soft, air filled rubber ball, 4.75" in diameter, was used for the tactile stimulation intervention during Intervention II.

#### *Target Behavior*

The target behavior, appropriate verbal responses, was defined as Jay speaking only to ask or answer task-related questions after raising his hand and being called on by the teacher.

#### *Design*

An alternating treatment design with a baseline and final treatment phase was used to evaluate two intervention packages. As recommended by Richards and colleagues (1999), a baseline phase was included in order to compare the frequency of appropriate verbal responses before and after implementation of the interventions. A final treatment phase was included due to the nature of the Jay's behavior and the significant improvements that were achieved with Intervention II.

#### *Data Collection*

Data collection methods included a FAB; direct observations; teacher, student, and parent interviews; and self-monitoring tracking sheets. The language arts teacher was responsible for collecting data.

#### *Dependent Variables*

The dependent variable was the number of appropriate verbal responses exhibited by the student.

#### *Independent Variables*

The independent variables consisted of two intervention packages. Intervention I was a combination of self-monitoring and journaling. The self-monitoring intervention consisted of the student recording his verbal responses on a daily tracking sheet as either meeting the target behavior or not meeting the target behavior. The journaling aspect of the intervention required the participant to write his responses in the journal response section of his self-monitoring sheet and submit them to his language arts teacher at the end of the 60-minute instructional block. Intervention II was a combination of self-monitoring and tactile stimulation. The self-monitoring intervention held the same recording requirements as those of Intervention I with the exception of a written response. The tactile stimulation intervention consisted of having the participant squeeze a soft, air filled rubber ball, 4.75" in diameter, while he waited quietly for the teacher to call on him.

#### *Procedures*

During the baseline phase, the language arts teacher recorded the number of verbal responses provided by the student. The verbal responses were recorded as either appropriate or

inappropriate. A whole-interval method was used to record the frequency of verbal responses in a 60-minute instructional block. Verbal responses were recorded as either appropriate or inappropriate. Baseline data was collected for six 60-minute sessions.

Prior to introducing the interventions, Jay was allowed to choose between two reinforcers—a ticket good for five minutes of computer time or a ticket good for one minute of conversation with the teacher. Jay chose tickets good for one minute of conversation with the teacher. Jay was told that he would earn one ticket for every three appropriate verbal responses he demonstrated.

During the first session for Intervention I, Jay was given an explanation of what his target behavior entailed and was taught how to record his verbal responses on a self-monitoring sheet. He was instructed to mark a tally in one of two boxes. The first box indicated that he met his behavioral goal. The second box indicated that he did not meet his behavioral goal. He was also instructed to write down any questions, comments, or answers to teacher-posed questions in the journal response section of his self-monitoring sheet.

During the first session for Intervention II, Jay was instructed to record his verbal responses on the self-monitoring sheet designed for Intervention II. He was also instructed to squeeze a small, air-filled rubber ball while he raised his hand and waited quietly for the teacher to acknowledge him. He was allowed to provide a verbal response after the teacher called his name.

The teacher maintained a monitoring sheet of Jay's verbal responses for every session. The teacher and Jay compared their results on a daily basis to ensure agreement. Interventions were counterbalanced across sessions with no more than two consecutive sessions of the same intervention. Each intervention was presented 6 times during its intervention phase.

### **Results**

The data indicated that both intervention packages were effective in increasing the number of appropriate verbal responses in a 60 minute instructional block. As illustrated in Figures 1 and 2, there was a steady increase in appropriate verbal responses during both intervention phases. Overall, Intervention II was more effective in producing and maintaining the target behavior. As shown in Table 1, the number of appropriate responses increased from 0 during the baseline phase to 62 at the end of the alternating treatments phase. There was a 61% decrease in the number of inappropriate verbal responses. Intervention I, self-monitoring and journaling, accounted for 45% of appropriate responses. Intervention II, the combination of self-monitoring and tactile stimulation, accounted for 55% of appropriate verbal responses.

### **Discussion**

Results from this study are similar to those previously obtained for self-monitoring and tactile stimulation interventions (Amato-Zech et al., 2006; Stalvey & Brasell, 2006). In particular, the results demonstrate the effectiveness of combining self-monitoring and tactile stimulation to shift verbal behavior in a positive direction. The intervention was successful in improving Jay's behavior. Jay was able to reach desirable goals through the use of a combination self-monitoring and tactile stimulation. Jay's appropriate verbal responses were consistent throughout the intervention and post-intervention phases. Jay learned to gain his teacher's attention in a more appropriate manner.

### **Implications**

Students who exhibit inappropriate verbal responses are capable of improving their behavior and becoming productive members of a classroom community. This information may

assist teachers in choosing appropriate interventions which can reduce classroom distractions, increase on-task behaviors and, subsequently, increase the effectiveness of instructional delivery.

### Limitations

Several limitations of this study should be addressed by future research. Due to the nature of the alternating treatments design, there is a possibility of interference from interventions. The effects of Intervention I may have been masked by Intervention II. There is a possibility that the effects of Intervention I influenced or carried over to the effects of Intervention II. It is also difficult to generalize results to a larger population, different settings, other types of disruptive behaviors, or non-kinesthetic learners. Other limitations include teacher's willingness to intervene, the time commitment involved in implementing the intervention, and the complexity and number of steps involved in the intervention.

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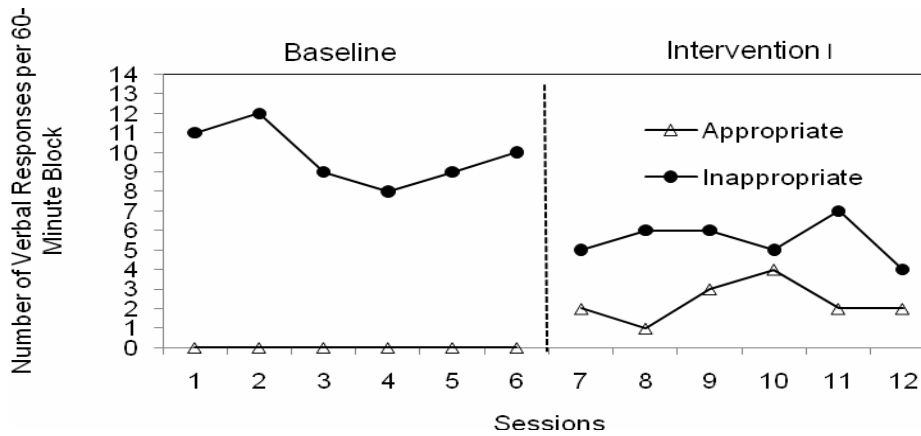


Figure 1. The effects of Intervention I: Verbal responses with self-monitoring and journaling.

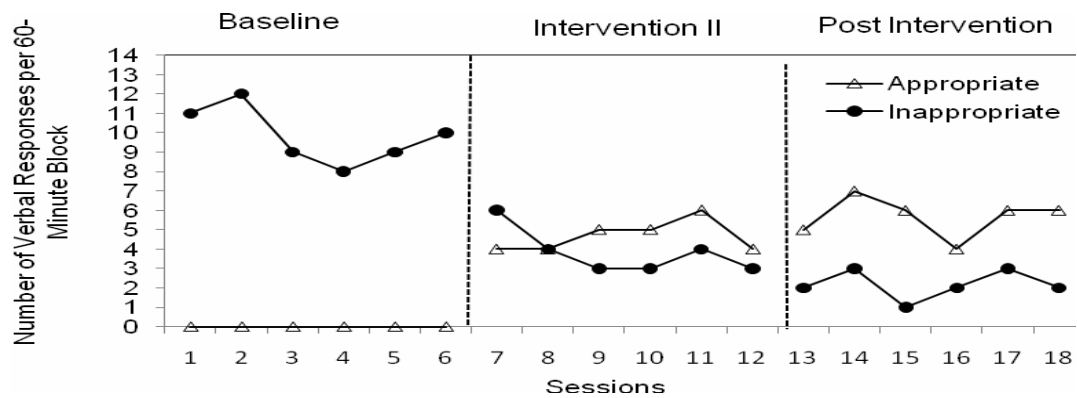


Figure 2. The effects of Intervention II: Verbal responses with self-monitoring and tactile stimulation.

Table 1

*Number of Verbal Responses*

Responses	Baseline	Self-Monitoring & Journaling Intervention	Self-Monitoring and Tactile Stimulation Intervention	Total
Appropriate	0	28	34	62
Inappropriate	59	23	13	36