

Reducing Time-Out Assignments for Students with Emotional/Behavioral Disorders in a Self-Contained Classroom

Janice A. Grskovic,^{1,6} Arlene M. Hall,² Donna J. Montgomery,³ Andres U. Vargas,⁴ Sydney S. Zentall,⁴ and Phillip J. Belfiore⁵

This study assessed the impact of a class-wide time-out/re-directing strategy on (a) the frequency of teacher-assigned time-outs and (b) the time students spent in disciplinary sanctions. Twelve students with emotional/behavioral disorders, enrolled in a self-contained elementary classroom were taught an alternative time-out strategy (Active Response Beads-Time Out), while teachers were taught a re-directing strategy, in an attempt to decrease the amount of student's time spent in time-out (TO) and the number of TO assigned by staff. Using a multiple baseline design across academic classroom periods, results showed that Active Response Beads Time-Out (ARB-TO) and teacher re-directions decreased the total time spent in time-out and number of TO assigned across the three class periods. Results maintained at one, two and four week follow-up sessions.

KEY WORDS: time-out; behavior disorders; academics; class-wide.

Time-out (TO) is a behavior management technique used by over 70% of teachers of students with emotional and behavioral disorders (Zabel, 1986). Costenbader and Reading-Brown (1995) reported that students with emotional/behavioral disorders in a separate special education facility spent, on average, 23 hours in exclusionary TO (i.e., isolation room) over a single school year. Heron (1987) defines TO as the withdrawal of the opportunity to earn positive

¹School of Education, Indiana University Northwest, Gary, Indiana.

²Department of Adolescent, Career, and Special Education, Murray State University, Murray, Kentucky.

³Teacher Education Department, University of Nebraska, Kearney, Nebraska.

⁴Department of Educational Studies, Purdue University, West Lafayette, Indiana.

⁵Education Division, Mercyhurst College, Erie, Pennsylvania.

⁶Correspondence should be addressed to Janice A. Grskovic, School of Education, Indiana University Northwest, 3400 Broadway, Gary, Indiana 47408-1197; e-mail: jgrskovi@iun.edu.

reinforcement. TO may be described as exclusionary (e.g., removal of student from reinforcing situation for a brief time interval) or non-exclusionary (i.e., removal of positive reinforcement while the student remains within the original setting) (Martin & Pear, 2003; Heron, 1987).

Understandably, assigning and placing one student in exclusionary or non-exclusionary TO greatly reduces his/her time on academic task, as well as greatly impacts the class-wide learning environment due to loss of instructional time resulting from the teacher enforcing and monitoring the TO. In educational settings where multiple students engage in behavior problems (i.e., a special classroom/center for behavioral support, self-contained special education classroom), the loss of instructional time is compounded due to staff time spent enforcing/monitoring multiple TO episodes. Daunic, Smith, Robinson, Miller, and Landry (2000) suggest that class-wide/school-wide approaches to managing disruptive, aggressive, and violent behavior are critical to ensuring a positive educational environment. A class-wide solution to lost instructional time resulting from assigning and managing TO is to reduce the amount of time related to components of the TO sequence, or re-structure the components entirely. The ideal classroom, in this situation, would be one where all students are engaged in active instruction, and if TO is required, it is assigned and managed effectively and efficiently, with students returning quickly to instruction.

Following a disruptive behavior, a typical TO sequence consists of (a) a teacher mand (e.g., "You have a time-out."); (b) a latency period between the end of the teacher mand and the initiation of student compliance to the mand; (c) the student engaging in the TO behavior; (d) the termination of TO, usually indicated by a teacher cue or prompted by appropriate student behavior; and (e) student reentry into classroom activity or task. Additionally, teacher-student review and contingent delay may be components of the TO sequence. A teacher-student review of why the TO was assigned, and alternative actions that could have avoided the TO, may occur between steps d and e. Contingent delay, or an extension of the TO for a specified period of time contingent on the occurrence of aberrant behavior during the TO sequence (Bostow & Bailey, 1969) may extend the duration of step c. Extension of the TO sequence related to contingent delay may result in students being maintained in TO contingent on responses that would not normally result in a TO being assigned (Mace, Page, Ivancic, & O'Brien, 1986). Contingent delay may also result in an escalation in the original aberrant behavior leading to more time spent at that TO level, moving to a more intrusive TO level, or moving to a more intrusive intervention option.

Successful initiation and completion of the entire TO episode requires the student to quickly and calmly disengage from the disruptive behavior, comply to the teacher-delivered TO mand, and maintain TO behavior for the duration of the TO period. Unfortunately, these demands are difficult for students with behavioral disorders who are often characterized by deficits in these very skills (Grskovic,

Zentall, & Stormont-Spurgin, 1995; Zentall & Hall, 1997). Johns and Carr (1995) recommend that students assigned a TO should begin to calm down before the TO begins. Without this initial “calming down,” the effectiveness of the TO may be compromised. In addition, the TO may be ineffective because students did not initiate (step b.) or engage (step c.) in the required TO behavior, and if the teacher does not respond to the student behavior required to terminate the TO episode (step d.), or re-direct the student to re-engage in the classroom activity (step e.). As mentioned earlier, when developing a class-wide system, issues of compliance and behavioral repertoire are compounded, yet class-wide, cross-curricular approaches to management are the most efficient in the long run (Daunic, et al., 2000).

Because assigning and monitoring of TO to any one student greatly impacts the entire classroom environment (e.g., teacher availability to other students, increased noise and anxiety, other students taunting or reinforcing problems) a class-wide intervention (Active Response Beads-Time Out, ARB-TO) was implemented. The purpose of this study was to replace an existing on-site TO strategy. Because the ARB-TO strategy might reduce student time in TO, but that time might then be spent engaged in ARB-TO, we attempted to reduce class-wide (a) the number of teacher assigned TO and ARB-TO, and (b) the amount of student time spent in TO and ARB-TO.

METHODS

Participants and Setting

A classroom of twelve students, 11 male and 1 female, ranging in age from 7 years 10 months to 12 years 5 months, participated in this study. All students were enrolled in a self-contained, emotional support elementary classroom located in an outpatient facility serving youth and adults. The classroom was staffed by two licensed teachers and one paraprofessional. The senior teacher was certified in emotional handicaps, and had six years of teaching experience within special education. The second teacher was also certified in behavior disorders, and in her second year of teaching. The paraprofessional had been working in special education for over eight years. All students were identified as having emotional handicaps with coexisting Attention Deficit/Hyperactivity Disorder and/or Learning Disabilities. All students were enrolled in this setting as a result of (a) unsuccessful placements in less restrictive environments, or (b) successful completion of more restrictive, residential programs. A small speech room, bathroom, and time-out room adjoined the central classroom. All instruction took place in the one classroom. All data were collected from a connecting observation room (with a two-way mirror), which was entered from outside the classroom without teacher or student awareness.

Dependent Measure and Experimental Design

The primary dependent variable was the percentage of 10s intervals containing disciplinary actions. Disciplinary action was further assessed as TO and ARB-TO. Using a 10s partial interval recording system, TO intervals were scored immediately following the teacher verbalization “You have a time,” and terminated when the teacher initiated a verbal review of the reason for the TO with the student (e.g., “Matt, do you know why you were in TO?”). In addition to monitoring the TO episode, data collectors also recorded the type of TO assigned. A *non-exclusionary TO* was recorded when a student was asked to put his/her head down on the desk for 10-s following the teacher verbalization “You have a time.” An *exclusionary TO* was recorded when the student was verbally remanded to the TO room following the teacher verbalization “You have a time.” Both exclusionary and non-exclusionary TO ended with the verbal teacher review as stated above.

A multiple baseline design across class periods (social studies, mathematics, reading) was employed to evaluate the effectiveness of the class-wide intervention.

Procedures

Each session was 30 min in length. At the onset of each session the data collectors activated a 10s interval tape, and following the 30-min session, the tape was deactivated and the data collectors left the observation room. Because all data collection occurred in the observation room, teachers and students were unaware of the onset and termination of each session.

Baseline

During baseline, data collectors entered the observation room at the beginning of each academic session, activated the 10s interval tape, and monitored the classroom. Students were observed during social studies, mathematics, and reading classes. Each session began with a teacher-led, 3–10 min, whole class lecture, followed by an in-seat assignment. The other teacher and paraprofessional did paper work at their desk during the lecture, and assisted individual students during the in-seat assignment.

Prior to this study an on-site, program-wide TO system was already in place. A non-exclusionary TO, in which the student was required to place head on desk for initially 10s, was assigned by either of the two teachers or the paraprofessional as a consequence for class rule violation (e.g., refusing to begin work, refusing to complete work, being out of seat, talking out, rude or obscene gestures and verbal statements, aggression, destructing property). If the student did not comply with the initial non-exclusionary TO request, the teacher or paraprofessional gave a

first reminder to the student of the TO requirement, and then walked away. If the student was noncompliant to this first reminder, additional time was added to the original non-exclusionary TO (e.g., “You now have an additional time out.”).

An exclusionary TO, in which the student was sent or escorted to the TO room, was assigned when either (a) the non-exclusionary TO was not complied with and an escalation of behavior occurred, or (b) extreme behavior was exhibited by a student (e.g., aggression towards self, staff, or other students, throwing objects).

This class-wide TO system was in place at the center for several years, and all staff were trained and monitored in the existing TO protocol. This TO system was in place during baseline.

Active Response Beads and Re-Directing Training

Following baseline, two, 30-min training sessions were provided to classroom students and staff. All training sessions were conducted by doctoral students in special education. The purpose of the training was to (a) explain to students that if they complied with the new initial teacher request, they could avoid extended placement in TO, and (b) teach students a new ARB-TO strategy. All students were taught an ARB-TO sequence requiring the following steps (a) following the teacher request to get an ARB by walking to the teacher desk and picking up the Active Response Bead (b) walking back to own desk, (c) sitting and putting head down on desk, (d) using the ARB (counting backwards, vocally to subvocally, from 10 to 1, each number they exhaled a breath, while sliding the beads left to right on the cord,) and (e) lifting head off the desktop when counting reaches 1. Counting the 10 beads and exhaling lasted about 10s, similar in duration to the initial non-exclusionary TO request of head on desk. Following instruction, each student’s performance was assessed until three consecutive correct trials (100%) were achieved.

Active Response Beads (ARBs) were constructed by stringing ten 1.9 cm round wooden beads, each with a hole drilled through the center, onto a 37.5 cm red velvet cord. Knots were tied at each end of the cord to prevent the beads from sliding off.

In addition to the student ARB-TO training, teachers and paraprofessionals were instructed to assign the ARB-TO as a replacement for assigning non-exclusionary TO. (Staff retained the right to assign exclusionary TO for extreme behavior resulting in injury to self or others.) Teachers and paraprofessionals were instructed that whenever they observed a behavior, during the specific classroom activity, that had previously warranted a non-exclusionary TO, they should redirect the student by giving the verbal prompt, “Get an ARB.” After the student walked to the teacher desk to get the ARB, the teacher should provide feedback, “Good job getting the ARB, your time is for (behavior), put your head on the desk.” Successful termination of the ARB-TO procedure (i.e., student counted from

10 to 1 while moving beads, with head on desk) by the student should result in teacher praise (e.g., “You did a nice job doing the ARB, please return them to my desk.”). When the student returned the ARB to the teacher’s desk, the teacher should provide additional verbal praise (e.g., “Thank you for giving me the ARB.”), redirect the student back to the academic task, and offer academic assistance. Teachers and paraprofessionals were instructed to only follow the procedure during the class period in which intervention was prescribed (social studies first, mathematics second, reading third). Students, teachers, and paraprofessionals were cued to the intervention in place when the box of ARBs was visible on the teacher’s desk.

Although staff were instructed to assign an ARB-TO as a replacement for non-exclusionary TO, there were a few instances (3–5) when this did not occur, and the non-exclusionary TO was assigned inadvertently.

Class-Wide Implementation

Following student and staff training, post-training observations of the class-wide strategy began. Similar to Baseline, all sessions were 30 min in length, and students and staff were monitored across the same three instructional areas (Social Studies, Mathematics, Reading). The 30-min session ran similar to that described in Baseline (e.g., whole class lecture followed by in-seat assignment) with the exception that the previous TO system was replaced with the student ARB-TO and teacher re-directing program sequentially across instructional areas.

Maintenance

Maintenance data were collected at 1- 2- and 4-week intervals following the termination of the formal study. Data collection during maintenance was identical in procedure to the Class-wide Implementation phase. Similar to Baseline and Class-wide Implementation, Maintenance was collected across all three instructional areas.

Interobserver Agreement and Procedural Integrity

Interobserver agreement was calculated for all dependent variables on an interval-by-interval basis, and was collected during 30% of the sessions. Mean agreement for occurrence, non-occurrence, and total for intervals of exclusionary TO was 99% (80–100%), 99% (98–100%), and 99% (99–100%), respectively. Mean agreement for non-exclusionary TO (baseline) and ARB-TO (intervention) was 96% (90–100%), 99% (96–100%), and 99% (96–100%), respectively.

Procedural integrity was assessed for 33% of all intervention sessions by an independent observer using a procedural checklist outlining antecedent and consequent procedures performed by the teachers and paraprofessionals as part of the re-directing intervention. Staff correctly performed antecedent procedures

(i.e., “Get an ARB.”) an average of 96% (75–100%), and correctly performed consequent procedures (i.e., feedback and praise) an average of 82% (25–100%).

Throughout intervention, student’s ARB-TO performance was assessed bi-weekly. Using a checklist of steps, ARB-TO performance was 100% for all students across all assessment probes, although the step of subvocal counting from 10 to 1 could not be directly assessed.

RESULTS

Figure 1 shows the percentage of intervals in which teachers assigned and/or students were engaged in disciplinary action (i.e., TO during baseline and TO and/or ARB-TO during class-wide implementation and maintenance). Teacher-assigned non-exclusionary TO during baseline were replaced by teacher-assigned ARB-TO during class-wide implementation and maintenance. During Class-wide Implementation and Maintenance, exclusionary TO and ARB-TO were not mutually exclusive, both could be assigned in the same 10-s interval if students were in TO and other students were in ARB-TO.

Baseline mean percentage of intervals containing disciplinary actions during Social Studies, Math, and Reading were 59% (22–100), 48% (0–100%), and 44% (0–100%), respectively. Following the introduction of the ARB-TO for students and re-directing for staff, the percentage of intervals containing disciplinary actions was greatly reduced across each of the three academic classes. Class-wide implementation mean percentage of intervals containing disciplinary actions as TO and/or ARB-TO during Social Studies, Math, and Reading were 22% (0–60%), 4% (0–10%), and 5% (0–8%), respectively. The reduction of time in TO and/or ARB-TO continued to stay at low levels during maintenance, with mean percentage of intervals for Social Studies at 4% (0–12%), Math at 3% (0–7%) and Reading at 2% (0–7%).

Our concern that staff would replace TO with ARB-TO, resulting in extended non-instructional situations was not realized when we monitored time in both TO and ARB-TO during intervention. During class-wide implementation in Social Studies the total TO/ARB-TO mean percentage was 22% of intervals (10% scored TO, 12% scored ARB-TO), compared to a mean of 59% of intervals in TO during baseline. During class-wide implementation in Math the total TO/ARB-TO mean percentage was 4% of intervals (2% scored TO, 2% scored ARB-TO), compared to a mean of 48% of intervals in TO during baseline. Lastly, during Class-wide Implementation (Intervention) in Reading the total TO/ARB-TO mean percentage of intervals was 5% (0% TO, 5% ARB-TO), compared to a mean of 44% of intervals in TO during baseline.

In addition to students spending less time in disciplinary action during Class-wide Implementation, teachers were assigning fewer TO and/or ARB-TO. During Math, the average number of TO assigned per baseline session was 5.5 (total 72),

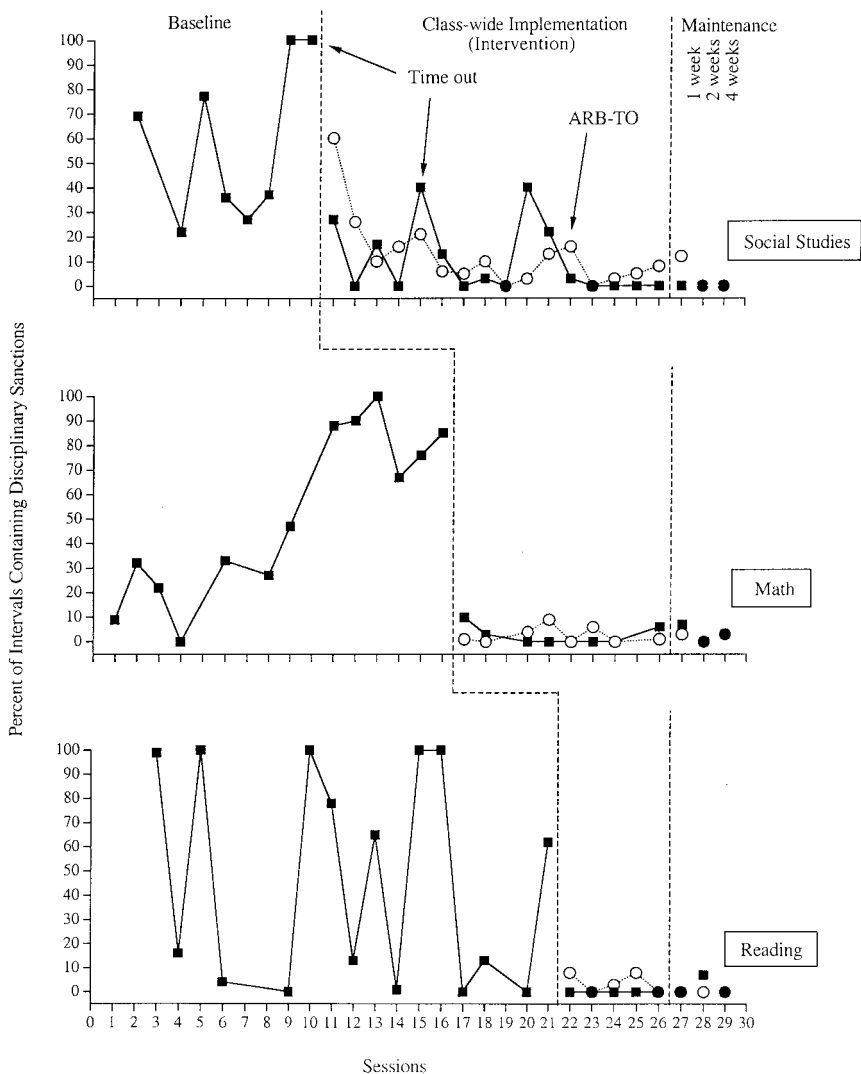


Fig. 1. The percentage of 10-s intervals containing disciplinary sanctions (TO and/or ARB-TO) for one or more students.

whereas during Class-wide Implementation the average number of TO and ARB-TO was 1.6 [total TO given 3 (.4 per session), total ARB-TO given 10 (1.3 per session)]. During Reading, the average number of TO assigned per baseline session was 4.1 (total 70), whereas during Class-wide Implementation the average number of TO and ARB-TO was 1.0 [total TO given 0, total ARB-TO given 5 (1.0 per session)].

Table I. Total and Mean Number of TO and ARB-TO Episodes

	Social studies		Mathematics		Reading	
	Time-Out	ARB-TO	Time-Out	ARB-TO	Time-Out	ARB-TO
Baseline	55 (6.9)	—	72 (5.5)	—	70 (4.1)	—
Intervention	20 (1.3)	99 (6.2)	3 (.4)	10 (1.3)	0	5 (1.0)

The exception to this pattern was in the first implementation setting, Social Studies, where the average number of TO assigned per baseline session was 6.9 (total 55), and during Class-wide Implementation the average number of TO and ARB-TO was 7.5 [total TO given 20 (1.3 per session), total ARB-TO given 99 (6.2 per session)]. Upon reviewing these data most ARB-TO were assigned during the first three days of class-wide implementation (29, 10, 12). A number of hypotheses may begin to explain this phenomenon (e.g., intervention novelty, extinction burst for eliminating non-exclusionary TO). It was noted that students appeared eager to try out their newly trained ARB skill. By not calculating the first session, the average number of TO and ARB-TO assigned during class-wide implementation was 6.0 [total TO assigned 20 (1.3 per session), total ARB-TO assigned 70 (4.7 per session)] (see Table I).

Social Validity Evaluation

Staff rated the use of the ARB-TO and re-directing intervention using a 5-point Likert scale, with 5 being Strongly Agree and 1 being Strongly Disagree. Staff strongly agreed with the statement, “I am able to follow the ARB procedure.” ($M = 4.25$). Staff agreed with the statements, “Using the ARB has helped my students.” ($M = 3.75$), “Students are exhibiting more self-control.” ($M = 3.75$), and “The classroom is calmer now that we are using the ARB.” ($M = 3.5$). Staff were undecided on whether they were assigning fewer TO due to improved classroom behavior ($M = 2.75$), and disagreed with the statement, “The ARBs are not worth the effort it takes to use them.” ($M = 2.00$).

Students completed a similar questionnaire, using responses “Yes,” “Sort of,” “Don’t know,” and “No,” (5 to 1, respectively). Students reported liking the ARB-TO procedure better than the traditional TO procedure ($M = 3.7$), feeling calmer when using the ARB-TO ($M = 3.6$), wanting to continue to use them ($M = 3.6$). Students also indicated it was easier to get back to work following the ARB-TO procedure ($M = 3.4$).

DISCUSSION

Because of the interactive nature of the self-contained classroom setting, our interest was in reducing the frequency of time outs (TO) given and the time engaged

in TO for *any* student in the classroom. Results showed a reduction in teacher assigned TO as well as student time spent in TO. In addition, results showed that teachers did not replace assigning TO with assigning TO using the active response beads (ARB-TO). Classroom instructional time was not compromised by the additional intervention requirements of the ARB-TO.

The more immediate release from ARB-TO during class-wide implementation may have occurred because the ARB-TO cued or re-directed the student to a different response/feedback sequence than the original TO sequence, possibly minimizing contingent delay within the TO episode. The ARB-TO sequence required additional teacher social praise for student ARB-TO compliance (e.g., getting the ARB, counting the beads, and returning the ARB to the teacher desk). Additionally, the ARB-TO sequence required teachers to (a) verbally re-direct the student back to the academic task that was in place before the ARB-TO episode and (b) provide verbal assistance for the academic task.

If problem behavior, resulting in TO, served an escape function (as may be hypothesized from the high level of disciplinary sanctions during baseline across three academic classroom periods), the sequence of teacher-directed ARB-TO commands, followed by student compliance, teacher praise, teacher re-direction back to academic task, and additional teacher praise may have over time altered the valence of the academic classroom. The social reinforcement for compliance to the ARB-TO sequence and re-engagement with academic task may have been sufficient to reduce the reinforcement associated with escape. Mace and Belfiore (1992) suggested that during task engagement, behavior that avoids the task engagement removes reinforcement derived from that task and, hence is unlikely to be reinforced. The ARB-TO sequence may have minimized the establishing conditions for the problem behavior that escapes the task. In such a case, ARB-TO sequence may establish conditions for compliance to academic tasks, again, due to the teacher social reinforcement and re-direction back to the academic task that was in place prior to the ARB-TO episode.

The ARB-TO sequence (a) minimized time spent in TO and (b) increased teacher praise for student re-direction and student re-engagement back to the academic situation. These two features may have decreased the need to escape task, thus decreasing aberrant behaviors that occasioned ARB-TO. This condition change cued by the ARB-TO sequence may have accounted for the dramatic change in behavior from baseline to implementation during mathematics class. Future research would need to test this hypothesis by directly observing individual task engagement/compliance behavior following the ARB-TO sequence.

One limitation of this study was the lack of an instructional behavior measure. The results showed the ARB-TO procedure was effective in reducing the time students spent engaged in disciplinary sanctions (TO and ARB-TO), but does not show empirically that the time out of TO was time in instruction. Because all sessions were conducted during instructional class time, and the final required

prompt by teachers during intervention was re-direction and assistance with assigned work, it was observed anecdotally that more time was now spent engaged in academics. In addition, results from the Social Validation Evaluation also indicated students reported they got back to work more easily. Ultimately, it is not clear what effect ARB-TO might have had on academic achievement, even though during intervention less time was spent engaged in TO and ARB-TO. Additionally, because student behavior was not monitored directly, changes in intervals of disciplinary sanctions may have resulted from student compliance to ARB-TO directions as suggested, or idiosyncratic changes in teachers' criteria for applying ARB-TO or inconsistent implementation of the baseline TO procedure. It is also unclear if the frequency of TO was the result of a few students, or distributed equally across all students in the class. All of these limitations require further direct assessment.

In summary, the data from this study demonstrated a relationship between the use of the ARB-TO strategy and a reduction in the frequency of, and time spent in disciplinary sanctions across three instructional class periods. Further research will need to address the relative strength of the various components of the ARB-TO strategy, and more importantly, from an educational perspective, the impact the ARB-TO strategy has on time on academic task, individual instances of challenging behavior, and academic achievement.

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